

# Website@School Developer Documentation 0.90.2



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# Package wascore Procedural Elements

## admin.php

### **/admin.php - the main entypoint for website maintenance**

This is one of the main entry points for Website@School. Other main entry points are /index.php, /cron.php, /file.php and also /program/install.php. Main entry points all define the constant WASENTRY. This is used in various include()ed files to detect break-in attempts.

This is a kickstarter for /program/main\_admin.php.

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- **Version** \$Id: admin.php,v 1.2 2011-02-03 14:04:01 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

```
require_once dirname(WASENTRY)."/config.php" [line 39]
```

```
require_once $CFG->progdire."/main_admin.php" [line 45]
```



# config-example.php

## /config-example.php - example of the main configuration file

This file demonstrates and documents the contents of the main configuration file 'config.php'. This file only contains the parameters that are necessary to make a connection to the database and to identify the location of the program directory both in the file system on the webserver and as seen through a web browser from the outside. It is also possible to switch debugging on via the optional \$CFG-debug variable. All other configuration parameters are to be found in the database.

As a rule, the configuration file is generated at installation time. It MUST be called 'config.php' and it MUST reside in the same directory as the main entry points [index.php](#), [admin.php](#), [cron.php](#) and [file.php](#).

Here is an overview of the 11 essential parameters and the 1 optional parameter kept in the global \$CFG object.

- \$CFG->db\_type defines the database type.

Currently the only database type supported is 'mysql'. Maybe other databases will be supported in the future.

Default: 'mysql'

- \$CFG->db\_server defines the name of the database server.

In the case of 'mysql' the format is 'hostname:port' where 'hostname' is a valid host (default 'localhost') and 'port' is a portnumber or the path to a local socket, e.g. '/var/lib/mysql/mysql.sock'. If the ':' and the portnumber are omitted, the default port 3306 is used.

Default: 'localhost'

- \$CFG->db\_username holds the username to use when connecting to the server.

Default: ''

- \$CFG->db\_password holds the password to use when connecting to the server.

Default: ''

- \$CFG->db\_name holds the name of the database to use.

Default: 'was'

- \$CFG->prefix holds the tablename prefix.

The name of every table is prefixed with this value. This makes it possible to have two or more different instances of Website@School in the same database, simply by using a different prefix for every instance. Using a prefix ending with an underscore makes the resulting table names more readable and it also prevents mis-interpretation of a table name as an SQL keyword.

Default: 'was\_'

- `$CFG->dir` is the absolute directory path of 'index.php' and 'config.php'.

The main entry points (index.php, admin.php, etc.) are located in `$CFG->dir` whereas all other program files are located in the directory tree starting in `$CFG->progd`.

Usually the path in `$CFG->dir` is the same as the path to the document root of the webserver.

Examples:

- /var/www/html (Red Hat),
- /home/exemplum/public\_html (DirectAdmin),
- /home/httpd/htdocs (Open NA),
- C:\PROGRAM FILES\EASYPHP\WWW (Windows).

Default: '/home/httpd/htdocs'

- `$CFG->www` is the URI which corresponds with the directory `$CFG->dir`.

This URI is of the form `scheme://hostname:port/path`, where - `scheme` is either 'http' or 'https' - `hostname` is the name of the server - `port` is the number of the port the server uses to serve webpages - `path` is a path relative to the document root

Note that the colon followed by a port number are optional; the port number defaults to 80 for http and to 443 for https. Also note that the path is optional. If the path is omitted, the document root of 'hostname' is implied.

Examples:

- `http://www.example.com`
- `https://www.example.com`
- `http://www.example.com:81/web`
- `https://www.example.com:443` (the portnumber is superfluous here)
- `http://www.example.com:80` (the portnumber is superfluous here)

Default: (none)

- `$CFG->progd` is the absolute path to the program directory

The main entry points (index.php, admin.php, etc.) are located in `$CFG->dir` whereas all other program files are located in the directory tree starting in `$CFG->progd`.

Usually this directory is a subdirectory of the document root, or more precise: a subdirectory of `$CFG->dir`. The default name of this subdirectory is 'program'.

Default: '/home/httpd/htdocs/program'

- `$CFG->progwww` is the URI which corresponds with the directory `$CFG->progdir`. This URI is also of the form 'scheme://hostname:port/path', see the explanation for `$CFG->www` above.

As a rule this URI is `$CFG->www` followed by the relative path 'program'.

Important note: If you select different schemes for `$CFG->www` and `$CFG->progwww`, the browser of the website visitor may complain about mixing secure and insecure resources on the same page. It is best to use either 'http' or 'https' and not to mix both.

Default: (none)

- `$CFG->datadir` is the absolute path to a private directory outside the document root. This path points to a directory in which user documents are stored. This directory must be writeable for the user account which runs the webserver (often a user account named 'www-user' or 'www' or 'httpd' or 'apache'). This directory should NOT be accessible from the outside. Note that because of this there is no `$CFG->datawww` which corresponds to `$CFG->datadir`. The data directory should be located outside the document root. All files that need to be served from this directory tree will be served via the program code in 'file.php' in the directory `$CFG->dir`.

Note: some ISPs do not allow you to store data outside the document root. In that case you could use a 'difficult' directory name under the document root, e.g. '/home/httpd/htdocs/d3b07384d113edec49eaa6238ad5ff00', which makes it harder to guess the name and directly access the files in this directory via a browser.

Default: (none)

- `$CFG->debug` is a parameter to switch debugging ON  
Via this optional boolean variable debugging can be switched on. If the parameter is not defined, it defaults to FALSE, see [init.php](#).

Default: (variable is not defined)

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: config-example.php,v 1.2 2011-02-03 14:04:01 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)



## cron.php

### **/cron.php - the main entryptoint for processing cron jobs**

This is one of the main entry points for Website@School. Other main entry points are /index.php, /admin.php, /file.php and also /program/install.php. Main entry points all define the constant WASENTRY. This is used in various include()ed files to detect break-in attempts.

This is a kickstarter for /program/main\_cron.php.

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl)>
- **Version** \$Id: cron.php,v 1.2 2011-02-03 14:04:01 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

require\_once **dirname(WASENTRY)."/config.php"** *[line 39]*

require\_once **\$CFG->progdirent."/main\_cron.php"** *[line 45]*

## file.php

### **/file.php - the main entrypoint for serving files**

This is one of the main entry points for Website@School. Other main entry points are [admin.php](#), [cron.php](#), [index.php](#) and also [install.php](#). Main entry points all define the constant `WASENTRY`. This is used in various `include()`ed files to detect break-in attempts.

This is a kickstarter for `/program/main_file.php`, but first we check for 'maintenance mode': if the file 'maintenance.html' exists in the current directory, we bail out and redirect the visitor to that file.

If we're NOT in maintenance mode, we read the essential configuration parameters from the file 'config.php' in the current directory and continue with `/program/main_index.php` to do the actual work.

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: file.php,v 1.2 2011-02-03 14:04:01 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
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`WASENTRY = __FILE__` [line 40]

**Valid entry points define `WASENTRY`; prevents direct access to `include()`'s.**

`require_once $CFG->progdire."/main_file.php"` [line 55]

`require_once dirname(WASENTRY)."/config.php"` [line 49]

## index.php

### **/index.php - the main entryptpoint for website visitors (frontpage)**

This is one of the main entry points for Website@School. Other main entry points are [admin.php](#), [cron.php](#), [file.php](#) and also [install.php](#). Main entry points all define the constant WASENTRY. This is used in various include()ed files to detect break-in attempts.

This is a kickstarter for /program/main\_index.php, but first we check for 'maintenance mode': if the file 'maintenance.html' exists in the current directory, we bail out and redirect the visitor to that file.

If we're NOT in maintenance mode, we read the essential configuration parameters from the file 'config.php' in the current directory and continue with /program/main\_index.php to do the actual work.

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl)>
- **Version** \$Id: index.php,v 1.2 2011-02-03 14:04:01 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

```
require_once dirname(WASENTRY)."/config.php" [line 49]
```

```
require_once $CFG->progdire."/main_index.php" [line 55]
```

## init.php

**/program/init.php - setup database connection, sessions, configuration, etc.**

This file is included from one of the main entry points. The following subsystems and global variables are initialised:

- connection to the database
- session handler
- \$CFG
- etc.

This file is included at a fairly early stage in the process. It does not rely on any regular libraries which are include()'ed later on. That is: all relevant libraries (such as [waslib.php](#)) are included when necessary from within the function [initialise\(\)](#).

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: init.php,v 1.3 2011-05-09 13:29:08 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

*double function diff\_microtime(\$time\_start, \$time\_stop) [line 320]*

**Function Parameters:**

- *string* **\$time\_start** starting time as a string (fractional seconds, space, seconds)
- *string* **\$time\_stop** ending time as a string (fractional seconds, space, seconds)

### Calculate the difference between two microtimes

*void function error\_exit(\$bare\_condition\_code, [\$page\_title = 'Fatal Error']) [line 278]*

**Function Parameters:**

- *string* **\$bare\_condition\_code** the bare condition code to report
- *string* **\$page\_title** the title to show in the generated HTML-page



## emergency exit of program in case there is something really, really wrong

This routine outputs a short message and a 'cryptic' condition code and exits the program. It is called when something goes horribly wrong during the early stages of running the program, e.g. the database cannot be opened or there is a version mismatch between the program code (the .php-files) and the database. The complete condition code is the WAS release number followed by a slash followed by the WAS version number followed by a slash and the bare condition code. The message ends with a link to about.html with 'Powered by' or 'Based on', depending on the WAS original flag. Note that we try to show graphics (including logo) but that we switch back to text-only if it is too early, ie. before [waslib.php](#) is included.

Here is an overview of meaning of the condition codes used.

- 010: cannot find config.php, is W@S installed at all?
- 015: cannot find program/main\_XXXXX.php, is W@S installed at all?
- 020: configuration error, invalid database type
- 030: cannot connect to database, busy or configuration error?
- 040: error accessing the database, is W@S installed at all?
- 050: version mismatch, update to new version necessary
- 060: magic\_quotes\_sybase is On
- 070: there is no (default) node available in this (default) area
- 080: there is no area available
- 090: there is no valid theme available

The condition code is numeric because it is easier to report for non-English speaking users than a complicated English sentence. (The language files are not yet loaded when `error_exit()` is called).

- **TODO** do we really want to 'leak' a link to the main site?
- **Uses** [WAS\\_VERSION](#) - indicate internal version in 'cryptic' message
- **Uses** \$CFG

*void function initialise() [line 42]*

**initialise the program, setup database, read configuration, etc.**

*bool/void function was\_version\_check([\$exit\_on\_error = TRUE]) [line 223]*

**Function Parameters:**

- *bool* **\$exit\_on\_error** if TRUE, this routine only returns if versions match, if FALSE a mismatch is fatal

### check version of PHP-files against version stored in database

this checks the main WAS\_VERSION (of files) against \$CFG->version (database). if all is well, we return TRUE indicating both version numbers match. If there is a discrepancy it is logged and depending on parameter \$exit\_on\_error we either exit altogether OR we return FALSE to indicate the version mismatch.

Typical use is to call this routine near the start as follows (e.g. in [main\\_index.php](#) or [main\\_file.php](#)):

```
...
initialise();
was_version_check();
// Still here? Then version is OK
...
```

This forces an exit for the interfaces at the 'visitor' side. For the webmaster it is different: even if the versions do not match, we want to be able to login and do something about it via some sort of upgrade routine, e.g:

```
...
initialise();
if (!was_version_check(FALSE)) {
    do_upgrade();
} else {
    do_regular_admin();
}
...
```

## admin.php

**/program/languages/en/admin.php - translated messages for /program/admin.php (English)**

This file is the 'mother-of-all-languages' file: it is the basis for all other translations. Because there are so many strings to translate, it is easy to lose track of which one is used where, etc. Also, it is sometimes hard to figure out what the purpose of a word or a phrase is without the context.

I try to make that a little easier by adding comments to this (main) language file. These comments will be collected in a separate array called `$comment`. The actual translations and texts end up in an array called `$string`. By using the same key in the `$comment` array, it is possible to add clarification. This clarification can be made visible in the translation tool, helping the translator grasping the purpose and context of the texts to translate.

Note that the order in which the texts appear in this file can also determine the order in which the strings are displayed in the translation tool. The comments 'follow' the strings rather than vice versa. It is not an error if a string doesn't have a comment.

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: admin.php,v 1.5 2011-03-09 09:58:50 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

# loginlib.php

/program/languages/en/loginlib.php - translated messages for login procedure and change password

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl)>
- **Version** \$Id: loginlib.php,v 1.2 2011-02-03 14:03:59 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **Usedby** [admin\\_show\\_login\\_and\\_exit\(\)](#)
- **Usedby** [admin\\_login\(\)](#)
- **Usedby** [admin\\_logout\\_and\\_exit\(\)](#)
- **License** [GNU AGPLv3+Additional Terms](#)

# was.php

/program/languages/en/was.php - generic translated messages

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: was.php,v 1.2 2011-02-03 14:03:59 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

## admin.php

/program/languages/nl/admin.php - translated messages for /program/admin.php  
(Dutch)

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: admin.php,v 1.4 2011-03-09 09:58:50 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

# loginlib.php

/program/languages/nl/loginlib.php - translated messages for login procedure and change password

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl)>
- **Version** \$Id: loginlib.php,v 1.2 2011-02-03 14:03:59 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

# was.php

/program/languages/nl/was.php - generic translated messages (Dutch)

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: was.php,v 1.2 2011-02-03 14:03:59 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
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# accountmanagerlib.php

/program/lib/accountmanagerlib.php - accountmanager (users and groups)

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: accountmanagerlib.php,v 1.2 2011-02-03 14:04:03 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

GROUPMANAGER\_DIALOG\_ADD = 1 *[line 65]*

**Distinguish between the various dialogs**

GROUPMANAGER\_DIALOG\_CAPACITY\_ADMIN = 14 *[line 70]*

GROUPMANAGER\_DIALOG\_CAPACITY\_INTRANET = 13 *[line 69]*

GROUPMANAGER\_DIALOG\_CAPACITY\_PAGEMANAGER = 15 *[line 71]*

GROUPMANAGER\_DIALOG\_DELETE = 3 *[line 67]*

GROUPMANAGER\_DIALOG\_EDIT = 2 *[line 66]*

TASK\_ACCOUNTS = overview *[line 28]*

**default selection for account manager: show introduction + links to users and groups**

TASK\_GROUPS = groups *[line 49]*

**TASK\_GROUP\* relate to plain groups**

TASK\_GROUP\_ADD = groupadd *[line 50]*

TASK\_GROUP\_CAPACITY\_ADMIN = capacityadmin *[line 60]*

TASK\_GROUP\_CAPACITY\_INTRANET = capacityintranet *[line 58]*

TASK\_GROUP\_CAPACITY\_MODULE = capacitymodule *[line 59]*

TASK\_GROUP\_CAPACITY\_OVERVIEW = capacityoverview *[line 57]*

**TASK\_GROUP\_CAPACITY\_\* relate to group-capacity-combinations**

TASK\_GROUP\_CAPACITY\_PAGEMANAGER = capacitypagemanager *[line 61]*

TASK\_GROUP\_CAPACITY\_SAVE = capacitysave *[line 62]*

TASK\_GROUP\_DELETE = groupdelete *[line 51]*

TASK\_GROUP\_EDIT = groupedit *[line 52]*

TASK\_GROUP\_SAVE = groupsave *[line 53]*

TASK\_GROUP\_SAVE\_NEW = groupsavenew *[line 54]*

TASK\_USERS = users *[line 31]*

**TASK\_USER\* relate to user accounts**

```

TASK_USER_ADD = useradd [line 32]
TASK_USER_ADMIN = useradmin [line 42]
TASK_USER_ADVANCED = useradvanced [line 35]
TASK_USER_DELETE = userdelete [line 33]
TASK_USER_EDIT = useredit [line 34]
TASK_USER_GROUPADD = usergroupadd [line 37]
TASK_USER_GROUPDELETE = usergroupdelete [line 38]
TASK_USER_GROUPS = usergroups [line 36]
TASK_USER_GROUPSAVE = usergroupsave [line 39]
TASK_USER_INTRANET = userintranet [line 40]
TASK_USER_MODULE = usermodule [line 41]
TASK_USER_PAGEMANAGER = userpagemanager [line 43]
TASK_USER_SAVE = usersave [line 45]
TASK_USER_SAVE_NEW = usersavenew [line 46]
TASK_USER_TREEVIEW = usertreeview [line 44]
USERMANAGER_DIALOG_ADD = 21 [line 73]
USERMANAGER_DIALOG_ADMIN = 34 [line 79]
USERMANAGER_DIALOG_DELETE = 23 [line 75]
USERMANAGER_DIALOG_EDIT = 22 [line 74]
USERMANAGER_DIALOG_INTRANET = 33 [line 78]
USERMANAGER_DIALOG_PAGEMANAGER = 35 [line 80]
void function job_accountmanager(&$output) [line 96]

```

**Function Parameters:**

- *object* **&\$output** collects the html output

### **main entry point for accountmanager (called from admin.php)**

this routing dispatches the tasks. If a specified task is not recognised, the default task TASK\_ACCOUNTS\_OVERVIEW is executed. Note that the User Manager and the Group Manager are heavily interconnected. Therefore we use 1 common set of tasks and distinguish between both managers via sets of tasks, e.g. TASK\_USER\* point to the user manager where TASK\_GROUP\* lead to the group manager.

```
void function show_accounts_intro(&$output) [line 177]
```

**Function Parameters:**

- *object* **&\$output** collects the html output

### **display an introductory text for the account manager + menu**

```
void function show_accounts_menu(&$output, [$current_task = NULL]) [line 227]
```

**Function Parameters:**

- *object* **&\$output** collects the html output
- *string* **\$current\_task** indicate the current menu selection (if any)

**display the account manager menu**

## aclmanager.class.php

### /program/lib/aclmanager.class.php - dealing with access control lists

This file defines a class for dealing (edit+save but not create or delete) with lists of access control parameters. The main purpose is to allow easy editing of the many many permission bitmaps that are possible for both users and groups.

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: aclmanager.class.php,v 1.2 2011-02-03 14:04:03 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

ACL\_LEVEL\_AREA = 3 *[line 55]*

**limit available role options to pages, sections and areas (used in pagemanager permissions)**

ACL\_LEVEL\_NONE = 0 *[line 46]*

**limit available role options to 'none' and 'guru' (used in pagemanager permissions)**

ACL\_LEVEL\_PAGE = 1 *[line 49]*

**limit available role options to pages (used in pagemanager permissions)**

ACL\_LEVEL\_SECTION = 2 *[line 52]*

**limit available role options to pages and sections (used in pagemanager permissions)**

ACL\_LEVEL\_SITE = 4 *[line 58]*

**no limit on available role options (used in pagemanager permissions)**

ACL\_TYPE\_ADMIN = 2 *[line 36]*

**acl for administrator permissions**

ACL\_TYPE\_INTRANET = 1 *[line 33]*

**acl for intranet permissions**

ACL\_TYPE\_MODULE = 4 *[line 42]*

**acl for individual module permissions**

ACL\_TYPE\_PAGEMANAGER = 3 *[line 39]*

**acl for pagemanager permissions**

## area.class.php

### /program/lib/area.class.php - taking care of areas

This file defines a class for dealing with areas.

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl)>
- **Version** \$Id: area.class.php,v 1.2 2011-02-03 14:04:03 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **TODO** we probably need to get rid of this file because it is not used (2010-12-07/PF)
- **License** [GNU AGPLv3+Additional Terms](#)

AREA\_CONST\_TABLE\_AREAS = areas *[line 31]*

**the bare name of the areas table (without prefix), should be a class constant but PHP4 doesn't do that**

AREA\_CONST\_TABLE\_NODES = nodes *[line 34]*

**the bare name of the nodes table (without prefix), should be a class constant but PHP4 doesn't do that**

# areamanager.class.php

## /program/lib/areamanager.class.php - taking care of area management

This file defines a class for managing areas (add, edit, delete, view).

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl)>
- **Version** \$Id: areamanager.class.php,v 1.2 2011-02-03 14:04:03 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
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```
AREAMANAGER_CHORE_ADD = add [line 30]
AREAMANAGER_CHORE_DELETE = delete [line 31]
AREAMANAGER_CHORE_EDIT = edit [line 32]
AREAMANAGER_CHORE_EDIT_THEME = edittheme [line 33]
AREAMANAGER_CHORE_RESET_THEME = resettheme [line 34]
AREAMANAGER_CHORE_SAVE = save [line 36]
AREAMANAGER_CHORE_SAVE_NEW = savenew [line 35]
AREAMANAGER_CHORE_SET_DEFAULT = setdefault [line 37]
AREAMANAGER_CHORE_VIEW = view [line 29]
AREAMANAGER_DIALOG_ADD = 1 [line 39]
AREAMANAGER_DIALOG_DELETE = 2 [line 40]
AREAMANAGER_DIALOG_EDIT = 3 [line 41]
AREAMANAGER_DIALOG_EDIT_THEME = 4 [line 42]
AREAMANAGER_DIALOG_RESET_THEME = 5 [line 43]
```

## configassistant.class.php

### **/program/lib/configassistant.class.php - dealing with lists of configuration parameters**

This file defines a class for dealing (edit+save but not create or delete) with lists of configuration parameters. The main purpose is to allow easy editing of configuration of parts of the system, including the main program configuration.

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: configassistant.class.php,v 1.3 2011-05-11 07:46:27 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)



# configurationmanagerlib.php

## /program/lib/configurationmanagerlib.php - configurationmanager

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: configurationmanagerlib.php,v 1.2 2011-02-03 14:04:03 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
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CHORE\_SAVE = save [line 34]  
TASK\_ALERTS = alerts [line 32]  
TASK\_AREAS = areas [line 30]  
TASK\_CONFIGURATION\_INTRO = intro [line 29]  
TASK\_SITE = site [line 31]  
void function job\_configurationmanager(&\$output) [line 46]

### **Function Parameters:**

- *object* **&\$output** collects the html output

### **main entry point for configurationmanager (called from /program/main\_admin.php)**

this routine dispatches the tasks, If the specified task is not recognised, the default task TASK\_CONFIGURATION\_INTRO is executed.

void function process\_task\_site(&\$output) [line 168]

### **Function Parameters:**

- *object* **&\$output** collects the html output

### **handle the editing/saving of the main configuration information**

this routine handles editing of the main configuration parameters. It either displays the edit dialog or saves the modified data and shows the configuration manager introduction screen.

Note that we do NOT try to redirect the user via a header() after a succesful save. It would be

handy because this particular save action may have had impact on the global configuration, which is already read at this point. By redirecting we would make a fresh start, with the new parameters. However, we lose the easy ability to tell the user that the data was saved (via `$output->add_message()`). So, either no feedback or obsolete global config in core. Hmmmm. I settle for the feedback and the 'wrong' settings.

- **Uses** ConfigAssistant()

*void function show\_configuration\_intro(&\$output) [line 103]*

***Function Parameters:***

- *object* **&\$output** collects the html output

### **display an introductory text for the configuration manager + menu**

*void function show\_configuration\_menu(&\$output, [\$current\_task = NULL]) [line 115]*

***Function Parameters:***

- *object* **&\$output** collects the html output
- *string* **\$current\_task** indicate the current menu selection (if any)

### **display the configuration manager menu**

# databaselib.php

/program/lib/database/databaselib.php - database factory and database access routines

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: databaselib.php,v 1.2 2011-02-03 14:04:04 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

*bool/object* function database\_factory(\$prefix, [\$db\_type = 'mysql'], [\$debug = FALSE]) [*line 64*]

## **Function Parameters:**

- *string* **\$prefix** the tablename prefix
- *string* **\$db\_type** (optional) which database to use, default 'mysql'
- *bool* **\$debug** if TRUE extra information is displayed (handy for debugging the code)

## **manufacture a database object**

This loads (includes) a specific database access class based on the parameter \$db\_type. Currently 'mysql' is the only option, but support for PostgreSQL or other databases could be added in the future, see the code that is commented out

Because Website@School is not meant to be an 'enterprisy application', I decided against using an abstract class that would be extended by a specific driver class which would be instantiated via yet another factory type class; I'd like to keep this as simple as possible while retaining the necessary flexibility (and the option to add support for other databases). Toolkits like Adodb seem overkill for this application program.

This routine is called at a fairly early stage in the process. It does not rely on any regular libraries which may be include()'ed lateron. If no valid database type is specified, the function returns FALSE, otherwise a database object is returned.

Note that I did not use a singleton because I think that that pattern is simply a fancy word for a global variable. YMMV.

Note: This file can be safely included from the [install.php](#) script, allowing for database-

manipulations via this abstraction layer rather than directly going to the database. There are no dependencies on other include()'s other than the actual database class files such as mysql.class.php. Also, this file does not rely on the global variable \$CFG, which is also very convenient in the installer (where no CFG is available).

- **TODO** perhaps add postgresql in a future version

*void function db\_bool\_is(\$value, \$variable\_to\_check) [line 380]*

**Function Parameters:**

- *bool/mixed* **\$value** value to test for, could be TRUE, FALSE or anything else
- *mixed* **\$variable\_to\_check** the value of the variable to check

**check boolean field in a database-independent way**

Various databases have different ways to indicate TRUE or FALSE in boolean type of fields. MySQL uses a tinyint(1) with values NULL, 0 and 1. PostgreSQL uses a lowercase 't' or 'f' etc. We already have two database-specific definitions for TRUE and FALSE: SQL\_TRUE and SQL\_FALSE. This routine 'converts' the database-specific boolean values back to a form that is useable in PHP. This routine is able to test for either TRUE or FALSE. Any other value is returned as NULL.

```
Typical use: $user = db_select_single_record('users','is_active','user_id = 13');
if (db_bool_is(TRUE,$user['is_active'])) {
    ...
}
```

*bool/int function db\_delete(\$tablename, [\$where = ""]) [line 336]*

**Function Parameters:**

- *string* **\$tablename** the name of the table to delete from (without prefix)
- *mixed* **\$where** a single clause or an array with fieldnames => values ((without the WHERE keyword)

**delete zero or more rows in a table**

- Uses [db\\_delete\\_sql\(\)](#)

*string* function db\_delete\_sql(\$tablename, [\$where = ""]) [*line 348*]

**Function Parameters:**

- *string* **\$tablename** the name of the table to delete from (without prefix)
- *mixed* **\$where** a single clause or an array with fieldnames => values ((without the WHERE keyword))

**generate SQL to delete zero or more rows in a table**

- Usedby [db\\_delete\(\)](#)

*string* function db\_errormessage() [*line 458*]

**retrieve the latest database error from \$DB**

- Uses \$DB;

*string/mixed* function db\_escape\_and\_quote(\$value) [*line 277*]

**Function Parameters:**

- *mixed* **\$value** string, boolean, null or other value to escape and quote

**conditionally quote and escape values for use with a database table**

If \$value is a string, it is escaped and single quotes are added at begin and end. If \$value is a boolean, it is converted into the correct value for the database using SQL\_FALSE/SQL\_TRUE. If \$value is NULL, it is converted into the string 'NULL' (without

quotes) Otherwise the value is not changed.

- See <http://xkcd.com/327>
- Usedby [db\\_select\\_sql\(\)](#)
- Uses \$DB
- Usedby [db\\_insert\\_into\\_sql\(\)](#)

*bool function db\_insert\_into(\$tablename, \$fields) [line 120]*

**Function Parameters:**

- *string* **\$tablename** the name of the table to insert into (without prefix)
- *array* **\$fields** an associative array with fieldnames and fieldvalues

**execute the necessary SQL-code for an INSERT INTO statement**

This excutes the SQL-statement created by [db\\_insert\\_into\\_sql\(\)](#).

- Uses \$DB

*bool function db\_insert\_into\_and\_get\_id(\$tablename, \$fields, [\$key\_fieldname = ""]) [line 137]*

**Function Parameters:**

- *string* **\$tablename** the name of the table to insert into (without prefix)
- *array* **\$fields** an associative array with fieldnames and fieldvalues
- *string* **\$key\_fieldname** the name of the field that holds the primary key/serial

**execute the necessary SQL-code for an INSERT INTO statement and return the last\_insert\_id**

This executes the SQL-statement created by [db\\_insert\\_into\\_sql\(\)](#). If all goes well, the value of the last inserted id is returned.

- **Uses** `$DB`

*string* function `db_insert_into_sql($tablename, $fields)` [line 95]

**Function Parameters:**

- *string* **\$tablename** the name of the table to insert into (without prefix)
- *array* **\$fields** an associative array with fieldnames and fieldvalues

### **generate the necessary SQL-code for an INSERT INTO statement**

Construct an SQL-statement that inserts data into the specified table. This routine takes care of properly escaping strings and also handles the addition of the table prefix

- **Uses** [db\\_escape\\_and\\_quote\(\)](#)

*int|bool* function `db_last_insert_id([$tablename = ''], [$fieldname = ''])` [line 409]

**Function Parameters:**

- *string* **\$tablename** name of the table (without prefix) in which a record was inserted
- *string* **\$fieldname** name of the serial field to examine

### **wrapper for DB->last\_insert\_id()**

This calls `$DB->last_insert_id()` in a way that should be compatible with a future PostgreSQL database class. Note that MySQL doesn't care about this. You can get away with leaving table and field parameters empty (as is the default), but for compatibility and documentation purposes you should use the correct values.

Typical use: `db_insert_into('users',$fields_array);` `$user_id` =

```
db_last_insert_id('users','user_id');
```

- **Uses \$DB**

*bool/array* function `db_select_all_records($tablename, $fields, [$where = "], [$order = "], [$keyfield = "], [$limit = "], [$offset = "])` *[line 251]*

**Function Parameters:**

- *string* **\$tablename** name of the table to select from (without prefix)
- *mixed* **\$fields** fieldname or array with fieldnames to select
- *mixed* **\$where** a single clause or an array with fieldnames => values ((without the WHERE keyword)
- *mixed* **\$order** fieldname or array with fieldnames to determine sort order (without ORDER BY keyword)
- *string* **\$keyfield** field to use as the key in the returned array or empty for 0-based numeric array key
- *int* **\$limit** the maximum number of records to retrieve
- *int* **\$offset** the number of records to skip initially

## fetch all selected records from the database in one array

- **Uses** [db\\_select\\_sql\(\)](#)

*bool/array* function `db_select_single_record($tablename, $fields, [$where = "], [$order = "])` *[line 222]*

**Function Parameters:**

- *string* **\$tablename** name of the table to select from (without prefix)
- *mixed* **\$fields** fieldname or array with fieldnames to select



- *mixed* **\$where** a single clause or an array with fieldnames => values ((without the WHERE keyword)
- *mixed* **\$order** fieldname or array with fieldnames to determine sort order (without ORDER BY keyword)

## fetch a single record from the database

- Uses [db\\_select\\_sql\(\)](#)

*string* function db\_select\_sql(\$tablename, \$fields, [\$where = ''], [\$order = '']) [*line 178*]

### **Function Parameters:**

- *string* **\$tablename** name of the table to select from (without prefix)
- *mixed* **\$fields** fieldname or array with fieldnames to select
- *mixed* **\$where** a single clause or an array with fieldnames => values ((without the WHERE keyword)
- *mixed* **\$order** fieldname or array with fieldnames to determine sort order (without ORDER BY keyword)

## generate the necessary SQL-code for a simple SELECT statement

Construct an SQL-statement of the form: SELECT field\_list FROM table WHERE where\_expression ORDER BY orderby\_list

The parameter \$fields can be either a simple string, indicating a single field or an array when more fields are to be selected

The optional parameter \$where is either a simple string with an appropriate expression (without the keyword WHERE) or an array with fieldname/value-pairs. In the latter case the clauses fieldname=value are AND'ed together. If the specified values are string-like, they are properly quoted. Boolean values are treated properly too.

The optional parameter \$order is either a simple string with an appropriate list or expression (without the keyword ORDER BY) or an array with fieldnames which will be used to create a comma-delimited string.

Examples:

1. `db_select_sql('areas','title')` yields `'SELECT title FROM was_areas'`
2. `db_select_sql('areas',array('title','theme_id'),array('is_visible' => TRUE),'sort_order')` yields `'SELECT title,theme_id FROM was_areas WHERE is_visible = 1 ORDER BY sort_order'` (if `SQL_TRUE` is `'1'`)

- Usedby [db\\_select\\_all\\_records\(\)](#)
- Usedby [db\\_select\\_single\\_record\(\)](#)
- Uses [db\\_escape\\_and\\_quote\(\)](#)

*bool/int* function `db_update($tablename, $fields, [$where = ''])` [*line 300*]

**Function Parameters:**

- *string* **\$tablename** the name of the table to update (without prefix)
- *array* **\$fields** an associative array with fieldnames and fieldvalues
- *mixed* **\$where** a single clause or an array with fieldnames => values ((without the WHERE keyword))

## update one or more fields in a table

- Uses [db\\_update\\_sql\(\)](#)

*string* function `db_update_sql($tablename, $fields, [$where = ''])` [*line 314*]

**Function Parameters:**

- *string* **\$tablename** the name of the table to update (without prefix)
- *array* **\$fields** an associative array with fieldnames and fieldvalues
- *mixed* **\$where** a single clause or an array with fieldnames => values ((without the WHERE keyword))

## generate sql to update one or more fields in a table

- Usedby [db\\_update\(\)](#)
- Uses \$DB

*string* function db\_where\_clause([\$where = ""]) [*line 431*]

### **Function Parameters:**

- *mixed* **\$where** a single clause or an array with fieldnames => values ((without the WHERE keyword)

### **construct a where clause from string/array, including the word WHERE**

this constructs a where clause including the word 'WHERE' based on the string or array \$where.

The optional parameter \$where is either a simple string with an appropriate expression (without the keyword WHERE) or an array with fieldname/value-pairs. In the latter case the clauses fieldname=value are AND'ed together. If the specified values are string-like, they are properly quoted. Boolean values are treated properly too. NULL-values yield a standard 'IS NULL' type of expression.

## mysql.class.php

### /program/lib/database/mysql.class.php - access to mysql via database class

This file is included from the poor mans database factory in [databaselib.php](#). It provides all necessary functionality to use MySQL as the underlying database server.

This file defines two classes: DatabaseMysql and DatabaseMysqlResult. Typical usage would be:

```
$DB = new Database($table_prefix);           // once at program start
$DB->connect($host,$usr,$pwd,$dbname);        // once at program start

$sql = "SELECT * FROM {$DB->prefix}foo";      // select all rows from table foo,
$DBResult = $DB->query($sql);
$all_rows = $DBResult->fetch_all_assoc()      // store everything in an array,
$DBResult->close();                          // and free the memory

...                                           // do something with $all_rows

$DB->close();                                // once at program end
```

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl)>
- **Version** \$Id: mysql.class.php,v 1.5 2011-05-09 19:34:24 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

SQL\_FALSE = 0 [line 48]

**this circumvents the sub-optimal implementation of booleans in MySQL**

SQL\_TRUE = 1 [line 51]

**this circumvents the sub-optimal implementation of booleans in MySQL**

## dbsessionlib.php

### /program/lib/dbsessionlib.php - functions to keep PHP-sessions in the database

This file provides the functions to handle sessions via the database rather than via files or other standard PHP-mechanisms.

Useful information about storing sessions can be found in these user comments:  
<http://php.net/manual/en/function.session-set-save-handler.php>

Important issues:

- there is an issue with writing session data when using a database class because the database class is already destroyed when PHP tries to write the session data. Workaround: call `session_commit()` (alias for `session_write_close()`) near the end of the script.
- there is a security risk when the script simply accepts any session id that is presented via a cookie; a session should exist/be created before data is written and the session key should have been created in a previous call and thus be present in the database
- different versions of PHP handle callback parameters differently where object methods are involved. The most generic way to work around these incompatibilities is to use global functions for open, close, etc. rather than methods in some session class.
- session keys should be sanitised before manipulating the database in order to prevent an SQL injection.
- `session.auto_start` may make it impossible to substitute our own session handlers if it is set in `php.ini`
- how about locking a session?

There is a difference between the maximum session duration and the session time out. A session could last for 'duration' seconds but only if there is still activity at least every timeout seconds. There should be a maximum session lifetime of say 24 hours. There also should be a timeout of say 60 minutes.

Sessions are stored in a table called 'sessions'. This table is defined as follows: `session_id` serial

`session_key` varchar(255)

`session_data` longtext

`user_id` int unsigned

`user_information` varchar(255)

`ctime` datetime

`atime` datetime

primary key(`session_id`)

foreign key(`user_id`) references users(`user_id`)

unique index(`session_key`)

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl)>
- **Version** \$Id: dbsessionlib.php,v 1.2 2011-02-03 14:04:03 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **Usedby** [admin\\_continue\\_session\(\)](#)
- **License** [GNU AGPLv3+Additional Terms](#)

*bool* function dbsession\_close() [*line 214*]

### **'close' a session that was opened with dbsession\_open() before**

Since this function has no way to tell `_which_` session should be closed, it is utterly useless (but it has to exist to satisfy `session_set_save_handler()`) The function [dbsession\\_open\(\)](#) has the same uselessness, so they are a perfect pair.

- **TODO** should we do something with locking the session record from `dbsession_open()` until `dbsession_close()`? For now, the session record is not locked in any way, so the latest call gets to keep its changes Mmmm....

*bool|string* function dbsession\_create(\$user\_id, [\$user\_information = ""]) [*line 125*]

### **Function Parameters:**

- *int* **\$user\_id** link to the users table, identifies the user that started the session
- *string* **\$user\_information** (optional) auxiliary information about the user, e.g. the IP-address

### **create a new session in the session table, return the unique sessionkey**

this creates generates a new unique session key and stores it in a new record in the sessions table. Additional information is recorded in the new record too: the `user_id` and auxiliary information. This information makes that a session can always be linked to a particular user (which is handy when dealing with locked pages, etc.). This routine attempts to create a unique session key a number of times. If it doesn't work out, the routine returns FALSE.

the optional parameter `$user_information` can be used to store additional information about this user, e.g. the IP-address. This is useful for generating messages like 'Node xxx is

currently locked by user YYYY logged in from ZZZZ'.

Note that the generation of a unique session key is salted with both the main url of this website and the special salt that was recorded once during installation time. Also, pseudo-random data is added via `rand()`. Hopefully this will be hard to guess, even though we use `md5()` to condense this (semi-)random information into only 128 bits.

- **TODO** should we also record the IP-address of the user in the session record? In a way this is a case of information leak, even though it is only between authenticated users. Mmmm...
- **Uses** \$DB
- **Uses** \$CFG

*bool function dbsession\_destroy(\$session\_key) [line 267]*

**Function Parameters:**

- *string* **\$session\_key** the unique session\_key that identifies the session

**remove a session record from the sessions table (it should still exist)**

remove the specified record from the sessions table. it is an error if the record does not exist.

*bool function dbsession\_exists(\$session\_key) [line 159]*

**Function Parameters:**

- *string* **\$session\_key** the unique session\_key that identifies the session

**check to see if \$session\_key exists in the session table**

This checks the existence of a session in the sessions table. Session keys are only generated from [dbsession\\_create\(\)](#). This prevents us accepting spurious session keys via a manipulated cookie. If the session key does not exist, the call fails and FALSE is returned.

*bool function dbsession\_expire(\$max\_lifetime) [line 308]*

**Function Parameters:**

- *int* **\$max\_lifetime** the lifetime value to automatically expire sessions (in seconds)

### **remove all sessions that were created more than \$max\_life seconds ago**

not only are sessions terminated when there is no more activity for \$time\_out seconds (@see [dbsession\\_garbage\\_collection\(\)](#)) but also the total lifetime of a session is limited to \$life\_time seconds. This routine is not part of the required session handlers but it can be called periodically (@see [cron.php](#)).

- Uses [dbsession\\_remove\\_obsolete\\_sessions\(\)](#)

*bool* function [dbsession\\_garbage\\_collection\(\\$time\\_out\)](#) [*line 285*]

#### **Function Parameters:**

- *int* **\$time\_out** the time-out value to automatically expire sessions (in seconds)

### **remove all sessions that are last accessed more than \$time\_out seconds ago**

- Usedby [was\\_login\(\)](#)
- Uses [dbsession\\_remove\\_obsolete\\_sessions\(\)](#)

*int|bool* function [dbsession\\_get\\_session\\_id\(\\$session\\_key\)](#) [*line 173*]

#### **Function Parameters:**

- *string* **\$session\_key** the unique session\_key that identifies the session

### **retrieve the session\_id (pkey) that corresponds with session\_key**

this is very similar to [dbsession\\_exists\(\)](#). This routine returns the actual session\_id integer, whereas [dbsession\\_exists\(\)](#) only returns TRUE.



*bool* function dbsession\_open(\$save\_path, \$session\_name) [*line 195*]

**Function Parameters:**

- *string* **\$save\_path** (unused) pathname relevant for file based session handler
- *string* **\$session\_name** (unused) the non-unique session\_name that identifies the cookie in the user's browser

### 'open' a session

this 'opens' a session. note that this function is unable to identify the session because it is only presented with

- the \$save\_path (which is relevant only with file-based session handlers)
- the \$session\_name (which is the \_name\_ of the session, but not the \_token\_)

there is no way to let this function do anything useful, so it boils down to a dummy always returning TRUE. The function [dbsession\\_close\(\)](#) has the same uselessness, so they are a perfect pair.

*string* function dbsession\_read(\$session\_key) [*line 224*]

**Function Parameters:**

- *string* **\$session\_key** the unique session\_key that identifies the session

### read the (serialised) session data from the database

*bool* function dbsession\_remove\_obsolete\_sessions(\$seconds, \$time\_field) [*line 332*]

**Function Parameters:**

- *int* **\$seconds** the period of time after which the session is obsolete
- *string* **\$time\_field** the field to use for time comparisons: either 'atime' or 'ctime'

### workhorse for removing obsolete sessions from the database

this logs and subsequently removes obsolete sessions from the sessions table It is a workhorse function for both [dbsession\\_garbage\\_collection\(\)](#) and [dbsession\\_expire\(\)](#).

Session records are removed when the \$time\_field in the sessions table contains a date/time that is older than \$seconds seconds ago. Before the records are removed, we retrieve them

and log pertinent information from each one via `logger()`, for future reference.

Note that we try to continue with deleting records, even if the logging appears to have generated errors.

- Usedby [dbsession\\_expire\(\)](#)
- Usedby [dbsession\\_garbage\\_collection\(\)](#)

*bool* function `dbsession_setup($session_name)` [line 85]

**Function Parameters:**

- *string* **\$session\_name** the name of the session (usually 'PHPSESSID' in generic PHP-applications)

### **setup database based handlers for session management**

this is basically shorthand for `session_set_save_handler()` this routine replaces the existing session handlers with the handlers specified below in this file.

- Usedby [was\\_login\(\)](#)
- Usedby [was\\_logout\(\)](#)

*bool* function `dbsession_write($session_key, $session_data)` [line 244]

**Function Parameters:**

- *string* **\$session\_key** the unique session\_key that identifies the session
- *string* **\$session\_data** the string with (serialised) session variables

### **write the (serialised) data to the database**



# dialoglib.php

## /program/lib/dialoglib.php - useful functions for manipulating dialogs

This file provides various utility routines for creating and validating user dialogs.

A dialog is a collection of input elements grouped together in a form. An input element (or field) has at least a type (e.g. F\_ALPHANUMERIC or F\_DATETIME) and a name (e.g. 'title' or 'expiry') and optionally one or more of the other possible properties. The name of an input element uniquely identifies the field in the dialog; it can be used to retrieve the data entered by the user from the global \$\_POST array.

A dialog can be defined via a 0-based array, where every array element is separate input element. Each of the input elements is in itself an associative array with property-value-pairs. The recognition of a property depends on the type, e.g. the number of decimals is irrelevant for a string-type input element.

Here is an overview of properties and field types to which they apply. An 'x' means required, an 'o' means optional and a '-' means don't care.

type

	name	value	rows	columns	minlength	maxlength	decimals	minvalue	maxvalue	options	label	accesskey	alt	class	viewonly	tabindex	title	hidden	id
F_ALPHANUMERIC	x	x	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
F_INTEGER	x	x	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
F_REAL	x	x	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
F_DATE	x	x	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
F_TIME	x	x	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
F_DATETIME	x	x	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
F_PASSWORD	x	x	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
F_CHECKBOX	x	x	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o

```

F_LISTBOX    x x o o - - - - - x o o o o o o o o o
F_RADIO      x x o - - - - - x o o o o o o o o o
F_FILE       x x o - o - - - - - o o o o o o o o - o
F_SUBMIT     x x x - - - - - - - o o o o o o o - o
F_RICHTEXT   x x o o o o o o - - - - - o o o o o o o o o o

```

There are two more properties: 'errors' and 'error\_messages'. These properties can be set whenever the validation of the input yields an error. If all is well, 'errors' is either not set or equal to 0.

Here is a description of the various properties.

- type:  
the type of the input element, one of the F\_\* constants defined at the top of this file.
- name:  
the name to uniquely identify the input element
- value:  
the current value of the element, this value needs to be displayed in the dialog
- rows:  
the number of text rows for this element. This applies only to generic text fields (alphanumerics) and listboxes.
- columns:  
the number of characters to show in the input element. This applies only to text inputs (not lists or checkboxes).
- minlength:  
the minimum number of characters that need to be entered by the user. If 0, the field can be left empty.
- maxlength:  
the maximum number of characters that can be entered by the user. Note that this number is no necessarily the same as the number of columns to display (or even the product of columns and rows).
- decimals:  
the number of decimals in the fraction of real numbers
- minvalue:  
the minimum value that needs to be entered. This applies to numeric fields (integer, real) and also to dates and times.
- maxvalue:

the maximum value that can be entered. This applies to numeric fields (integer, real) and also to dates and times.

- **options:**  
this is a list (array) of key-value-pairs that identify the allowable values for a listbox or radio buttons. The key is used as the fields value and the value is the descriptive title of the option.
- **label:**  
this is the text that is displayed `_before_` the input element. It is used to indicate the purpose of the input element.
- **accesskey:**  
this is a single letter that can be used to access the element via the keyboard by using a key combination like [Alt-A].
- **alt:**  
an alternative text that describes the element (accessibility)
- **class:**  
this identifies the class(es) that need to be associated with this element. This allows for changing the style of the element.
- **readonly:**  
indicates that this element is not to be changed by the user but that it can be displayed nevertheless
- **tabindex:**  
a number that indicates the order in which fields area accessed when using the [Tab] key to move to the next element.
- **title:**  
a descriptive title that is displayed when the mouse is hovering over the element
- **hidden:**  
identifies a field that should be part of the dialog, but not visible to the user. Note that by specifying a hidden list, it is possible to validate the value of the hidden input against the list of acceptable values once it returns from the user. However, one should never trust the value of a field that is sent in 'hidden' form, because after all it is still user input, no matter what.
- **id**  
a unique (within the document) identifier for this input element. This id is used to link a label to an input. The id should start with a letter. The corresponding label is identified by appending the string `'_label'` to the id.

- **errors:**  
the number of errors encountered after validating the value of this element
- **error\_messages:**  
an array of messages identifying the problems encountered with this element during validation

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl)>
- **Version** \$Id: dialoglib.php,v 1.3 2011-05-02 20:51:01 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

ATTR\_CLASS\_ERROR = error [line 200]  
 ATTR\_CLASS\_VIEWONLY = viewonly [line 201]  
 BUTTON\_CANCEL = cancel [line 204]  
 BUTTON\_DELETE = delete [line 206]  
 BUTTON\_GO = go [line 209]  
 BUTTON\_NO = no [line 208]  
 BUTTON\_OK = ok [line 203]  
 BUTTON\_SAVE = save [line 205]  
 BUTTON\_YES = yes [line 207]  
 F\_ALPHANUMERIC = alphanumeric [line 186]  
 F\_CHECKBOX = checkbox [line 193]  
 F\_DATE = date [line 189]  
 F\_DATETIME = datetime [line 191]  
 F\_FILE = file [line 197]  
 F\_INTEGER = integer [line 187]  
 F\_LISTBOX = listbox [line 194]  
 F\_PASSWORD = password [line 192]  
 F\_RADIO = radio [line 195]  
 F\_REAL = real [line 188]  
 F\_RICHTEXT = richtext [line 198]  
 F\_SUBMIT = submit [line 196]  
 F\_TIME = time [line 190]  
 string function accesskey\_from\_string(\$string) [line 1381]

**Function Parameters:**

- *string* **\$string** the string to process

### return the ASCII-character that follows the first tilde in a string

this returns the ASCII-character that follows the first tilde in the string (if any). This is the character that could be added as an accesskey to some HTML tag, e.g. a label or an input.

Note that a tilde followed by a UTF-8 sequence of 2 or more bytes does NOT yield a hotkey at all but an empty string instead.

*string* function `accesskey_tilde_to_underline($string, [$tag_open = '<u>'], [$tag_close = '</u>'])` [line 1353]

#### **Function Parameters:**

- *string* **\$string** the string to process
- *string* **\$tag\_open** the tag that starts the emphasis
- *string* **\$tag\_close** the tag that ends the emphasis

### replace tilde+character with emphasised character to indicate accesskey

this replaces the combination of a tilde and the character following it with \$tag\_open followed by the character followed by \$tag\_close.

Example: `accesskey_tilde_to_underline("~Username")` yields  
"`<u>U</u>ername`"  
`accesskey_tilde_to_underline("Pass~word",",")` yields "Password"  
`accesskey_tilde_to_underline("~Role",",")` yields "Role"

Note that we only accept ASCII here: if a tilde is followed by a non-ASCII-character (e.g. the first byte of a multibyte UTF-8 sequence) we silently ignore and still 'eat' the tilde.

*array* function `dialog_buttondef($button_type, [$value = ""], [$title = "])` [line 1243]

#### **Function Parameters:**

- *string* **\$button\_type** one of the predefined button constants, e.g. `BUTTON_OK`
- *string* **\$value** the label used for display including hotkey, eg. `'~Yes'` or `'~Cancel'`
- *string* **\$title** the text displayed via a mouseover

### shortcut for generating a dialogdef for a button

this constructs an array describing a button. The button definition is bare bones but it



includes name, class, value and optionally a title. If no \$value is specified, a translated value is retrieved for the button. If no \$title is specified, a title indicating the hotkey is constructed. This more or less works around the problem that hotkeys cannot be visualised in an input type="submit" button (It is possible in a button tag, but we don't use that because it requires HTML 4. Maybe later...)

*string* function dialog\_get\_class(&\$item, [\$class = NULL]) [*line 1314*]

**Function Parameters:**

- *array* **&\$item** the parameters that describe the dialog input element
- *string* **\$class** class to start with, otherwise use \$item['class']

**construct a space-delimited list of classes that apply to this item**

this constructs a string with applicable classes for this element. if the item has validation errors, the class ATTR\_CLASS\_ERROR is added, if the item is viewonly, the class ATTR\_CLASS\_VIEWONLY is added. This allows for the CSS to change the style depending on these situations.

*string* function dialog\_get\_label(&\$item) [*line 295*]

**Function Parameters:**

- *array* **&\$item** the parameters that describe the dialog input element

**construct a label for a dialog input element**

this constructs the label for an input. It is built inside a label-tag, possibly with these attributes: id, for, accesskey, class, title. The class is a special case: if there were errors the class 'ATTR\_CLASS\_ERROR' is added to the class attribute, in case of viewonly the class ATTR\_CLASS\_VIEWONLY' is added too. (Note that the latter shouldn't happen: how can a viewonly field yield any errors at all unless someone is trying to crack the program?)

Because some browsers require that the label of a listbox is linked to the select tag (done via 'id' and 'for'), we MUST have some 'id' for that particular tag. If it is not there, we generate one and add it automatically.

- **TODO** if we let the hotkey from the label prevail and add it to the input tag, why add a hotkey to the label too?

*array/string* function `dialog_get_widget(&$item)` [line 353]

**Function Parameters:**

- *array* **&\$item** the parameters that describe the dialog input element

**construct an actual HTML input widget for dialog input element**

this constructs the actual HTML-code for a dialog input element. If the input element is 'hidden', we generate a minimalistic hidden field with no labels, accesskeys or whatever: basically just a name-value-pair to communicate to a subsequent form.

If the item is genuine (it has a name and a type), we construct the input using a workhorse routine.

- **TODO** we could manipulate the title attribute of input strings like "please enter a number between {MIN} and {MAX}" based on the various value properties instead of just displaying the title. oh well, for a future version, perhaps...
- **TODO** we now only cater for buttons via `input type="submit"` without the option to visualise the accesskey. Using the `button` tag could solve that, but `button` is not defined before HTML 4.01. What to do?

*array/string* function `dialog_get_widget_file(&$item, $name, $value)` [line 1187]

**Function Parameters:**

- *array* **&\$item** the parameters that describe the dialog input element
- *string* **\$name** the name of the input element ('fieldname')
- *mixed* **\$value** the (current) value of the input element to show ('field value')

**construct an input field for file upload**

this constructs an input widget for uploading files. This usually includes a button to browse the user's local file system (depends on browser).

Note that it is NOT possible to 'preload' a value in this input field; any predefined value is ignored by the browser. As a workaround we could show the \$value to the user using an

additional comment, e.g. by adding it to the label or something. For now, we simply do nothing with the value.

The properties recognised translate to the following HTML-code/attributes

name	: name
value	: value (see note above)
accesskey	: accesskey
columns	: cols (textarea) or size (input type="text")
alt	: alt
class	: class (also depends on viewonly and errors)
tabindex	: tabindex
id	: id
title	: title
viewonly	: disabled AND addition of ATTR_CLASS_ERROR to class list (if viewonly == TRUE)
errors	: addition of ATTR_CLASS_ERROR to class list (if errors > 0)

- **TODO** if we let the hotkey from the label prevail and add it to the input tag, why add a hotkey to the label too?
- **TODO** should we do something with an um-empty \$value? If so, waht? The browser ignores this...

*array* function `dialog_get_widget_listbox(&$item, $name, $value, $f_type)` [line 997]

**Function Parameters:**

- *array* **&\$item** the parameters that describe the dialog input element
- *string* **\$name** the name of the input element ('fieldname')
- *mixed* **\$value** the (current) value of the input element to show ('field value')
- *string* **\$f\_type** the type of the field (eg text, number, date, time, ...)

### **construct a listbox**

this constructs a listbox

The number of lines in the result depends on the number of items in the options array in \$item. The result always starts with a SELECT opening tag, followed by N OPTION tags and finally a SELECT closing tag.

There are two different ways to specify the options. The simple way is to have a single options array with 'value' => 'option text' pairs. In this case the available properties such as

title, class and viewonly are copied from the corresponding generic properties in the \$item array,

The other way is to have an array of arrays like this:

```
$item['options'] = array('1'=>array('title'=>'...', 'option'=>'...'), 2 => array(...));
```

This allows for setting properties of individual options, e.g. one of the options could be made viewonly while the others are still selectable.

The properties recognised translate to the following HTML-code/attributes name : name

value : value AND perhaps 'selected' if value matches option value

accesskey : accesskey

alt : alt

class : class (also depends on viewonly and errors)

tabindex : tabindex

id : id

title : title

viewonly : disabled AND addition of ATTR\_CLASS\_ERROR to class list (if viewonly == TRUE)

errors : addition of ATTR\_CLASS\_ERROR to class list (if errors > 0)

label : tilde+letter may change the accesskey

Note that the options within the SELECT tag are indented 2 spaces for readability.

*array/string* function dialog\_get\_widget\_radiocheckbox(&\$item, \$name, \$value, \$f\_type) [line 873]

**Function Parameters:**

- *array* **&\$item** the parameters that describe the dialog input element
- *string* **\$name** the name of the input element ('fieldname')
- *mixed* **\$value** the (current) value of the input element to show ('field value')
- *string* **\$f\_type** the type of the field (eg text, number, date, time, ...)

### construct a checkbox or 1 or more radiobuttons

this constructs a checkbox or a list of radiobuttons.

Note: because a checkbox and radionbuttons are very similar, they are handled in the same workhorse routine. Maybe we should split this in the name of code clarity. Oh well...

If we are generating a checkbox, the result looks something like this: &lt;input type="checkbox" value="1" checked ...><label ...>option text</label>

If we are generating radiobuttons, the result looks something like this: &lt;input type="radio" value="1" checked ...><label ...>option 1 text</label>  
&lt;input type="radio" value="2" ...><label ...>option 2 text</label>  
&lt;input type="radio" value="3" ...><label ...>option 3 text</label>

The number of lines in the result depends on the number of items in the options array in \$item. In case of a checkbox there should only be one, in case of radiobuttons there should be more than 1.

There are two different ways to specify the options. The simple way is to have a single options array with 'value' => 'option text' pairs. In this case the available properties such as title, class and viewonly are copied from the corresponding properties in the \$item array,

The other way is to have an array of arrays like this:

```
$item['options'] = array('1'=>array('title'=>'...', 'option'=>'...'), 2 => array(...));
```

This allows for setting properties of individual options, e.g. one of the radio buttons could be made viewonly while the others are still selectable.

Note that such a non-simple array of arrays doesn't make much sense for a single, simple checkbox.

The properties recognised translate to the following HTML-code/attributes name : name

value : value AND perhaps 'checked' if value matches option value

accesskey : accesskey

alt : alt

class : class (also depends on viewonly and errors)

tabindex : tabindex

id : id

title : title

viewonly : disabled AND addition of ATTR\_CLASS\_ERROR to class list (if viewonly == TRUE)

errors : addition of ATTR\_CLASS\_ERROR to class list (if errors > 0)

label : tilde+letter may change the accesskey

Note: In case of radiobuttons, the document-wide unique id is constructed from the specified id by appending an underscore and an indexnumber (except for the first item in the list). This id can be overruled by an id specified in the options array-of-arrays.

Even when an item has an explicit accesskey, the access key can be overruled by the 'hotkey' derived from a tilde+letter combination in the options array, either in the simple case or in case of an array-of-arrays.

Note that also the generic title can be overruled by a title that is defined in the options array-of-arrays.

*array/string* function `dialog_get_widget_richtextinput(&$item, $name, $value, $f_type)` [line 1095]

**Function Parameters:**

- *array* **&\$item** the parameters that describe the dialog input element
- *string* **\$name** the name of the input element ('fieldname')
- *mixed* **\$value** the (current) value of the input element to show ('field value')
- **\$f\_type**

**construct an input field using the user's preferred editor**

this constructs an input for rich text like a page with HTML-code. Most users will probably

have selected the FCKeditor. However, there is also the option to use the so-called 'plain' editor, which is nothing more than a textarea in disguise.

The properties recognised translate to the following HTML-code/attributes name : name  
value : value  
accesskey : accesskey  
rows : rows  
columns : cols  
maxlength : maxlength  
alt : alt  
class : class (also depends on viewonly and errors)  
tabindex : tabindex  
id : id  
title : title  
viewonly : disabled AND addition of ATTR\_CLASS\_ERROR to class list (if viewonly == TRUE)  
errors : addition of ATTR\_CLASS\_ERROR to class list (if errors > 0)

- **TODO** if we let the hotkey from the label prevail and add it to the input tag, why add a hotkey to the label too?

*array/string* function dialog\_get\_widget\_submit(&\$item, \$name, \$value, \$f\_type) [line 764]

**Function Parameters:**

- *array* **&\$item** the parameters that describe the dialog input element
- *string* **\$name** the name of the input element ('fieldname')
- *mixed* **\$value** the button's label possibly including a tilde indicating hotkey
- *string* **\$f\_type** the type of the field (eg text, number, date, time, ...)

### **construct a submit button**

this constructs a submit button. For compatibility we use a simple input of type submit because the button widget is only available since HTML 4. We may change that in the future, and force everyone to use at least HTML 4. For now it is as it is.

Note that the label of the button is retrieved from \$value rather than from the label property. We do use the \$value as a string possibly containing hotkeys (via prepending a letter with a tilde) and we also set the accesskey to that value. However, it is different from other widgets because an input cannot display underlines (a button can).

The properties recognised translate to the following HTML-code/attributes

name	: name
value	: value
accesskey	: accesskey
alt	: alt
class	: class (also depends on viewonly and errors)
tabindex	: tabindex
id	: id
title	: title
viewonly	: disabled AND addition of ATTR_CLASS_ERROR to class list (if viewonly == TRUE)
errors	: addition of ATTR_CLASS_ERROR to class list (if errors > 0)

*array/string function dialog\_get\_widget\_textinput(&\$item, \$name, \$value, \$f\_type) [line 675]*

**Function Parameters:**

- *array* **&\$item** the parameters that describe the dialog input element
- *string* **\$name** the name of the input element ('fieldname')
- *mixed* **\$value** the (current) value of the input element to show ('field value')
- *string* **\$f\_type** the type of the field (eg text, number, date, time, ...)

**construct an input field, usually for text input OR a textarea for multiline input**

this constructs most variations on text fields, including password fields. Many of the defined field types (the F\_\* constants) can be handled via a simple input of type text. The semantics of the field (eg. is it an integer, a real) have no impact on the HTML-input: at that level it is still plain text. However, for a password we use the password type in order to make the value display as asterisks. If the number of rows is more than 1, the input element becomes a text area. Note that this generally only applies to F\_ALPHANUMERIC but that is not enforced here (you can make a multiline F\_DATE, even though it doesn't make much sense).

The properties recognised translate to the following HTML-code/attributes

name	: name
value	: value
accesskey	: accesskey
rows	: rows (textarea only)
columns	: cols (textarea) or size (input type="text")
maxlength	: maxlength
alt	: alt
class	: class (also depends on viewonly and errors)
tabindex	: tabindex
id	: id
title	: title
viewonly	: disabled AND addition of ATTR_CLASS_ERROR to class list (if viewonly ==

TRUE)

errors : addition of ATTR\_CLASS\_ERROR to class list (if errors > 0)

- **TODO** if we let the hotkey from the label prevail and add it to the input tag, why add a hotkey to the label too?

*array* function dialog\_quickform(\$href, &\$dialogdef, [\$method = 'post'], [\$attributes = '']) [*line 233*]

**Function Parameters:**

- *string* **\$href** the target of the HTML form
- *array* **&\$dialogdef** the array which describes the complete dialog
- *string* **\$method** method to submit data to the server, either 'post' or 'get'
- *string/array* **\$attributes** holds the attributes to add to the form tag

**construct a generic form with a dialog**

this constructs an HTML form with a simple dialog where

- every label and every widget has its own line  
(enforced by a BR-tag)
- label/widget-combinations are separated with a P-tag
- buttons are stringed together on a single line (ie no trailing BR)

This should be sufficient for many dialogs. If the layout needs to be more complex a custom dialog can always be constructed using functions [dialog\\_get\\_label\(\)](#) and [dialog\\_get\\_widget\(\)](#).

- **Usedby** [ConfigAssistant::show\\_dialog\(\)](#)
- **Uses** [html\\_form\(\)](#)

*bool* function dialog\_validate(&\$dialogdef) [*line 434*]

**Function Parameters:**



- **array `&$dialogdef`** the complete dialog definition; contains detailed errors and/or reformatted values

### validate and check values that were submitted via a user dialog

this steps through the definition of a dialog and retrieves the values submitted by the user via `$_POST[]`. The values are checked against the constraints (e.g. minimum string length, date range, etc.). If the submitted value is considered valid, it is stored in the corresponding value of the `dialogdef` element, maybe properly reformatted (in case of dates/times/datetimes). If there were errors, these are recorded in the dialog definition element, in the form of one or more readable error messages. Also the error count (per element) is incremented. This makes it easy to

- inform the user about what was wrong with the input data
- determine whether there was an error at all (if `$dialogdef[$k]['errors'] > 0`).

Note that this routine has the side effect of filling the dialog array with the data that was submitted by the user via `$_POST`. If the validation is successful, the data is ready to be saved into the database. If it is not, the data entered is still available in the `dialogdef` which makes it easy to return to the user and let the user correct the errors without losing all the data input because of a silly mistake in some input field.

Update 2009-03-17: We no longer validate the view-only fields because these fields are not POST'ed by the browser and hence cannot be validated. This also means that there is no value set from `$_POST` for those fields.

- Used by [ConfigAssistant::save\\_data\(\)](#)

*bool function valid\_datetime(\$f\_type, \$input, &\$output) [line 1417]*

#### **Function Parameters:**

- **string `$f_type`** indicates the field type we are expecting, can be `F_DATE`, `F_TIME` or `F_DATETIME`
- **string `$input`** the string that needs to be checked
- **string `&$output`** if the input is valid, this contains a properly formatted value

### check validity of date, time or datetime

this checks the validity of dates and times. If all tests are passed successfully, the input value is reformatted in the standard format corresponding with that field type:

- F\_DATE becomes yyyy-mm-dd (with leading zeros for month or day where applicable)
- F\_TIME becomes hh:mm:ss (with leading zeros when applicable)
- F\_DATETIME is combination of F\_DATE and F\_TIME glued together with a space: yyyy-mm-dd hh:mm:ss

Valid values for dates are within the range 0000-01-01 ... 9999-12-31 (but note that the year is always displayed with 4 digits). This routine takes leap years into account the same way the standard function `checkdate()` does.

Valid values for times are between 00:00:00 and 23:59:59. Note that we don't deal with leap seconds or other fancy stuff (this is not rocket science): KISS. Usually we only need times to determine an embargo date/time anyway.

Also, this routine doesn't know about time zones and daylight savings time.

# email.class.php

/program/lib/email.class.php - wrapper for sending mail

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: email.class.php,v 1.3 2011-03-11 13:57:24 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

# filelib.php

/program/lib/filelib.php - utilities for manipulating files

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: filelib.php,v 1.2 2011-02-03 14:04:04 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

*bool/string* function get\_mediatype(\$mimetype) [*line 353*]

## **Function Parameters:**

- *string* **\$mimetype** the full mimetype to examine, possibly with parameters

## **extract the mediatype and -subtype from a full mimetype**

this extracts the mediatype and -subtype from a full mimetype, i.e. 'text/plain' from 'text/plain; charset=US-ASCII' (see also [get\\_mimetype\(\)](#) and RFC2616). If \$mimetype doesn't look like a mimetype, we return FALSE.

*string* function get\_mimetype(\$path, [\$name = ""]) [*line 290*]

## **Function Parameters:**

- *string* **\$path** fully qualified path to the file to test
- *string* **\$name** name of the file, possibly different from \$path

## **determine the mimetype of a file**

This routine tries to discover the mimetype of a file. First we try to determine the mimetype via the fileinfo extension. If that doesn't work, we try the deprecated mime\_content\_type() function. If that doesn't work, we try to shell out to file(1). If that doesn't work, we resort to "guessing" the mimetype based on the extension of the file or else we return the generic 'application/octet-stream'.

Note that in step 3 we shell out and try to execute the `file(1)` command. The results are checked against a pattern to assert that we are really dealing with a mime type. The pattern is described in RFC2616 (see sections 3.7 and 2.2):

```
media-type    = type "/" subtype *( ";" parameter )
type          = token
subtype       = token
token         = 1*<any CHAR except CTLs or separators>
separators    = "(" | ")" | "<" | ">" | "@"
               | "," | ";" | ":" | "\" | "<"
               | "/" | "[" | "]" | "?" | "="
               | "{" | "}" | SP | HT
CHAR          = <any US-ASCII character (octets 0 - 127)>
CTL           = <any US-ASCII control character
               (octets 0 - 31) and DEL (127)>
SP            = <US-ASCII SP, space (32)>
HT            = <US-ASCII HT, horizontal-tab (9)>
"<"          = <US-ASCII double-quote mark (34)>
```

This description means we should look for two tokens containing letters a-z or A-Z, digits 0-9 and these special characters: ! # \$ % & ' \* + - . ^ \_ ` | or ~. That's it.

Note that `file(1)` may return a mime type with additional parameters. e.g. `'text/plain; charset=US-ASCII'`. This fits the pattern, because it starts with a token, a slash and another token.

The optional parameter `$name` is used to determine the mimetype based on the extension (as a last resort), even when the current name of the file is meaningless, e.g. when uploading a file, the name of the file (from `$_FILES['file0']['tmp_name']`) is something like `'/tmp/php4r5dwfw'`, even though `$_FILES['file0']['name']` might read `'S6301234.JPG'`. If `$name` is not specified (i.e. is empty), we construct it from `$path`.

- **TODO** there is room for improvement here: the code in step 1 and step 2 is largely untested
- **Usedby** [send\\_file\\_from\\_datadir\(\)](#)

*array function* `get_mimetypes_array()` [line 73]

### **return an array with mimetypes keyed by file extension**

This routine returns an array with 'known' combinations of (lower case) file extensions and (lowercase) mime types. This array can be used in two ways.

Example 1: find a mimetype by extension

```
$mimetypes = get_mimetypes_array();  
$mimetype = $mimetypes['jpg']; // this should yield 'image/jpeg'
```

Example 2: find an extension by mimetype

```
$mimetypes = get_mimetypes_array();  
$extension = array_search('image/jpeg',$mimetypes); // this should yield 'jpg'
```

Note that in that last example the first matching element is used. This implies that the most common extension for a certain mimetype should come first in the array, i.e. 'jpg'=>'image/jpeg' should come before 'jpeg'=>'image/jpeg'.

The list below is based on the list of mime types as distributed with the Apache webserver software.

Changes and tweaks to the list below:

application/octet-stream: default extension is an empty string "  
application/postscript: default extension is ps  
audio/mpeg: default extension is mp3  
image/jpeg: default extension is jpg  
text/plain: default extension is txt  
video//quicktime: default extension is mov

#### **NOTE**

Please do not change the mapping for both the empty extension "" and the binary extension 'bin'; these extensions must map to 'application/octet-stream' because this is necessary to defeat tricks with uploading files with double extensions (as used in the File Manager).

# filemanager.class.php

## /program/lib/filemanager.class.php - filemanager

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl)>
- **Version** \$Id: filemanager.class.php,v 1.3 2011-05-02 16:16:25 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

PARAM\_FILENAME = filename\_ [line 41]

**This constant is used to construct the fieldname used for deleting files**

PARAM\_FILENAMES = filenames [line 44]

**This constant is used to construct the fieldname counting the number of files to delete**

PARAM\_PATH = path [line 46]  
PARAM\_SORT = sort [line 47]  
SORTBY\_DATE\_ASC = 3 [line 53]  
SORTBY\_DATE\_DESC = -3 [line 54]  
SORTBY\_FILE\_ASC = 1 [line 49]  
SORTBY\_FILE\_DESC = -1 [line 50]  
SORTBY\_NONE = 0 [line 48]  
SORTBY\_SIZE\_ASC = 2 [line 51]  
SORTBY\_SIZE\_DESC = -2 [line 52]  
TASK\_ADD\_DIRECTORY = mkdir [line 37]  
TASK\_ADD\_FILE = upload [line 36]  
TASK\_CHANGE\_DIRECTORY = cd [line 32]  
TASK\_LIST\_DIRECTORY = ls [line 31]  
TASK\_PREVIEW\_FILE = preview [line 33]  
TASK\_REMOVE\_DIRECTORY = rmdir [line 35]  
TASK\_REMOVE\_FILE = rm [line 34]  
TASK\_REMOVE\_MULTIPLE\_FILES = batchrm [line 38]  
THUMBNAIL\_PREFIX = zz\_thumb\_ [line 57]

**This constant is used to specify thumbnail files to be ignored in directory listings**

require\_once \$CFG->progdir."/lib/filelib.php" [line 28]

**utility routines for manipulating files**





## groupmanager.class.php

/program/lib/groupmanager.class.php - taking care of group management

This file defines a class for dealing with groups.

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl)>
- **Version** \$Id: groupmanager.class.php,v 1.2 2011-02-03 14:04:04 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

GROUPMANAGER\_MAX\_CAPACITIES = 8 *[line 30]*

**this defines the maximum number of capacities a group can have (keep this below 10 because of dialog hotkeys)**

# htmllib.php

## /program/lib/htmllib.php - useful functions for generating HTML-code

This file provides various utility routines that aid in creating HTML-code.

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: htmllib.php,v 1.2 2011-02-03 14:04:04 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

*void function href(\$path, [\$params = "], [\$fragment = "]) [line 204]*

### **Function Parameters:**

- *string* **\$path** the hypertext reference
- *array|string* **\$params** the parameter(s) to add to the \$path
- *string* **\$fragment** the optional position within the page

## **construct a href from a path, params and a fragment**

- **TODO** should we merge this with `html_a()` and/or rename this routine to `html_href()`?

*string function html\_a([\$href = "], [\$params = NULL], [\$attributes = NULL], [\$anchor = NULL]) [line 69]*

### **Function Parameters:**

- *string* **\$href** holds the hypertext reference
- *string|array* **\$params** holds the parameters to add to the \$href
- *string|array* **\$attributes** holds the attributes to add to the tag

- *string* **\$anchor** if not empty this string and a closing tag are appended

### construct an HTML A tag with optional parameters and attributes

this constructs an A tag of the form `<a href="$href?p1=v1&p2=v2 att1="val1" att2="val2">`

If no parameters are specified, nothing is added to the href. If no attributes are specified the tag only has the href attribute. If **\$params** is an array, the elements of this array are added to the href after a `rawurlencode()`. The complete **\$href** is then escaped via `htmlspecialchars()`. If **\$attributes** is an array, all elements are added as escaped key-value-pairs. If string, then just append. If **\$anchor** is not empty, the string is appended to the constructed opening tag and subsequently a closing tag is appended.

Note that urlencoding and specialchars are applied to the URL property and that the other properties are only are `htmlspecialchars()`ed. The optional **\$anchor** is not changed in any way.

Examples: `html_a('index.php')`: `<a href="index.php">`  
`html_a('index.php',array('foo'=>'bar'))`: `<a href="index.php?foo=bar">`  
`html_a('index.php',array('x'=>'y'),array('title'=>'foo'))`: `<a href="index.php?x=y" title="foo">`  
`html_a('index.php',"",array('class'=>'dimmed'),'baz')`: `<a href="index.php" class="dimmed">baz</a>`  
`html_a("","",array('name'=>'chapter1'),'chapter 1')`: `<a name="chapter1">chapter 1</a>`

*string* function `html_attributes($attributes)` [line 159]

#### **Function Parameters:**

- *mixed* **\$attributes** an array or string with attributes or NULL

### convert an array of name-value pairs to a string

this converts an array of name-value-pairs to a string containing attribute="content" items, where both 'attribute' and 'content' are properly escaped (with `htmlspecialchars()`). Properties that don't have content, such as 'disabled' or 'selected' or 'checked' can be specified using the special value NULL, e.g. `array('disabled' => NULL)`. If the parameter **\$attributes** happens to be a string, it is returned with a space prepended. If it is neither a string nor an array (e.g. NULL), an empty string is returned. Note that the attribute="content" elements are delimited with spaces, and that a leading space is prepended (but not trailing space is added).

*string* function `html_form($action, [$method = 'post'], [$attributes = ''])` [line 182]

#### **Function Parameters:**

- *string* **\$action** the url to submit to
- *string* **\$method** either get or post (default)
- *string|array* **\$attributes** holds the attributes to add to the tag

## construct the opening of a HTML form

- Usedby [dialog\\_quickform\(\)](#)
- Usedby [TranslateTool::render\\_translation\\_dialog\(\)](#)

*void* function `html_form_close()` [*line 191*]

### companion of `html_form`: close the tag

*string* function `html_img($src = "", [$attributes = NULL])` [*line 115*]

#### **Function Parameters:**

- *string* **\$src** holds the url to the image file
- *string|array* **\$attributes** holds the attributes to add to the tag

## construct an HTML IMG tag with optional attributes

this constructs an IMG tag of the form ``

If no attributes are specified the tag only has the src attribute If \$attributes is an array, all elements are added as raw encoded key-value-pairs. If it is a string, then just append.

Examples: `html_img('icon.gif')`: ``

`html_img('icon.gif',array('width'=>16, 'height'=>16))`: ``

*void* function `html_input_radio($name, $options)` [*line 241*]

#### **Function Parameters:**

- **\$name**
- **\$options**

## STUB

*void function* `html_input_select($name, $options)` [*line 231*]

**Function Parameters:**

- **\$name**
- **\$options**

## STUB

*void function* `html_input_submit($name, $value)` [*line 250*]

**Function Parameters:**

- **\$name**
- **\$value**

## STUB

*void function* `html_input_text($name)` [*line 225*]

**Function Parameters:**

- **\$name**

## STUB

*string function* `html_table([$attributes = NULL], [$content = NULL], $m)` [*line 261*]

**Function Parameters:**

- *string/array* **\$attributes** holds the attributes to add to the tag
- *string* **\$m** margin for improved code readability

- **\$content**

## construct the opening of a HTML table

*void function* `html_table_cell`([\$attributes = NULL], [\$content = NULL]) [*line 286*]

### **Function Parameters:**

- **\$attributes**
- **\$content**

*void function* `html_table_cell_close`() [*line 291*]

*string function* `html_table_close`([\$m = margin for improved code readability]) [*line 271*]

### **Function Parameters:**

- *string* **\$m** margin for improved code readability

## construct table closing tag

*void function* `html_table_head`([\$attributes = NULL], [\$content = NULL]) [*line 296*]

### **Function Parameters:**

- **\$attributes**
- **\$content**

*void function* `html_table_head_close`() [*line 301*]

*void function* `html_table_row`([\$attributes = NULL], [\$content = NULL]) [*line 276*]

### **Function Parameters:**

- **\$attributes**
- **\$content**

*void function* `html_table_row_close`() [*line 281*]

*string function* `html_tag`[\$tag = "], [\$attributes = NULL], [\$content = NULL]) [*line 133*]

### **Function Parameters:**

- *string* **\$tag** is the HTML-tag to create, e.g. 'span' or 'script'
- *mixed* **\$attributes** holds the attributes to add to the tag or NULL
- *mixed* **\$content** if not NULL this string and a closing tag are appended

**construct a generic HTML-tag with attributes, optionally close it too**

# language.class.php

## /program/lib/language.class.php - taking care of translations of messages

This file defines a class for dealing with translation of phrases.

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl)>
- **Version** \$Id: language.class.php,v 1.2 2011-02-03 14:04:04 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)



# loginlib.php

## **/program/lib/loginlib.php -- functions to handle user login/logout**

Visitors need to authenticate when they want to see a 'protected' area or when they want to modify the website content. This requires a user account and the visitor presenting valid credentials (username + password).

We don't want malicious scripts trying to get in with brute force. However, we need to accomodate users that make typo's while entering credentials. Also we want to allow for sending password reminders, in a safe way.

### Features:

- users are allowed N login attempts within an interval of T1 minutes
- users can request a new password (a 'bypass') to be mailed to them.  
this additional password is valid for only T2 minutes
- if a user has requested a bypass, the user is forced to change her password. the new password must differ from the old password and also from the bypass
- if too many failures are detected in the last T1 minutes, login attempts from the corresponding IP-address are blocked for T3 minutes  
N = \$CFG->login\_max\_failures, default 10

T1 = \$CFG->login\_failures\_interval, default 12 minutes

T2 = \$CFG->login\_bypass\_interval, default 30 minutes

T3 = \$CFG->login\_blacklist\_interval, default 8 minutes

Once a user is authenticated, a PHP-session is established, using our own database based session handler. The session key is stored in a cookie in the user's browser. Presenting this cookie on subsequent calls is enough to gain access. The logout routine takes care of killing both the user's cookie and the session in the database.

There are several different login procedures.

#### 1. Normal login

The user enters a valid username and password and is subsequently logged in.

2. Change password The user enters a valid username and password and also a valid new password (twice). A salted hash of the new password is recorded in the database and the user is logged in.

3. Forgotten password, phase 1: sending a laissez-passer The user presents a valid combination of username and email address. Subsequently a one-time logon-code (dubbed 'laissez-passer') is sent to the user's email address. This code is valid for at most T2 minutes. This code can be used, exactly once, to send a temporary password via email.

4. Forgotten password, phase 2: sending a temporary password The user clicks the link

received in phase 1 and a temporary password (dubbed 'bypass') is sent to the user. This temporary password is valid for another T2 minutes.

5. Message box This is a pseudo-procedure. A simple 'message box' type of screen is displayed but no real interaction is anticipated via this screen. This is used to tell the user that things didn't work out (too many failures) or to check their mail for further instructions (e.g. when a laissez passer was sent). Whenever the user acknowledges this screen by clicking the button, she usually is directed to \$WAS\_SCRIPT\_NAME.

6. Blacklist This is also a pseudo-procedure. The corresponding number is used to identify blacklisted IP-addresses in the database.

Note that when the user logs in after a temporary password has been sent, the normal login procedure is immediately followed by a (forced) 'change password' procedure. This makes sure that a temporary password will be changed immediately after the user logs in.

Note that each of the procedures can be entered 'manually', i.e. by opening `index.php?login=X` the user starts procedure X. This allows for the user to change her password whenever she feels this is necessary, without going through the trouble of the 'forgotten password'-procedure which eventually ends with the user changing her password too.

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: loginlib.php,v 1.4 2011-05-04 07:32:46 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **TODO** should we normalize the `remote_addr` everywhere? We now rely on the `remote_addr` being equal to some stored value (in the database) but with an IPv6 address there are several possibilities to have different representations of the same address (e.g. `:::dead:beef` is equivalent to `::0:dead:beef` or even `:::DeAd:BeeF` or `'0000:0000:0000:0000:0000:DEAD:BEEF'`. This problem also exists with IPv4: `'127.0.0.1'` is equivalent to `'127.000.000.001'`. \*sigh\*
- **TODO** should we suppress the username in the laissez-passer routine? We `_do_` leak the the username in an insecure email message. This does require making the laissez-passer code unique in the database (currently only username+code has to be unique and that's easy because the username itself is unique).
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BY\_EMAIL = 2 [line 159]

**this selects authentication via username+email in `authenticate_user()`**

BY\_LAISSEZ\_PASSER = 3 *[line 162]*

**this selects authentication via username+laissez\_passer in authenticate\_user()**

BY\_PASSWORD = 1 *[line 156]*

**this selects authentication via username+password in authenticate\_user()**

LOGIN\_DEBUG = 0 *[line 117]*

**useful when debugging routines in this file: 0=production, 1=debugging**

LOGIN\_FAILURE\_DELAY\_SECONDS = 3 *[line 141]*

**this is the number of seconds to delay responding after a login action fails (slow 'm down..)**

LOGIN\_PROCEDURE\_BLACKLIST = 6 *[line 138]*

**this is a pseudo procedure, used to record blacklisted IP-addresses**

LOGIN\_PROCEDURE\_CHANGE\_PASSWORD = 2 *[line 126]*

**this is the procedure to change the user's password**

LOGIN\_PROCEDURE\_MESSAGE\_BOX = 5 *[line 135]*

**this is a pseudo procedure, used to deliver some message to the user**

LOGIN\_PROCEDURE\_NORMAL = 1 *[line 123]*

**this is the usual procedure for logging in**

LOGIN\_PROCEDURE\_SEND\_BYPASS = 4 *[line 132]*

**this is phase 2 of the 'forgot password' procedure**

LOGIN\_PROCEDURE\_SEND\_LAISSEZ\_PASSER = 3 *[line 129]*

**this is phase 1 of the 'forgot password' procedure**

LOGIN\_PROCEDURE\_SHOWLOGIN = 0 *[line 120]*

**this only shows the login dialog**

MAXIMUM\_LINE\_LENGTH = 50 *[line 165]*

**this defines the maximum line length in messages and instructions**

`MINIMUM_PASSWORD_DIGITS = 1` [line 153]

**this is the hardcoded minimal number of digits in a new password**

`MINIMUM_PASSWORD_LENGTH = 6` [line 144]

**this hardcoded minimal length is enforced whenever a user wants to change her password**

`MINIMUM_PASSWORD_LOWERCASE = 1` [line 147]

**this is the hardcoded minimal number of lower case characters in a new password**

`MINIMUM_PASSWORD_UPPERCASE = 1` [line 150]

**this is the hardcoded minimal number of upper case characters in a new password**

`bool function acceptable_new_password($new_password1, $new_password2, [$salt = "], [$password_hash = "], [$bypass_hash = "])` [line 1278]

**Function Parameters:**

- *string* **\$new\_password1** new password
- *string* **\$new\_password2** new password again, to prevent typo's
- *string* **\$salt** (optional) the salt that was used to hash the old password and the bypass
- *string* **\$password\_hash** (optional) the hashed existing password
- *string* **\$bypass\_hash** (optional) the hashed bypass password

### **check the new passwords satisfy password requirements**

Users should provide the same password twice, to prevent typo's, so both passwords should be equal. Also, the following requirements should be satisfied:

- the minimum password length should be `MINIMUM_PASSWORD_LENGTH` (default 6)
- the new password should contain at least `MINIMUM_PASSWORD_LOWERCASE` lowercase letter a-z (default 1)
- the new password should contain at least `MINIMUM_PASSWORD_UPPERCASE` upper case letter A-Z (default 1)
- the new password should contain at least `MINIMUM_PASSWORD_DIGITS` digit 0-9 (default 1)
- the new password should not be the same as the previous password
- the new password should not be the same as the bypass password (if any was issued)

Note that the bypass-generator also should satisfy these rules. This could lead to the thought of accepting the bypass-password as the permanent one. However, since this temporary password was sent to the user in a plain-text email message, we should consider this a 'bad' password.

The minimum password length and other minimum values are not configurable (via \$CFG) because that would make it too easy (too tempting) to give in and use weak passwords (too short, only lowercase, etc.) However, if you really MUST, you could change the MINIMUM\_PASSWORD\_\* constants defined above.

Note that the check againsts existing (temporary and regular) passwords is not performed if the corresponding parameters are empty. If they are empty, this routine only performs the first 4 checks in the list above.

*bool/array function authenticate\_user(\$by\_what\_token, \$username, \$token) [line 1174]*

**Function Parameters:**

- *int* **\$by\_what\_token** which authentication token to use
- *string* **\$username** username the user entered in the dialog
- *string* **\$token** the token is either password, email or laissez\_passer entered by the user

### **check the user's credentials in one of three ways**

This authenticates the user's credentials. There are some variants:

- by password: the user's password should match
- by email: the user's email should match
- by laissez passer: the one-time authentication code should match

Strategy: we first read the active record for user \$username in core. If there is none, the user does not exist or is inactive => return FALSE.

After that we check the validity of the token:

- a password is checked via the password hash or, if that fails, via the bypass hash. In the latter case, the bypass should not yet be expired (a bypass and a laissez\_passer are valid until the 'bypass\_expiry' time).
- an email address is checked caseInsensitive and without leading/trailing spaces
- a laissez\_passer is checked much the same way as the bypass password, be it that the code is stored 'as-is' rather than as a hash. The comparison is caseInsensitive.

If the credentials are considered valid, an array with the user record is returned, otherwise FALSE is returned.

Because there are actually several checks to be done, we decided not to use SQL like: SELECT \* FROM users WHERE username=\$username AND password=\$password, not the least because we need to have the salt in our hands before we can successfully compare password hashes.

Note: The 'special cases' (checking email, checking laissez\_passer, checking bypass) all have their token stripped from leading and trailing spaces. We don't want to further confuse the user by not accepting a spurious space that was entered in the heat of the moment when the user has 'lost' her password. Therefore we also always trim the username. Rationale: usernames and also the generated passwords etc. never have leading/trailing spaces. However, one cannot be sure that a user has not entered a real password with leading/trailing space, so we do NOT trim the \$token in the first attempt in the case 'BY\_PASSWORD' below.

*bool* function login\_change\_password(\$user\_id, \$new\_password) [*line 1227*]

**Function Parameters:**

- *int* **\$user\_id** identify the user record by user\_id
- *string* **\$new\_password** the new password in plain text

**update the users database with a new (randomly salted) password and reset bypass mode to normal**

This updates the user record for user with user\_id and stores the new password. The new password and a new random salt are hashed together and the result is stored, together with the new salt, overwriting the old salt and the old password hash. The bypass mode is reset to normal and the bypass hash is reset. Return TRUE on success.

*string* function login\_dialog\_close([\$action = "], [\$m = "]) [*line 846*]

**Function Parameters:**

- *string* **\$action** (optional) if not empty the currently open HTML-form is closed
- *string* **\$m** (optional) margin to add for code readability

**close the login dialog/table and maybe an opened HTML-form**

- See [login\\_dialog\\_open\(\)](#)

*string* function login\_dialog\_home\_forgot\_password(\$forgot, [\$m = "]) [*line 942*]

**Function Parameters:**

- *string* **\$forgot** anchor text to display with link to forgot password dialog
- *string* **\$m** (optional) margin to add for code readability

### **add a row with links to home page and forgot password dialog to the login dialog/table**

This constructs a link to the home page in the left hand dialog/table column and optionally a link to the start of the forgot password dialog. The latter is only displayed if \$forgot is not empty.

*string* function login\_dialog\_instruction(\$instruction, [\$m = ""]) [line 858]

#### **Function Parameters:**

- *string* **\$instruction** instructive message to show to user
- *string* **\$m** (optional) margin to add for code readability

### **add a row to the table/dialog with wordwrap()'ed instruction for the user**

*string* function login\_dialog\_open(\$title, [\$action = "], [\$message = "], [\$m = ""]) [line 802]

#### **Function Parameters:**

- *string* **\$title** text to show in the dialog title bar
- *string* **\$action** (optional) if not empty a HTML-form pointing to \$action is opened
- *string* **\$message** (optional) feedback message to show to user
- *string* **\$m** (optional) margin to add for code readability

### **construct the start of the login dialog, opening the form and the secondary table**

This optionally opens an HTML-form (which is optionally closed in companion routine [login\\_dialog\\_close\(\)](#)) and subsequently starts a table with two columns. The first row of the table shows the \$title, the second row may show a wordwrap()'ed feedback message for the user in a different background colour.

- See [login\\_dialog\\_close\(\)](#)
- **TODO** should we add another 'powered by' link to '/program/about.html'?

*string* function login\_dialog\_password\_input(\$prompt, \$name, [\$tabindex = "], [\$m = "]) [*line 899*]

**Function Parameters:**

- *string* **\$prompt** the text to show in the 1st column of the table row
- *string* **\$name** the name of the input field
- *int* **\$tabindex** (optional) determines in which order fields are accessed in the dialog
- *string* **\$m** (optional) margin to add for code readability

### **add a row with a password input field to the login dialog/table**

This generates HTML for another table row. Special feature: try to suppress autocomplete via an extra parameter. See

*string* function login\_dialog\_submit\_input(\$buttontext, \$name, [\$tabindex = "], [\$m = "]) [*line 919*]

**Function Parameters:**

- *string* **\$buttontext** the text to show in the button
- *string* **\$name** the name of the button
- *int* **\$tabindex** (optional) determines in which order fields are accessed in the dialog
- *string* **\$m** (optional) margin to add for code readability

### **add a row with a submit button to the login dialog/table**

*string* function login\_dialog\_text\_input(\$prompt, \$name, [\$value = "], [\$tabindex = "], [\$m = "]) [*line 875*]

**Function Parameters:**

- *string* **\$prompt** the text to show in the 1st column of the table row
- *string* **\$name** the name of the input field
- *string* **\$value** (optional) value to preload the field value (default empty string)



- *int* **\$tabindex** (optional) determines in which order fields are accessed in the dialog
- *string* **\$m** (optional) margin to add for code readability

### add a row with an ordinary input field to the login dialog/table

*bool/int* function login\_failure\_blacklist\_address(\$remote\_addr, \$delay\_in\_seconds, [\$username = ""]) [*line 1432*]

#### **Function Parameters:**

- *string* **\$remote\_addr** the remote IP-address is the origin of the failure
- *int* **\$delay\_in\_seconds** the number of seconds to put this address on the blacklist
- *string* **\$username** extra information, could be useful for troubleshooting afterwards

### add remote\_addr to the blacklist for specified interval (in seconds)

*bool/int* function login\_failure\_delay(\$remote\_addr) [*line 1466*]

#### **Function Parameters:**

- *string* **\$remote\_addr** the remote IP-address that is the origin of the failure

### delay execution of this script for a few seconds and blacklist the remote\_addr during the delay

This immediately blacklists the remote address for LOGIN\_FAILURE\_DELAY\_SECONDS seconds. Once that is done, the execution is delayed for that same period of time. After the delay, the temporary blacklisting is removed from the table. The whole purpose of this rapid succession of an INSERT and a DELETE is to prevent brute force attack scripts that do not wait for an answer and/or use multiple connections. This routine defeats that trick, because nothing can be done when an IP-address is blacklisted.

- **Uses \$CFG**

*int* function login\_failure\_increment(\$remote\_addr, \$procedure, [\$username = ""]) [*line 1487*]

#### **Function Parameters:**

- *string* **\$remote\_addr** the remote IP-address that is the origin of the failure
- *int* **\$procedure** indicates in which procedure the user failed
- *string* **\$username** extra information, could be useful for troubleshooting afterwards

### **add 1 point to score for a particular IP-address and failed procedure, return the new score**

This records a login failure in a table and returns the the number of failures for the specified procedure in the past T1 minutes.

*bool* function login\_failure\_reset(\$remote\_addr) [*line 1421*]

#### **Function Parameters:**

- *string* **\$remote\_addr** the remote IP-address is the origin of the failure

### **deactivate all login failures/blacklisting scores for remote\_addr**

This resets all the scores for all failed login attempts and blacklistings for the specified IP-address. The records in the login\_failures table are deactivated by deleting the records for this remote\_addr.

Note that the failed logins and the blacklistings are recorede in the log\_messages table via [logger\(\)](#). Therefore we can automatically keep this table 'login\_failures' clean without cron jobs.

This routine resets `_all_` scores, including any blacklisting that might still be active, i.e. which has a datim in the future.

*bool* function login\_is\_blacklisted(\$remote\_addr) [*line 1390*]

#### **Function Parameters:**

- *string* **\$remote\_addr** the remote IP-address to be checked

### **find out if a remote address is blacklisted at this time**

This routine checks if this remote address is blacklisted in the login\_failures table with a datim that lies in the future. If this is the case, the address is indeed blacklisted and TRUE is returned. Note that we sum the points much the same way as in [login failure increment](#) rather than counting 'blacklist-records'.

*string* function login\_page\_close([\$alert\_message = ""]) [*line 769*]

**Function Parameters:**

- *string* **\$alert\_message** (optional) message to show via a javascript alert()

**construct the end of the simple HTML-page, closing the full size table**

- See [login\\_page\\_open\(\)](#)
- Uses [javascript\\_alert\(\)](#)

*string* function login\_page\_open(\$title, [\$focus = ""]) [*line 705*]

**Function Parameters:**

- *string* **\$title** the title of the HTML-page
- *string* **\$focus** (optional) the name of the field to focus on (via Javascript)

**construct the start of a simple HTML-page and open a full size table**

This routine starts with a plain HTML-page, with a title and possibly a single line of Javascript to place the cursor in a particular input field (defined later in the page). After that, a main table is opened and within that 1x1 table the table cell is opened. [login\\_page\\_close\(\)](#) closes that cell.

- See [login\\_page\\_close\(\)](#)
- Uses \$CFG;

*bool* function login\_send\_bypass(\$user) [*line 1052*]

**Function Parameters:**

- **array \$user** an associative array with the user record

### **send a new (temporary) password to the user via email**

This generates a new temporary password for the user, stores it in the user record and sends an email message to the user with the temporary password (in plain text) and further instructions.

Note that the password is valid only for a limited time; sending a password in plain text appears to be an acceptable risk. Note that the limited time is increased with 10% in order to give the user a reasonable margin to enter the correct password.

Also note that the existing salt is used to salt the temporary password; this makes it easier to check for validity of both the regular password and the temporary password later on.

A log message recording the event is added via [logger\(\)](#).

- **Uses** [logger\(\)](#)
- **Uses** \$CFG

*bool* function login\_send\_confirmation(\$user) [*line 1106*]

#### **Function Parameters:**

- **array \$user** an associative array with the user record

### **send email to user confirming password change**

This sends an email to the user's email address confirming that the user's password was changed. Note that the new password is NOT sent to the user.

- **Uses** \$CFG

*bool* function login\_send\_laissez\_passer(\$user) [*line 986*]

**Function Parameters:**

- *array* **\$user** the user record from database

**send a special one-time login code to the user via email**

This generates a temporary code with which the user can request a new temporary password. This code can be used only once. Note that this code is valid for only a limited time. This code simply overwrites the bypass password (the temporary password) in the user record. This means that if a phase 2 is pending, a new phase 1 will replace the old phase 2.

The temporary code consists of digits and uppercase characters. However, it is longer (20 characters) than the minimum password length of 6, so a brute force on such a code will likely not succeed ( $36^{20}$  is much more than the usual  $62^6$ ).

This routine also brings the user's record into 'bypass mode'. This mode is reset to 'normal' after the user has successfully changed her password.

A log message recording the event is added via [logger\(\)](#).

- **Uses** [logger\(\)](#)
- **Uses** \$CFG

*string* function login\_stylesheet() [*line 730*]

**a simple in-line style sheet conveniently grouped in a single routine**

- **TODO** this routine needs some cleaning up

*string* function password\_hash(\$salt, \$password, [\$algorithm = 0]) [*line 1332*]

**Function Parameters:**

- *string* **\$salt**
- *string* **\$password**

- *int* **\$algorithm** (optional) algorithm to use: 0=md5, 1=sha1

### calculate a hash from a salt and a password

This routine constructs a hash of the combination of salt and password. By default the md5() function is used to calculate a 32-character long string of hexadecimal digits. If the parameter \$algorithm is 1 then the sha1() function is used and a 40-character long string of hexadecimal digits is returned.

Note that we do not use the crypt() function because that could introduce a portability issue. If a website is migrated to another machine, the used crypt algorithm might no longer be available, and that would effectively lock out all users. Both md5() and sha1() are standard PHP-functions (since 4.3.x) and should be portable, which makes any installed table of users portable too.

- Used by [password\\_hash\\_check\(\)](#)

*bool* function password\_hash\_check(\$salt, \$password, \$hash) [*line 1359*]

#### **Function Parameters:**

- *string* **\$salt** salt
- *string* **\$password** password to check
- *string* **\$hash** hash to check against

### check equivalency of salt+password against hash

This verifies whether the hash of \$salt and \$password is the same as \$hash. Note that the two hashes are compared in a caseInsensitive way. Usually these hashes are using lowercase hexadecimal digits but a caseInsensitive compare makes A,...,F equivalent to a,...,f.

If the length of the presented \$hash is 40 characters, it is assumed that the hash algorithm to use is sha1, otherwise the default algorithm (md5) is used.

- Uses [password\\_hash\(\)](#)

*string* function password\_salt([\$length = 12]) [*line 1373*]

**Function Parameters:**

- *int* **\$length** the number of characters in the generated string

### generate a quasi random string to salt the password hash

this generates a quasi-random string of digits and letters to be used as a salt when calculating a password hash.

*void* function show\_login([\$screen = 1], [\$message = ""], [\$username = ""]) [*line 579*]

**Function Parameters:**

- *int* **\$screen** the screen variant to show, could be 1,...,5
- *string* **\$message** the message to show just above the first field, used for feedback to user
- *string* **\$username** the default username to show in the dialog

### show complete login dialog and exit

There are different variations of this dialog.

#### 1. LOGIN\_PROCEDURE\_NORMAL Plain login

(message)

Username: \_\_\_\_\_

Password: \_\_\_\_\_

[OK]

<home page> <forgotten password?>

This screen is used for plain user authentication. As a rule the user uses the correct primary password to authenticate. However, it is also possible to enter the 'bypass' password instead. If the authentication fails, that fact is recorded. If the number of failures exceeds threshold N, the user is shown screen #3 LOGIN\_PROCEDURE\_SEND\_LAISSEZ\_PASSER. If the number is still below N1 screen #1 is shown again.

The link <forgotten password?> takes the user directly to screen #3 LOGIN\_PROCEDURE\_SEND\_LAISSEZ\_PASSER.

## 2. LOGIN\_PROCEDURE\_CHANGE\_PASSWORD - Login/change password (message)

Username: \_\_\_\_\_  
Old password: \_\_\_\_\_  
New password1: \_\_\_\_\_  
New password2: \_\_\_\_\_

[OK] This screen is used to change the user's password. If both new passwords are different, the user is redirected to the same screen #3 until she gets it right. Otherwise, if the old password is either the valid original password OR the bypass password, the password is changed and the mode is reset to 'normal'. The one-time codes and the bypass password are reset. Also, as a result, the user is logged in. If the user failed to enter the proper old password more than N1 times, the mode is also reset to normal (invalidating the laissez-passer and the bypass password) and the user is dropped at a screen #4 basically telling her to contact the webmaster. In this process the user is also logged out if necessary.

## 3. LOGIN\_PROCEDURE\_SEND\_LAISSEZ\_PASSER Request bypass (message)

Username: \_\_\_\_\_  
Email: \_\_\_\_\_

[OK] This screen is used to help the user reset her password. It is displayed automatically after N1 failed login attempts. This screen can also be reached via the <forgot password?> link in screen #1.

If the user presents an invalid combination of username and email address, this failure is also recorded. If the number of failures has reached the threshold N2, the user is taken to a screen #4 that basically tells the user ask the webmaster for assistance and that's that.

If the user presents a valid combination of username and email address, an email with a message like 'click the link below for a new password' is sent to the email address. After that mail is sent a screen #4 is displayed, basically telling the user to await further instructions that were sent via mail.

Note that resetting the password is a two-step process. First the user is sent a one-time code laissez-passer embedded in a link. Clicking the link before it expires (after T minutes) yields a second email message containing a bypass password that can be used to login and subsequently change the primary password. After that both the laissez-passer and the bypass password are invalidated.

## 4. LOGIN\_PROCEDURE\_SEND\_BYPASS - Send a temporary password

Phase 2 of the forgot password procedure.

## 5. LOGIN\_PROCEDURE\_MESSAGE\_BOX Alert (message)

This screen is user to communicate various messages to the user, e.g. 'check your mail for instructions', 'contact webmaster', etc.

*void/int* function was\_login([\$procedure = LOGIN\_PROCEDURE\_SHOWLOGIN], [\$message = ""]) [line 267]

**Function Parameters:**



- *int* **\$procedure** the login procedure to execute
- *string* **\$message** the message to display when showing the login dialog

### execute the selected login procedure

The login process is controlled via the parameter 'login' provided by the user via 'index.php?login=N or via the 'action' property in a HTML-form. These numbers correspond to the LOGIN\_PROCEDURE\_\* constants defined near the top of this file. Here's a reminder:

1. LOGIN\_PROCEDURE\_NORMAL this is the usual procedure for logging in
2. LOGIN\_PROCEDURE\_CHANGE\_PASSWORD this is the procedure to change the user's password
3. LOGIN\_PROCEDURE\_SEND\_LAISSEZ\_PASSER this is phase 1 of the 'forgot password' procedure
4. LOGIN\_PROCEDURE\_SEND\_BYPASS this is phase 2 of the 'forgot password' procedure

Note that this routine only returns to the caller after either a succesful regular login (i.e. after completing LOGIN\_PROCEDURE\_NORMAL). All the other variants and error conditions yield another screen and an immediate exit and hence no return to caller. If this routine returns, it returns the user\_id of the authenticated user (the primary key into the users table). It is up to the caller to retrieve additional information about this user; any information read from the database during login is discarded. This prevents password hashes still lying around.

Note that a successful login has the side effect of garbage collection: whenever we experience a successful login any obsolete sessions are removed. This makes sure that locked records eventually will be unlocked, once the corresponding session no longer exists. The garbage collection routine is also called from the PHP session handler every once in a while, but here we make 100% sure that garbage is collected at least at every login. (Note: obsolete sessions should not be a problem for visitors that are not logged in, because you have to be logged in to be able to lock a record.)

- Uses [dbsession\\_setup\(\)](#)
- Uses [dbsession\\_garbage\\_collection\(\)](#)
- Uses \$CFG

*void* function was\_logout() [*line 187*]

### end a session (logout the user) and maybe redirect

This routine ends the current session if it exists (as indicated by the cookie presented by

the user's browser). An empty value is sent to the browser (effectively deleting the cookie) and also the session is ended. The routine ends either with showing a generic login dialog OR a redirection to a user-defined page.

Note that as a rule this routine does NOT return but instead calls `exit()`. However, there are cases where this routine DOES return, notably when no session appears to be established (no cookie submitted by the browser or a non-existing/expired session). If the routine does return, the status is equivalent to a logged out user; no session exists so the user simply should not be logged in.

- **Uses** [dbsession\\_setup\(\)](#)
- **Uses** `$CFG`

## module.class.php

### /program/lib/module.class.php - taking care of modules

This file defines a base class for dealing with modules. It is always included and it can be used as a base to inherit from.

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: module.class.php,v 1.2 2011-02-03 14:04:04 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **TODO** we probably need to get rid of this file because it is not used (2010-12-07/PF)
- **License** [GNU AGPLv3+Additional Terms](#)

# modulelib.php

/program/lib/modulelib.php - module factory

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: modulelib.php,v 1.2 2011-02-03 14:04:04 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **TODO** we probably need to get rid of this file because it is not used (2010-12-07/PF)
- **License** [GNU AGPLv3+Additional Terms](#)

*bool/object* function module\_factory([\$module\_id = 0], [\$node\_id = NULL]) [*line 46*]

## **Function Parameters:**

- *int* **\$module\_id** which module to retrieve from database via primary key
- **\$node\_id**

## **manufacture a module object**

This loads (includes) a specific module based on the parameter \$module\_id. Relevant data is read from the database. If no module can be found, the function returns FALSE;

Note that the base Module-class is always included so it is there if other modules need it.

- **TODO** what if the module is not found? Currently no alternative is loaded but FALSE is returned.
- **Uses** \$CFG

require\_once \$CFG->progdir."/lib/module.class.php" [*line 30*]

## **module class is used as a base class from which others are derived**



# modulemanagerlib.php

## /program/lib/modulemanagerlib.php - modulemanager

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: modulemanagerlib.php,v 1.2 2011-02-03 14:04:04 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

*void* function job\_modulemanager(&\$output) [*line 32*]

### ***Function Parameters:***

- *object* **&\$output** collects the html output

**main entry point for modulemanager (called from admin.php)**

# pagemanager.class.php

/program/lib/pagemanager.class.php - pagemanager

This file contains the Page Manager class, the core functionality of Website@School.

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl)>
- **Version** \$Id: pagemanager.class.php,v 1.3 2011-05-02 21:03:52 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

DIALOG\_NODE\_ADD = 1 *[line 54]*  
DIALOG\_NODE\_DELETE\_CONFIRM = 5 *[line 58]*  
DIALOG\_NODE\_EDIT = 2 *[line 55]*  
DIALOG\_NODE\_EDIT\_ADVANCED = 3 *[line 56]*  
DIALOG\_NODE\_EDIT\_CONTENT = 4 *[line 57]*  
MODULE\_NAME\_DEFAULT = htmlpage *[line 69]*

**Default initial module of a new page (see get\_dialogdef\_add\_node())**

NODE\_VISIBILIY\_DEFAULT = NODE\_VISIBILIY\_HIDDEN *[line 67]*

**Default initial visibility of a new node (see get\_dialogdef\_add\_node())**

NODE\_VISIBILIY\_EMBARGO = 3 *[line 65]*

**Initial visibility of a new node: under embargo**

NODE\_VISIBILIY\_HIDDEN = 2 *[line 63]*

**Initial visibility of a new node: hidden**

NODE\_VISIBILIY\_VISIBLE = 1 *[line 61]*

**Initial visibility of a new node: visible**

PARAM\_TREEVIEW = treeview *[line 48]*  
TASK\_ADD\_PAGE = addpage *[line 35]*  
TASK\_ADD\_SECTION = addsection *[line 36]*  
TASK\_NODE\_DELETE = delete *[line 37]*  
TASK\_NODE\_EDIT = edit *[line 38]*  
TASK\_NODE\_EDIT\_ADVANCED = editadvanced *[line 40]*

TASK\_NODE\_EDIT\_CONTENT = editcontent [*line 39*]  
TASK\_PAGE\_PREVIEW = preview [*line 41*]  
TASK\_SAVE\_CONTENT = savecontent [*line 45*]  
TASK\_SAVE\_NEWPAGE = savenewpage [*line 43*]  
TASK\_SAVE\_NEWSECTION = savenewsection [*line 44*]  
TASK\_SAVE\_NODE = savenode [*line 42*]  
TASK\_SET\_DEFAULT = setdefault [*line 34*]  
TASK\_SUBTREE\_COLLAPSE = collapse [*line 33*]  
TASK\_SUBTREE\_EXPAND = expand [*line 32*]  
TASK\_TREEVIEW = treeview [*line 30*]  
TASK\_TREEVIEW\_SET = settreeview [*line 31*]  
TREE\_VIEW\_CUSTOM = 2 [*line 50*]  
TREE\_VIEW\_MAXIMAL = 3 [*line 51*]  
TREE\_VIEW\_MINIMAL = 1 [*line 49*]



# statisticslib.php

/program/lib/statisticslib.php - statistics

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: statisticslib.php,v 1.2 2011-02-03 14:04:04 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

*void* function job\_statistics(&\$output) [*line 32*]

## **Function Parameters:**

- *object* **&\$output** collects the html output

**main entry point for statistics (called from admin.php)**

## theme.class.php

### /program/lib/theme.class.php - taking care of themes

This file defines a base class for dealing with themes. It is always included and it can be used as a starting point for other themes by inheriting from this class.

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: theme.class.php,v 1.4 2011-05-11 19:11:01 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

# themelib.php

## /program/lib/themelib.php - theme factory

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl)>
- **Version** \$Id: themelib.php,v 1.2 2011-02-03 14:04:04 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

*bool/object* function theme\_factory(\$theme\_id, \$area\_id, \$node\_id) [*line 45*]

### **Function Parameters:**

- *int* **\$theme\_id** denotes which theme to retrieve from database via primary key
- *int* **\$area\_id** the area we're working in
- *int* **\$node\_id** the node that is to be displayed

### **manufacture a theme object**

This loads (includes) a specific theme based on the parameter \$theme\_id. Relevant data is read from the database.

- **TODO** what if the theme is not found? Currently no alternative is loaded but FALSE is returned.
- **TODO** should we massage the directory and file names of the included theme?
- **Uses** \$CFG

require\_once **\$CFG->progrdir."/lib/theme.class.php"** [*line 29*]

### **theme class is used as a base class from which others can be derived**



# toolslib.php

/program/lib/toolslib.php - tools

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: toolslib.php,v 1.2 2011-02-03 14:04:04 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

```
TASK_BACKUPTOOL = backuptool [line 31]
TASK_LOGVIEW = logview [line 32]
TASK_TOOLS_INTRO = intro [line 29]
TASK_TRANSLATETOOL = translatetool [line 30]
void function job_tools(&$output) [line 45]
```

## **Function Parameters:**

- *object* **&\$output** collects the html output

## **main entry point for tools (called from /program/main\_admin.php)**

this routine dispatches the tasks, If the specified task is not recognised, the default task TASK\_TOOLS\_INTRO is executed.

- **TODO** fix permissions for backup tool! perhaps another bit?

```
void function show_tools_intro(&$output) [line 113]
```

## **Function Parameters:**

- *object* **&\$output** collects the html output

## display an introductory text for tools + menu

*void* function show\_tools\_menu(&\$output, [\$current\_task = NULL]) *[line 125]*

### **Function Parameters:**

- *object* **&\$output** collects the html output
- *string* **\$current\_task** indicate the current menu selection (if any)

## display the tools menu

*output* function task\_backuptool(&\$output) *[line 203]*

### **Function Parameters:**

- *object* **&\$output** collects output to show to user

## show an introductory text for backup tool OR stream a ZIP-file to the browser

If we arrive here via the tools menu, the parameter download is not set. In that case we show an introductory text with a link that yields a ZIP-file with the backup.

If the user follows the download link, we arrive here too but with the download parameter set. We then dump the database in a variable and subsequently compress it in a ZIP-file which we stream to the browser. We do code some things in the basename of the backup:

- the hostname
- the database name
- the database prefix
- the date and the time

which should be enough to distinguish nearly all backups if you happen to have a lot of different ones. Note that the URL is also encoded as a comment in the .ZIP.

The parameter download is currently set to 'zip'. However, we do attempt to send the plain uncompressed data if that parameter is set to 'sql' (quick and dirty). Oh well. hopefully there is enough memory to accomodate backups of moderate sized sites.

Note that we need space to compress the data; a informal test yielded that we need about 160% of the uncompressed size of the backup (tested with a small testset). Rule of the thumb for memory: the more the merrier but at least twice the size of the uncompressed backup.

*output* function task\_logview(&\$output) *[line 291]*

### **Function Parameters:**

- *object* **&\$output** collects output to show to user

### quick and dirty logfile viewer

this constructs a table with the contents of the logtable. fields displayed are: datim, IP-address, username, logpriority and message we use a LEFT JOIN in order to get to a meaningful username rather than a numeric user\_id an attempt is made to start with the last page of the logs because that would probably be the most interesting part. We paginate the log in order to keep it manageable.

- **TODO** should we allow for fancy selection mechanisms on the logfile or is that over the top?

# translatetool.class.php

/program/lib/translatetool.class.php - taking care of language translations

This file defines a class for managing translations.

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: translatetool.class.php,v 1.4 2011-03-11 15:32:46 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

```
TRANSLATETOOL_CHORE_EDIT = edit [line 34]
TRANSLATETOOL_CHORE_LANGUAGE_ADD = language_add [line 30]
TRANSLATETOOL_CHORE_LANGUAGE_EDIT = language_edit [line 32]
TRANSLATETOOL_CHORE_LANGUAGE_SAVE = language_save [line 33]
TRANSLATETOOL_CHORE_LANGUAGE_SAVE_NEW = language_savenew [line 31]
TRANSLATETOOL_CHORE_OVERVIEW = overview [line 29]
TRANSLATETOOL_CHORE_SAVE = save [line 35]
TRANSLATETOOL_PARAM_DOMAIN = domain [line 39]
TRANSLATETOOL_PARAM_LANGUAGE_KEY = language_key [line 38]
```

**This parameter identifies the language.**

Note: it should not be confused with the global 'language' parameter



# updatelib.php

## /program/lib/updatelib.php - update wizard

This file handles all system updates. The basic idea is as follows.

We assume that a previous version of Website@School is/was already correctly installed using the code in /program/[install.php](#). Using this version the school has added many, many hours of work in entering data.

Now a new version is installed, i.e. the new files (or just the updated files) are copied/uploaded to the webserver, including the file [version.php](#) and perhaps also updated versions of modules, themes, etc. This yields an error message for visitors (the infamous 'error 050') because the database version and the file version no longer match. The user logging in into admin.php is forced to attend to the job 'update', arriving here in [job\\_update\(\)](#).

There an overview is presented of the core version and versions of all subsystems, with the option to upgrade those that qualify. The actual work for the core version is done in [update\\_core\(\)](#) in this file. The actual work for modules and themes are done via the code in those subsystems. However, these are called from here.

The user is more or less \_forced\_ to perform the upgrade: all ways lead to job\_upgrade() while the internal (database) version does not match the file version.

The upgrade should perform all necessary steps to upgrade, ending with updating the internal version number to match the file version. After that the error message '050' for visitors is gone, and admin.php no longer forces the user to come here. It is possible, however, to manually arrive here to check the updates of modules, themes, etc. but I consider that less important. That is: an upgrade of a module or theme will NOT be forced upon the user. It is wise, though to upgrade, but that is up to the user.

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl)>
- **Version** \$Id: updatelib.php,v 1.9 2011-05-09 20:00:04 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

```
TASK_INSTALL_LANGUAGE = install_language [line 66]
TASK_INSTALL_MODULE = install_module [line 69]
TASK_INSTALL_THEME = install_theme [line 72]
TASK_UPDATE_CORE = core [line 64]
```

```
TASK_UPDATE_LANGUAGE = update_language [line 67]
TASK_UPDATE_MODULE = update_module [line 70]
TASK_UPDATE_OVERVIEW = overview [line 63]
TASK_UPDATE_THEME = update_theme [line 73]
array function get_manifests($path) [line 1042]
```

**Function Parameters:**

- *string* **\$path** top directory for the search for manifest files

### retrieve an array of manifests for modules, themes or languages

this examines the file system starting in the directory \$path, looking for manifest files. These manifest files are named after the subdirectory they are in as follows. Example: If \$path is /program/modules, this routine steps through that directory and may find subdirectories 'htmlpage', 'guestbook' and 'forum'. Eventually these manifest files are include()'d:

/program/modules/htmlpage/htmlpage_manifest.php,	
/program/modules/guestbook/guestbook_manifest.php	and
/program/modules/forum/forum_manifest.php.	

Every manifest file must describe the module (or language or theme) via the following construct:

```
$manifests['htmlpage'] = array('name' => 'htmlpage', ..., 'cron_interval' => 0);
```

After processing all the subdirectories of \$path, the resulting array \$manifests is returned. Note that pseudo-directories like '.' and '..' are not considered. Also, subdirectories 'foo' without the file 'foo\_manifest.php' are also ignored.

Note that the name of the manifest file itself is also stored in the array, but excluding the subdirectory name.

Note: a similar routine is used in the installation script [install.php](#).

```
void function install_language(&$output, $language_key, $language_key) [line 347]
```

**Function Parameters:**

- *object* **&\$output** collects the html output
- *string* **\$language\_key** primary key for language record in database AND name of the /program/languages subdirectory
- **\$language\_key**

### install an additional language pack

this routine attempts to insert the information from the manifest of language \$language\_key into the database. The routine displays the result (error or success) in a message in \$output. Details can be found in the logs.

The `language_key` is validated by reading all existing manifests. This is quite expensive, but that is not important because we do not use this routine very often anyway.

Note that we assume that the actual translations of the language pack are already unpacked into the correct directories. The corresponding manifest should exist in the directory `/program/languages/$language_key`.

`void function install_module(&$output, $module_key) [line 479]`

**Function Parameters:**

- *object* **&\$output** collects the html output
- *string* **\$module\_key** primary key for module record in database AND name of the `/program/modules` subdirectory

### install an additional module

this routine attempts to insert the information from the manifest of module `$module_key` into the database. The routine displays the result (error or success) in a message in `$output`. Details can be found in the logs.

The `module_key` is validated by reading all existing module manifests. This is quite expensive, but that is not important because we do not use this routine very often anyway.

Note that we assume that the actual modules are already unpacked into the correct directories. The corresponding manifest should exist in the directory `/program/modules/$module_key`.

- **TODO** we should refactor and combine `install_theme()` and `install_module()`
- **Uses** `$CFG`

`void function install_theme(&$output, $theme_key) [line 699]`

**Function Parameters:**

- *object* **&\$output** collects the html output
- *string* **\$theme\_key** primary key for theme record in database AND name of the `/program/themes` subdirectory

### install an additional theme

this routine attempts to insert the information from the manifest of theme \$theme\_key into the database. The routine displays the result (error or success) in a message in \$output. Details can be found in the logs.

The theme\_key is validated by reading all existing module manifests. This is quite expensive, but that is not important because we do not use this routine very often anyway.

Note that we assume that the actual theses are already unpacked into the correct directories. The corresponding manifest should exist in the directory /program/themes/\$theme\_key.

- **TODO** we should refactor and combine install\_theme() and install\_module()
- **Uses** \$CFG

*void function job\_update(&\$output) [line 103]*

#### **Function Parameters:**

- *object* **&\$output** collects the html output

### main entry point for update wizard (called from /program/main\_admin.php)

This routine takes care of executing update routines for both the core program and modules, themes, etc. It is called automatically whenever the core program version in the database is different from the version in the file {@Ink version.php} (see also [main\\_admin\(\)](#)).

It can also be called manually via 'job=update'. When no specific task is specified, this routine shows the overview of versions for core, modules, themes, etc. Whenever a component is NOT up to date, an [Update] button is displayed. If a component IS up to date, we simply display the word 'OK'. This implies that when everything is up to date, the overview simply displays a list of OK's and the user is 'free to go'.

The actual updates for modules, themes, etc. is done via the various subsystems themselves, e.g. by calling `htmlpage_upgrade()` in the file `/program/modules/htmlpage/htmlpage_install.php`. The updates for the core program are actually performed from this file right here, see below for an example.

Note that we give a core update high priority: if the core is not up to date, nothing will work, except updating the core.

*void* function update\_core(&\$output) [*line 894*]

**Function Parameters:**

- *object* **&\$output** collects the html output

**update the core version in the database to the version in the version.php file (the 'manifest' version)**

*bool* function update\_core\_2010120800(&\$output) [*line 1100*]

**Function Parameters:**

- *object* **&\$output** collects the html output

**perform actual update to version 2010120800**

*bool* function update\_core\_2010122100(&\$output) [*line 1118*]

**Function Parameters:**

- *object* **&\$output** collects the html output

**perform actual update to version 2010122100**

*bool* function update\_core\_2011020100(&\$output) [*line 1136*]

**Function Parameters:**

- *object* **&\$output** collects the html output

**perform actual update to version 2011020100**

*bool* function update\_core\_2011051100(&\$output) [*line 1199*]

**Function Parameters:**

- *object* **&\$output** collects the html output

## perform actual update to version 2011051100

this is a substantial change in the database: we (finally) standardise on UTF-8 including the database. Up until now we still only have a choice of exactly one database driver: MySQL. Therefore the upgrade we do here can be more or less MySQL-specific. (So much for database-independency).

What needs to be done here?

The most important task (in fact: the only task) is to change the collation (and implicitly the default charset) to utf8\_unicode\_ci (4.1.x <= MySQL < 5.5.2) or utf8mb4\_unicode\_ci (MySQL 5.5.3+). See [mysql.class.php](http://mysql.class.php) for more information on these UTF-8 & MySQL issues.

Strategy here is as follows.

```
for all 'our' tables (ie. "LIKE '{$prefix}%" do
  if table default charset is already utf8 (or utf8mb4)
    continue;
  for appropriate columns in this table
    change column type to binary
    change column type back to non-binary with correct charset and collation
  if no trouble sofar
    change default charset/collation of the table too
  else
    return failure
return success
```

This way we might be able to work our way through huge tables: if the PHP max processing time kicks in, we can rerun the upgrade and start (again) with the table we had in our hands the previous time. I don't expect this to happen, but it still the way to do it IMHO.

Note that I assume that I cannot change the default charset of the DATABASE for the same reason the Installation Wizard expects the database to be ready before installation commences. (I cannot be sure that I have the privilege to execute 'ALTER DATABASE \$db\_name DEFAULT CHARSET utf8 COLLATE utf8\_unicode\_ci').

A useful reference for solving this problem of converting to utf8 can be found here:  
[http://codex.wordpress.org/Converting\\_Database\\_Character\\_Sets](http://codex.wordpress.org/Converting_Database_Character_Sets).

In the case of W@S we do not have to deal with enum-fields because those are not used at this time. In fact it boils down to changing char, varchar, text and longtext.

Let goforit...

*bool* function update\_core\_version(&\$output, \$version) [*line 949*]

### **Function Parameters:**

- *object* **&\$output** collects the html output
- *int* **\$version** the new version number to store in config table

**record the specified version number in the config table AND in \$CFG->version**

This utility routine records the new version number in the config table and also adjusts the version number already in core (in \$CFG->version).

*bool* function update\_create\_tables(\$filename) [*line 1067*]

**Function Parameters:**

- *string* **\$filename** contains the table definitions

### **create tables in database via include()'ing a file with tabledefs**

- **Uses \$DB**

*void* function update\_language(&\$output, \$language\_key, \$lanuage\_key) [*line 410*]

**Function Parameters:**

- *object* **&\$output** collects the html output
- *string* **\$lanuage\_key** primary key for language record in database AND name of the /program/languages subdirectory
- **\$language\_key**

### **update a language in the database**

this routine tries to update the information in the database with the information in the language manifest of the selected language \$language\_key. The event is logged via logger().

Note that an upgrade of a language is not at all interesting because there is nothing to do except to update the data in the databse with that from the manifest. However, we still do it this way in order for the user to grow accustomed to it so we can complexicate this routine in the future without the user having to learn new tricks.

*void* function update\_module(&\$output, \$module\_key) [*line 590*]

**Function Parameters:**

- *object* **&\$output** collects the html output

- *string* **\$module\_key** unique secondary key for module record in modules table in database

### call the module-specific upgrade routine

this routine tries to execute the correct upgrade script/function for module `$module_key`. If all goes well, a success message is written to `$output` (and the update is performed), otherwise an error message is written to `$output`. Either way the event is logged via `logger()`.

Note that we take care not to load spurious files and execute non-existing functions. However, at some point we do have to have some trust in the file system...

*void* function `update_show_overview(&$output)` [line 170]

#### **Function Parameters:**

- *object* **&\$output** collects the html output

### display an introductory text for update + status overview

*array* function `update_status_anchor([$task = NULL], [$key = NULL], [$anchor = NULL])` [line 924]

#### **Function Parameters:**

- *string* **\$task** which update task do we need to do?
- *string||null* **\$key** which module/theme/etc. (NULL for core)
- *string* **\$anchor** text to show in link

### return an anchor tag with link to the specific update function

This utility routine returns a ready to use HTML anchor tag.

*void* function `update_status_table_close(&$output)` [line 1006]

#### **Function Parameters:**

- *object* **&\$output** collects the html output

### close the status overview HTML-table we opened before



this is the companion routine for [update\\_status\\_table\\_open\(\)](#); it closes the open HTML-table

*void function update\_status\_table\_open(&\$output, [\$title = "]) [line 980]*

**Function Parameters:**

- *object* **&\$output** collects the html output
- *string* **\$title** is the header of the first column

**open a status overview HTML-table including column headers**

this routine opens an HTML-table in preparation for a status overview of the system or a subsystem (languages, modules, themes). The optional title is used as the header of the first column.

The width of the first column is 25% and the remaining 5 columns area 15% each which creates an orderly display of name, internal version, external version, releasedate, release and status.

*void function update\_theme(&\$output, \$theme\_key) [line 805]*

**Function Parameters:**

- *object* **&\$output** collects the html output
- *string* **\$theme\_key** unique secondary key for theme record in themes table in database

**call the theme-specific upgrade routine**

this routine tries to execute the correct upgrade script/function for theme \$theme\_id. If all goes well, a success message is written to \$output (and the update is performed), otherwise an error message is written to \$output Either way the event is logged via logger().

Note that we take care not to load spurious files and execute non-existing functions. However, at some point we do have to have some trust in the file system...

# useraccount.class.php

## /program/lib/useraccount.class.php - taking care of useraccounts

This file defines a class for dealing with users. Also, the global job permission constants and access control constants are defined. This file is always included, even when a visitor is anonymous (ie. not logged in).

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl)>
- **Version** \$Id: useraccount.class.php,v 1.3 2011-05-09 19:39:37 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

```
ACL_ROLE_GURU = -1 [line 99]
ACL_ROLE_INTRANET_ACCESS = 1 [line 100]
ACL_ROLE_NONE = 0 [line 98]
ACL_ROLE_PAGEMANAGER_AREAMASTER = ACL_ROLE_PAGEMANAGER_SECTIONMASTER|
PERMISSION_AREA_DROP_PAGE|
PERMISSION_AREA_ADD_PAGE|
PERMISSION_AREA_DROP_SECTION|
PERMISSION_AREA_ADD_SECTION|
PERMISSION_AREA_EDIT_AREA [line 112]
ACL_ROLE_PAGEMANAGER_CONTENTMASTER = PERMISSION_NODE_EDIT_CONTENT [line 101]
ACL_ROLE_PAGEMANAGER_PAGEMASTER = ACL_ROLE_PAGEMANAGER_CONTENTMASTER|
PERMISSION_NODE_DROP_CONTENT|
PERMISSION_NODE_ADD_CONTENT|
PERMISSION_NODE_EDIT_PAGE [line 102]
ACL_ROLE_PAGEMANAGER_SECTIONMASTER = ACL_ROLE_PAGEMANAGER_PAGEMASTER|
PERMISSION_NODE_DROP_PAGE|
PERMISSION_NODE_ADD_PAGE|
PERMISSION_NODE_DROP_SECTION|
PERMISSION_NODE_ADD_SECTION|
PERMISSION_NODE_EDIT_SECTION [line 106]
ACL_ROLE_PAGEMANAGER_SITEMASTER = ACL_ROLE_PAGEMANAGER_AREAMASTER|
PERMISSION_SITE_DROP_AREA|
PERMISSION_SITE_ADD_AREA|
PERMISSION_SITE_EDIT_SITE [line 118]
JOB_PERMISSION_ACCOUNTMANAGER = 16 [line 47]
```

**This (dangerous) permission allows access to add/edit/delete users and groups (including escalate privileges)**

```
JOB_PERMISSION_BACKUPTOOL = 256 [line 59]
```

**This allows the user to download a backup of the database**

JOB\_PERMISSION\_CONFIGURATIONMANAGER = 32 *[line 50]*

**This permission allows the user to access the configuration manager and change the site configuration**

JOB\_PERMISSION\_FILEMANAGER = 4 *[line 41]*

**This permission allows the user to access the file manager and upload/delete files in selected places**

JOB\_PERMISSION\_GURU = -1 *[line 32]*

**Guru permissions = all permission bits are set, even the unused ones**

JOB\_PERMISSION\_LOGVIEW = 512 *[line 62]*

**This allows the user to view the contents of the log table**

JOB\_PERMISSION\_MASK = JOB\_PERMISSION\_NEXT\_AVAILABLE\_VALUE-1 *[line 74]*

**This mask can be used to isolate only the 'official' permissions from an integer value**

JOB\_PERMISSION\_MODULEMANAGER = 8 *[line 44]*

**This permission allows the user to access the module manager and configure modules**

JOB\_PERMISSION\_NEXT\_AVAILABLE\_VALUE = 2048 *[line 71]*

**NOTE: This quasi-permission should always be defined to be the highest permission 1**

JOB\_PERMISSION\_PAGEMANAGER = 2 *[line 38]*

**This permission allows the user to access the page manager and add/edit/delete nodes according to the user's ACLs**

JOB\_PERMISSION\_STARTCENTER = 1 *[line 35]*

**This permission is required for every user that is to logon to admin.php**

JOB\_PERMISSION\_STATISTICS = 64 *[line 53]*

**This permissions allows the user to access the site statistics**

JOB\_PERMISSION\_TOOLS =

JOB\_PERMISSION\_TRANSLATETOOL|JOB\_PERMISSION\_BACKUPTOOL|JOB\_PERMISSION\_LOGVIEW|JOB\_PERMISSION\_UPDATE *[line 68]*

**combine the permssions for the tools in a single bit mask for convenient testing**

JOB\_PERMISSION\_TRANSLATETOOL = 128 *[line 56]*

**This allows the user to translate the program, by modifying existing translations or adding new languages**

JOB\_PERMISSION\_UPDATE = 1024 *[line 65]*

**This allows the user to perform a system upgrade (see [also version check\(\)](#) and [main admin\(\)](#))**

PERMISSION\_AREA\_ADD\_PAGE = 1024 *[line 89]*

PERMISSION\_AREA\_ADD\_SECTION = 4096 *[line 91]*

PERMISSION\_AREA\_DROP\_PAGE = 512 *[line 88]*

PERMISSION\_AREA\_DROP\_SECTION = 2048 *[line 90]*

PERMISSION\_AREA\_EDIT\_AREA = 8192 *[line 92]*

PERMISSION\_NODE\_ADD\_CONTENT = 4 *[line 79]*

PERMISSION\_NODE\_ADD\_PAGE = 32 *[line 83]*

PERMISSION\_NODE\_ADD\_SECTION = 128 *[line 85]*

PERMISSION\_NODE\_DROP\_CONTENT = 2 *[line 78]*

PERMISSION\_NODE\_DROP\_PAGE = 16 *[line 82]*

PERMISSION\_NODE\_DROP\_SECTION = 64 *[line 84]*

PERMISSION\_NODE\_EDIT\_CONTENT = 1 *[line 76]*

PERMISSION\_NODE\_EDIT\_PAGE = 8 *[line 80]*

PERMISSION\_NODE\_EDIT\_SECTION = 256 *[line 86]*

PERMISSION\_SITE\_ADD\_AREA = 32768 *[line 95]*

PERMISSION\_SITE\_DROP\_AREA = 16384 *[line 94]*

PERMISSION\_SITE\_EDIT\_SITE = 65536 *[line 96]*

## usermanager.class.php

### /program/lib/usermanager.class.php - taking care of user management

This file defines a class for dealing with users.

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: usermanager.class.php,v 1.2 2011-02-03 14:04:04 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

GROUP\_SELECT\_ALL\_USERS = -1 *[line 30]*

**this value is used to select all users rather than users from a specific group**

GROUP\_SELECT\_NO\_GROUP = 0 *[line 33]*

**this value is used to select the users that are not associated with any group**

# utf8lib.php

## /program/lib/utf8lib.php - utility-routines for UTF-8

This file deals with the idiosyncrasies of UTF-8.

Reference: The Unicode Consortium, The Unicode Standard, Version 6.0.0, (Mountain View, CA: The Unicode Consortium, 2011, ISBN 978-1-936213-01-6) <<http://www.unicode.org/versions/Unicode6.0.0>>, chapter 3 (Conformance), page 94

Summary of the way valid code points are stored in 1 to 4 byte sequences.

bits	code-points	1st byte	2nd byte	3rd byte	4th byte	----	-----
---	-----	-----	-----	-----	7	0000 0000 0000 0000	0xxx xxxx 0xxx.xxxx 11
0000 0000 0000	0yyy yyxx xxxx	110y.yyyy	10xx.xxxx	16	0000 0000	zzzz	yyyy yyxx xxxx
1110.zzzz	10yy.yyyy	10xx.xxxx	21	000w	wwzz	zzzz	yyyy yyxx xxxx
10zz.zzzz	10yy.yyyy	10xx.xxxx					1111.0www

bits	byte 1	byte 2	byte 3	byte 4	comments	----	-----	-----	-----	-----	7	00
- 7F			U+0000 - U+007F	80 - BF						--> ill-formed		
C0 - C1	80 - BF				--> overlong 2-byte	11	C2 - DF	80 - BF				
U+0080 - U+07FF	E0	80 - 9F*	80 - BF		--> overlong 3-byte	16	E0	A0 -				
BF* 80 - BF		U+0800 - U+0FFF	16	E1 - EC	80 - BF	80 - BF		U+1000 -				
U+CFFF	16	ED	80 - 9F*	80 - BF	U+D000 - U+D7FF	ED	A0 - BF*	80 - BF				
		--> surrogates (U+D800 - U+DFFF)	16	EE - EF	80 - BF	80 - BF		U+E000 -				
U+FFFF	F0	80 - 8F*	80 - BF	80 - BF	--> overlong 4-byte	21	F0	90 - BF*	80 -			
BF 80 - BF	U+10000 - U+3FFFF	21	F1 - F3	80 - BF	80 - BF	80 - BF		U+40000 -				
U+FFFFFF	21	F4	80 - 8F*	80 - BF	80 - BF	U+100000 - U+10FFFF	F4	90 - BF*				
80 - BF	80 - BF	--> invalid planes 11 - 13		F5 - F7	80 - BF	80 - BF	80 - BF	-->				
invalid planes 14 - 1F		F8 - FB			--> invalid 5-byte sequence		FC -					
FD		--> invalid 6-byte sequence		FE - FF			-->					
disallowed (BOM)												

Note: Non-standard continuation ranges are marked with \* (only for byte 2)

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: utf8lib.php,v 1.2 2011-05-06 16:07:56 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

USE\_MBSTRING = TRUE [line 70]

int function utf8\_strcasecmp(\$utf8str1, \$utf8str2) [line 181]

**Function Parameters:**

- *string* **\$utf8str1** first string
- *string* **\$utf8str2** second string

### **compare two UTF8 strings in a case-INsensitive way**

This compares two UTF-8 strings caseINsensitive. We do this by comparing the lowercase variant of the strings with the regular strcmp. We use lowercasing because that translation table is 'better' than the upper case one.

Note that this is a quick and dirty approach: we simply use the multibyte strings as-is rather than extracting the actual code points and applying some sort of collation because that would make it much more complicated.

int function utf8\_strlen(\$utf8str) [line 112]

**Function Parameters:**

- *string* **\$utf8str** a valid UTF-8 string to examine

### **calculate the number of code points encoded in an UTF-8 string**

This routine uses a trick to calculate the number of code points available in string \$str. By first converting the UTF-8 string to ISO-8859-1 all multi-byte code points (ie. all non-ASCII) are converted to a single byte: the correct ISO-8859-1 character where possible and a '?' for characters not available in the ISO-8859-1 repertoire. Note that utf8\_decode() does NOT work very well on ill-formed UTF-8 strings, e.g. it happily interprets codes in invalid planes and translates truncated sequences to chr(0). The good news is that it works for valid UTF-8.

string function utf8\_strtoascii(\$utf8str) [line 268]

**Function Parameters:**

- *string* **\$utf8str** input string possibly with letters with diacriticals etc.

### **map some UTF-8 characters to comparable ASCII strings**

this maps a lot of UTF-8 characters to more or less comparable ASCII strings, e.g. an A-acute is mapped to 'A', etc. Handy when trying to construct readable filenames from letters

with diacritics, eg. e-acute 'l' e-grave 'v' 'e' (French for pupil) maps to 'e' 'l' 'e' 'v' 'e' rather than 'l' 'v' 'e' if the diacriticals would simply be 'eaten'.

Note that UTF-8 characters that are NOT mapped to ASCII are retained, i.e. the result is not plain ASCII but an UTF-8 string with as much characters mapped to ASCII as possible.

- **Uses \$UTF8\_ASCII**

*string* function utf8\_strtolower(\$utf8str) [line 134]

**Function Parameters:**

- *string* **\$utf8str** a valid UTF-8 string to examine

**fold a UTF-8 string to lower case**

this routine tries to use the multibyte routine for folding, but if it is not available we fall back to our own translation table \$UTF8\_UPPER\_LOWER which is derived straight from the Unicode Character Database.

Informal benchmarking yielded no significant speed difference between mb\_strtolower() and strtolower(). However, our table needs memory to store the 1100+ pairs and for mb\_strtolower() this is already taken care of. OTOH: depending on the version of mb\_string, our table (UCD 6.0.0 February 2011) may be more complete and up to date. Oh well.

*string* function utf8\_strtoupper(\$utf8str) [line 155]

**Function Parameters:**

- *string* **\$utf8str** a valid UTF-8 string to examine

**fold a UTF-8 string to upper case (sort of)**

this routine tries to use the multibyte routine for folding, but if it is not available we fall back to our own translation table \$UTF8\_LOWER\_UPPER which is derived from the Unicode Character Database. Note that this table has some quirks because the underlying table is injective.



*string* function utf8\_substr(\$utf8str, \$start, [\$length = NULL]) [*line 201*]

**Function Parameters:**

- *string* **\$utf8str** a valid UTF-8 string to examine
- *int* **\$start** an offset expressed in characters (not bytes)
- *int* **\$length** the length of the string to return (also expressed in characters)

**return part of a UTF-8 string**

this routine returns a valid UTF-8 substring from \$utf8str based on the \$start and \$length parameters in a way comparable to substr(). If available, we use the mb\_substr() replacement, otherwise we perform the requested actions ourselves.

If we do it ourselves, we prefix variable names with 'c\_' for characters and 'b\_' for bytes. A UTF-8 character takes up to 4 bytes.

*bool* function utf8\_validate(\$str) [*line 85*]

**Function Parameters:**

- *string* **\$str** the string to check

**check an arbitrary string for UTF-8 conformity**

return TRUE if string is valid UTF-8, FALSE otherwise.

# waslib.php

## /program/lib/waslib.php - core functions

This file provides various utility routines.

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl)>
- **Version** \$Id: waslib.php,v 1.4 2011-05-02 16:17:23 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

```
CAPACITY_CHAIR = 8 [line 38]
CAPACITY_CUSTOM1 = 11 [line 41]
CAPACITY_CUSTOM2 = 12 [line 42]
CAPACITY_CUSTOM3 = 13 [line 43]
CAPACITY_CUSTOM4 = 14 [line 44]
CAPACITY_CUSTOM5 = 15 [line 45]
CAPACITY_CUSTOM6 = 16 [line 46]
CAPACITY_CUSTOM7 = 17 [line 47]
CAPACITY_CUSTOM8 = 18 [line 48]
CAPACITY_CUSTOM9 = 19 [line 49]
CAPACITY_EDITOR = 9 [line 39]
CAPACITY_MEMBER = 4 [line 34]
CAPACITY_NEXT_AVAILABLE = 20 [line 50]
CAPACITY_NONE = 0 [line 30]
```

The constants **CAPACITY\_\*** are used for group memberships (see [accountmanagerlib.php](#)).

```
CAPACITY_PRINCIPAL = 3 [line 33]
CAPACITY_PROJECTLEAD = 5 [line 35]
CAPACITY_PUBLISHER = 10 [line 40]
CAPACITY_PUPIL = 1 [line 31]
CAPACITY_SECRETARY = 7 [line 37]
CAPACITY_TEACHER = 2 [line 32]
CAPACITY_TREASURER = 6 [line 36]
QUASI_RANDOM_DIGITS = 10 [line 253]
QUASI_RANDOM_DIGITS_UPPER = 36 [line 255]
QUASI_RANDOM_DIGITS_UPPER_LOWER = 62 [line 256]
QUASI_RANDOM_HEXDIGITS = 16 [line 254]
string function appropriate_legal_notices($high_visibility, [$m = ""]) [line 1524]
```

### **Function Parameters:**

- *bool* **\$high\_visibility** if TRUE we return a text-only link, otherwise a clickable image
- *string* **\$m** margin to improve readability of generated code

### **construct a link to appropriate legal notices as per AGPLv3 section 5**

This routine constructs ready-to-use HTML-code for a link to the Appropriate Legal Notices, which are to be found in /program/about.html. Depending on the highvisibility flag we either generate a text-based link or a clickabel image.

The actual text / image to use depends on the global constant WAS\_ORIGINAL. This constant is defined in /program/version.php and it should be TRUE for the original version of Website@School and FALSE for modified versions.

In the former case the anchor looks like 'Powered by Website@School', in the latter case it will look like 'Based on Website@School', which is in line with the requirements from the license agreement for Website@School, see /program/license.html.

### **IMPORTANT NOTE**

Please respect the license agreement and change the definition of WAS\_ORIGINAL to FALSE if you modify this program (see /program/version.php). You also should change the file '/program/about.html' and add a 'prominent notice' of your modifications.

Note: a comparable routine can be found in [install.php](#).

*array* function build\_tree(\$area\_id, [\$force = FALSE]) [*line 924*]

#### **Function Parameters:**

- *int* **\$area\_id** the area to make the tree for
- *bool* **\$force** if TRUE forces reread from database (resets the cache)

### **construct a tree of nodes in memory**

this reads the nodes in the specified area from disk and constructs a tree via linked lists (sort of). If parameter \$force is TRUE, the data is read from the database, otherwise a cached version is returned (if available).

Note that this routine also 'repairs' the tree when an orphan is detected. The orphan is automagically moved to the top of the area. Of course, it shouldn't happen, but if it does we are better off with a magically \_appearing\_ orphan than a \_disappearing\_ node.

A lot of operations in the page manager work with a tree of nodes in some way, e.g. walking the tree and displaying it or walking the tree and collecting the sections (but not the pages),

etc.

The tree starts with a 'root' with key 0 (\$tree[0]). This is the starting point of the tree. The nodes at the top level of an area are linked from this root node via the field 'first\_child\_id'. If there are no nodes in the area, this field 'first\_child\_id' is zero. The linked list is constructed by using the node\_id. All nodes in an area are collected in an array. This array is used to construct the linked lists.

Every node has a parent (via 'parent\_id'), where the nodes at the top level have a parent\_id of zero; this points to the 'root'. The nodes within a section or at the top level are linked forward via 'next\_sibling\_id' and backward via 'prev\_sibling\_id'. A zero indicates the end of the list. Children start with 'first\_child\_id'. A value of zero means: no children.

The complete node record from the database is also stored in the tree. This is used extensively throughout the pagemanager; it acts as a cache for all nodes in an area.

Note that we cache the node records per area. If two areas are involved, the cache doesn't work very well anymore. However, this doesn't happen very often; only in case of moving nodes from one area to another (and even then).

- **TODO** what if we need the trees of two different areas?      should the static var here be an array, keyed by area\_id?
- **TODO** repairing a node doesn't really belong here, in this routine.      we really should have a separate 'database repair tool' for this purpose.      someday we'll fix this....

array function calculate\_uri\_shortcuts(\$www, \$progwww) [line 189]

**Function Parameters:**

- *string* **\$www** the uri (scheme / authority / path) of the directory holding config.php
- *string* **\$progwww** the uri (scheme / authority / path) corresponding with the program directory

**try to eliminate the scheme and authority from the two main uri's**

This tries to get rid of the scheme and the authority in 'www' and 'progwww'. If these two elements are the same, it becomes possible to use a shorter form of the uri when referencing files in 'progwww' from 'www'.

If the scheme and the authority of 'www' and 'progwww' are the same, the returned strings contain only the path elements. If scheme and authority differ, they contain the same as 'www' and 'progwww' respectively.

Examples: `www = 'http://www.example.com/site'` and `progwww = 'http://www.example.com/site/program'` yields `www_short = ''` and `wwwprog_short = '/program'`.

`www = 'http://www.example.com'` and `progwww = 'http://common.example.com/program'` yields `www_short` identical to `www` and `progwww` identical to `progwww_short`.

The purpose is to be able to generate relative links, e.g. an image in `/program/graphics/foo.jpg` can be referred to like this

```
 or  
 rather than  

```

Note that the comparison in this routine is not very fancy, it can be easily fooled to consider scheme+authority to be different. However, since this routine is only used to compare two values from `config.php`, it's not likely to cause trouble.

*array* function `calc_user_related_acls($user_id)` [line 1162]

**Function Parameters:**

- *int* **\$user\_id** the user we're looking at

**calculate an array with acs related to user \$user\_id via group memberships**

this calculates the related acs for user `$user_id`. The results are returned as an array keyed by `acl_id`. It can contain 0 or more elements. The values of the array elements are groupname/capacity-pairs. This routine is referenced from both [useraccount.class.php](#) and [usermanager.class.php](#).

*string* function `capacity_name($capacity)` [line 1139]

**Function Parameters:**

- *int* **\$capacity** numeric code of capacity

**translate a numeric capacity code to a readable name**

this translates a capacity code into a readable name, e.g. as an item in a dropdown list when dealing with group memberships. The actual codes are defined as constants, e.g. `CAPACITY_NONE`.

*mixed* function `convert_to_type($type, $value)` [line 1222]

**Function Parameters:**

- *string* **\$type** new type for \$value: b=bool, i=integer, s=string, etc.
- *string* **\$value** the value to convert to type \$type

### convert a string to another type (bool, int, etc.)

- **TODO** perhaps change the possible values of \$type to full strings rather than 'cryptic' single letter codes. Furthermore: what do we do with invalid dates, times and date/times? For now it is a stub, returning \$value as-is. Oh well.

*int* function cron\_send\_queued\_alerts([\$max\_messages = 10]) [line 810]

#### **Function Parameters:**

- *int* **\$max\_messages** do not send more than this number of messages

### send pending messages/alerts

this goes through all the alert accounts to see if any messages need to be sent out by email. The strategy is as follows. First we collect a maximum of \$max\_messages alerts in in core (1 trip to the database) Then we iterate through that collection and for every alert we

1. construct and send an email message
2. update the record (reset the message buffer and message count) (+1 trip to the database)

Locking and unlocking would be even more expensive, especially when chances of race conditions are not so big. (An earlier version of this routine went to the database once for the list of all pending alerts and subsequently twice for each alert but eventually I considered that too expensive too).

Assuming that an UPDATE is more or less atomic, we hopefully can get away with an UPDATE with a where clause looking explicitly for the previous value of the message count. If a message was added after retrieving the alerts but before updating, the message count would be incremented (by the other process) which would prevent us from updating. The alert would be left unchanged but including the added message. Worst case: the receiver gets the same list of alerts again and again. I consider that a fair trade off, given the low probability of it happening. (Mmmm, famous last words...)

Bottom line, we don't do locking in this routine.

Note that we add a small reminder to the message buffer about us processing the alert and sending a message. However, we don't set the number of messages to 1 because otherwise that would be the signal to send this message the next time. We don't want to send a message every `$cron_interval` minutes basically saying that we didn't do anything since the previous run. (Or is this a feature after all?)

Failures are logged, success are logged as LOG\_DEBUG.

*array/bool* function `get_area_records([$forced = FALSE])` [line 1117]

**Function Parameters:**

- *bool* **\$forced** if TRUE forces reread from database (resets the cache)

**retrieve a list of all available area records keyed by area\_id**

this returns a list of area-records or FALSE if no areas are available. The list is cached via a static variable so we don't have to go to the database more than once for this. Note that the returned array is keyed with `area_id` and is sorted by `sort_order`. Also note that this list may include areas for which the current user has no permissions whatsoever.

*mixed* function `get_parameter_int($name, [$default_value = NULL])` [line 491]

**Function Parameters:**

- *string* **\$name** the name of the parameter to retrieve the value of
- *mixed* **\$default\_value** the value to return if parameter was not specified

**return an integer value specified in the page request or default value if none**

*mixed* function `get_parameter_string($name, [$default_value = NULL])` [line 506]

**Function Parameters:**

- *string* **\$name** the name of the parameter to retrieve the value of
- *mixed* **\$default\_value** the value to return if parameter was not specified

**return an (unquoted) string value specified in the page request or default value if none**

*bool|array* function get\_properties([\$tablename = 'config'], [\$where = '']) [*line 116*]

**Function Parameters:**

- *string* **\$tablename** the name of the table holding the properties
- *array|string* **\$where** which records do we need to select

**retrieve typed properties (name-value-pairs) from a table**

this retrieves the fields 'name', 'value' and 'type' from all records from \$tablename that satisfy the condition in \$where. The values, which are stored as strings in the database, are converted to their proper value type and stored in the resulting array, keyed by name. The following types are recognised:

- b = boolean
- d = date ('yyyy-mm-dd', handled like a string)
- dt = datetime ('yyyy-mm-dd hh:mm:ss', handled like a string)
- f = float
- i = integer
- s = string
- t = time ('hh:mm:ss', handled like a string)

Note that we currently do not validate these properties, the assumption is that the values are valid (or empty).

*int|null* function get\_requested\_area() [*line 442*]

**get the number of the area the user requested or null if not specified**

See discussion of [get\\_requested\\_node\(\)](#). We use separate routine because we may want to support `index.php/aaa/nnn/....` instead of `index.php?area=aaa&node=nnn&...`

*string|null* function get\_requested\_filename() [*line 474*]

**get the name of the requested file**

See discussion of [get\\_requested\\_node\(\)](#). Files are served via `/file.php` via a comparable mechanism: either

`http://localhost/file.php/path/to/filename.ext`

OR

`http://localhost/file.php?file=/path/to/filename.ext`

This routine extracts the `'/path/to/filename.ext'` part.



*int|null* function `get_requested_node()` [*line 417*]

### **get the number of the node the user requested or NULL if not specified**

This routine exists because nodes and areas are so central to the whole idea of WAS.

Purpose is to retrieve any requested `node_id` from the parameters submitted by the user. As a rule this works via name-value-pairs, something like this: `index.php?area=aaa&node=nnn`. However, if the webserver is configured correctly, we can also accept `index.php/aaa/nnn/...` or `index.php/nnn/...` which is more proxy-friendly. Using a generic routine like `get_parameter_int()` would not be sufficient in that case, so there.

Note that the same proxy-friendly 'trick' is used to determine the filename of a file that needs to be served via [file.php](#) (see [get\\_requested\\_filename\(\)](#)).

Note that we first look at the proxy-friendly variant. If that doesn't work, we resort to the conventional way of `index.php?node=nnn`. Also note that the order of the `path_info` is important. If there is just a single numeric path component, we assume that it is the node value; if there are two numerics our assumption is that the first one is the area id and the second one the node id.

Note that this routine does not validate the requested node in any way other than making sure that IF it is specified, it is an integer value. For all we know it might even be a negative value.

*int* function `get_unique_number([ $\$increment = TRUE$ ])` [*line 1485*]

#### **Function Parameters:**

- *bool*  **$\$increment$**  optional indicates whether the static counter must be incremented

### **a small utility routine that returns a unique integer**

this generates a unique number (starting at 1). This number is guaranteed to be unique during this http-request (or at least until the static variable  `$\$id$`  overflows, but that takes a while). If the optional parameter  `$\$increment$`  is `FALSE`, the latest id returned is returned again.

*array* function `get_user_groups( $\$user\_id$ )` [*line 1191*]

#### **Function Parameters:**

- *int*  **$\$user\_id$**  the user we're looking at

**retrieve the records of the groups of which user  $\$user\_id$  is a member**

- **Uses \$DB**

*int* function ini\_get\_int(\$variable) [*line 1320*]

**Function Parameters:**

- *string* **\$variable** name of the variable to retrieve, e.g. 'upload\_max\_filesize'

**return an integer (bytecount) value from PHP ini**

*bool* function is\_expired(\$node\_id, &\$tree) [*line 1079*]

**Function Parameters:**

- *int* **\$node\_id**
- *array* **&\$tree** family tree

**determine if any of the ancestors or \$node\_id itself is already expired**

This climbs the tree upward, starting at \$node\_id, to see if any nodes are expired. If an expired node is detected, TRUE is returned. If none of the nodes are expired, then FALSE is returned.

Note that this routine looks strictly at the expiry property, it is very well possible that a node is under embargo, see [is\\_under\\_embargo\(\)](#).

Also note that this routine currently also tries to 'fix' the node database when a circular reference is detected. This doesn't really belong here, but for the time being it is convenient to have this auto-repair mechanism here. The node that is fixed is the section we are looking at after MAXIMUM\_ITERATIONS tries, which is not necessarily the node we started with.

- **TODO** this function also 'repairs' circular references. This should move to a separate tree-repair function but for the time being it is "convenient" to have automatic repairs...
- **Uses \$DB**

*bool* function `is_under_embargo(&$tree, $node_id)` [*line 1031*]

**Function Parameters:**

- *array* **&\$tree** family tree
- *int* **\$node\_id**

**determine if any of the ancestors or \$node\_id itself is under embargo**

This climbs the tree upward, starting at \$node\_id, to see if any nodes are under embargo. If an embargo'ed node is detected, TRUE is returned. If none of the nodes are under embargo, then FALSE is returned.

Note that this routine looks strictly at the embargo property, it is very well possible that a node is expired, see [is\\_expired\(\)](#).

Also note that this routine currently also tries to 'fix' the node database when a circular reference is detected. This doesn't really belong here, but for the time being it is convenient to have this auto-repair mechanism here. The node that is fixed is the section we are looking at after MAXIMUM\_ITERATIONS tries, which is not necessarily the node we started with.

- **TODO** this function also 'repairs' circular references. This should move to a separate tree-repair function but for the time being it is "convenient" to have automatic repairs...
- **Uses** \$DB

*string* function `javascript_alert($message)` [*line 298*]

**Function Parameters:**

- *string* **\$message** message to display

**message a message and generate a javascript alert()**

- **Usedby** [login\\_page\\_close\(\)](#)

*bool* function lock\_record(\$id, &\$lockinfo, \$tablename, \$pkey, \$locked\_by, \$locked\_since) [*line 655*]

**Function Parameters:**

- *int* **\$id** the primary key of the record to lock
- *array* **&\$lockinfo** returns information about the session that already locked this record
- *string* **\$tablename** the name of the table
- *string* **\$pkey** name of the field holding the serial (pkey)
- *string* **\$locked\_by** name of the field to hold our session\_id indicating we locked the record
- *string* **\$locked\_since** name of the field holding the datetime when the lock was obtained

**put a (co-operative) lock on a record**

this tries to set the co-operative) lock on the record with serial (pkey) \$id in table \$tablename by setting the \$locked\_by field to our own session\_id. This is the companion routine of [lock\\_release\(\)](#).

The mechanism of co-operative locking works as follows. Some tables (such as the 'nodes' table) have an int field, e.g. 'locked\_by\_session\_id'. This field can either be NULL (indicating that the record is not locked) or hold the primary key of a session (indicating that the record is locked and also by which session).

Obtaining a lock boils down to updating the table and setting that field to the session\_id. As long as the underlying database system guarantees that execution of an UPDATE statement is not interrupted, we can use UPDATE as a 'Test-And-Set'-function. According to the docentation MySQL does this.

The procedure is as follows.

1. we try to set the locked\_by-field to our session\_id on the condition that the previous value of that field is NULL. If this succeeds, we have effectively locked the record.
2. If this fails, we retrieve the current value of the field to see which session has locked it. If this happens to be us, we had already locked the record before and we're done.
3. If another session\_id holds the lock, we check for that session's existence. If it still exists, we're out of luck: we can't obtain the lock.
4. If that other session does no longer exist, we try to replace that other session's session\_id with our own session\_id, once again using a single UPDATE (avoiding another race condition). If that succeeds we're done and we have the lock; if it failes we're also done but without lock.

If locking the record fails because the record is already locked by another session, this routine returns information about that other session in `$lockinfo`. It is up to the caller to use this information or not.

Note. A record can stay locked if the webbrowser of the locking session has crashed. Eventually this will be resolved if the crashed session is removed from the sessions table. However, the user may have restarted her browser while the record was locked. From the new session it appears that the record is still locked. This may take a while. Mmmmm... The other option is to lock on a per-user basis rather than per-session basis. Mmmm... Should we ask the user to override the session if it happens to be the same user? Mmm. put it on the todo list. (A small improvement might be to call the garbage collection between step 2 and 3. Oh well).

- **TODO** we need to resolve the problem of crashing browsers and locked records
- **TODO** perhaps we can save 1 trip to the database by checking for something like `UPDATE SET locked_by = $session_id WHERE (id = $id) AND ((locked_by IS NULL) OR (locked_by = $session_id))` but I don't know how many affected rows that would yield if we already had the lock and effectively nothing changes in the record. (Perhaps always update atime to force 1 affected row?)
- **TODO** do we need a 'force lock' option to forcefully take over spurious locks?
- **Usedby** [lock\\_release\\_node\(\)](#)
- **Usedby** [lock\\_record\\_node\(\)](#)

*bool* function lock\_record\_node(\$node\_id, &\$lockinfo) [line 575]

**Function Parameters:**

- *int* **\$node\_id** the primary key of the node to lock
- *array* **&\$lockinfo** returns information about the session that already locked this record

**get record lock on a node**

this is a wrapper around [lock\\_record\(\)](#) for locking nodes.

- Uses [lock\\_record\(\)](#)

*bool function lock\_release(\$id, \$tablename, \$pkey, \$locked\_by, \$locked\_since) [line 744]*

**Function Parameters:**

- *int* **\$id** the primary key of the record to unlock
- *string* **\$tablename** the name of the table
- *string* **\$pkey** name of the field holding the serial (pkey)
- *string* **\$locked\_by** name of the field holding the session\_id of the session that locked the record
- *string* **\$locked\_since** name of the field holding the datetime when the lock was obtained

**unlock a record that was previously successfully locked**

this removes the co-operative) lock on the record with serial (pkey) \$id in table \$tablename by setting the \$locked\_by field to NULL. This is the companion routine of [lock\\_record\(\)](#).

*bool function lock\_release\_node(\$node\_id) [line 588]*

**Function Parameters:**

- *int* **\$node\_id** the primary key of the node record to unlock

**release lock on a node**

this is a wrapper around [lock\\_release\(\)](#) for unlocking nodes.

- Uses [lock\\_record\(\)](#)

*bool function logger(\$message, [\$priority = LOG\_INFO], [\$user\_id = ""]) [line 363]*

**Function Parameters:**

- *string* **\$message** the message to write to the log

- *int* **\$priority** loglevel, see PHP-function syslog() for a list of predefined constants
- **\$user\_id**

### a simple function to log information to the database 'for future reference'

This adds a message to the table log\_messages, including a time, the remote address and (of course) a message. See also the standard PHP-function syslog(). We use the existing symbolic constants for priority. Default value is LOG\_INFO.

Note that messages with a priority LOG\_DEBUG are only written to the log if the global parameter \$CFG->debug is TRUE. All other messages are simply logged, no further questions asked.

If the caller does not provide a user\_id, this routine attempts to read the user\_id from the global \$\_SESSION array, i.e. we try to link events to a particular user if possible.

Note that with a field definition of varchar(255) there is room to store either an IPv4 address (max 15 bytes) or a full-blown IPv6 address (max 39 bytes).

- **TODO** should we make this configurable and maybe log directly to syslog (with automatic logrotate) or do we want to keep this 'self-contained' (the webmaster can read the table, but not the machine's syslog)?
- **Usedby** [login\\_send\\_bypass\(\)](#)
- **Usedby** [login\\_send\\_laissez\\_passer\(\)](#)
- **Uses** \$CFG

*string* function magic\_unquote(\$value) [*line 83*]

#### **Function Parameters:**

- *string* **\$value** a string value that is conditionally unescaped

### this circumvents the 'magic' in magic\_quotes\_gpc() by conditionally stripping slashes

Magic quotes are a royal pain for portability. If magic quotes are enabled, this function reverses the effect. There are three PHP-parameters in php.ini affecting the magic:

- the directive 'magic\_quotes\_runtime'
- the directive 'magic\_quotes\_gpc'

- the directive 'magic\_quotes\_sybase'

This routine deals with undoing the effect of the latter two. The effect of magic\_quotes\_runtime can be undone via set\_magic\_quotes\_runtime(0). This is done once at program start (See [initialise\(\)](#) in [init.php](#)).

This routine should be used to unquote strings from \$\_GET[], \$\_POST[] and \$\_COOKIE whenever they are needed.

Important note: because third party subsystems may deal with magic quotes on their own, it is a Bad Idea[tm] to globally replace the contents of \$\_GET[], \$\_POST[] and \$\_COOKIE with the unescaped values once at program start. Any subsystem would be confused if magic\_quotes\_gpc() indicates that the magic is in effect whereas in reality the magic was already undone at program start. Yes, this yields a performance penalty, but this magic was a mess right from the start. Hopefully PHP6 will get rid of this magic for once and for all...

*int* function performance\_get\_queries() [*line 547*]

**return the number of database queries that was executed**

- **Uses \$DB**

*double* function performance\_get\_seconds() [*line 559*]

**return the script execution time**

- **TODO** maybe we should get rid of this \$PERFORMANCE object, because it doesn't do that much anyway

*void* function quasi\_random\_string(\$length, [\$candidates = 36]) [*line 282*]

**Function Parameters:**

- *int* **\$length** length of the string to generate
- *int* **\$candidates** number of candidate-characters to choose from

**generate a string with quasi-random characters**



This generates a string of \$length quasi-random characters. The optional parameter \$candidates determines which characters are eligible. Popular choices for \$candidates are:

- 10 (minimum): use only digits from 0,...,9
- 16: use digits 0,...,9 or letters A,...,F
- 36 (default): use digits 0,...,9 or letters A,...,Z
- 62: use digits 0,...,9 or letters A,...,Z or letters a,...,z

If \$candidates is smaller than 10, 10 is used, if \$candidates is greater than 62 62 is used.

Note that this is an ASCII-centric routine: we only use plain ASCII letters and digits and nothing of the 64000 other Unicode characters in the Basic Multilingual Plane. The reason is simple: 7-bit ASCII characters have the best chance of getting through communication channels unmangled so there.

*string* function quoted\_printable(\$s, [\$textmode = TRUE], [\$newline = "\n"], [\$max\_length = 76]) [*line 1424*]

**Function Parameters:**

- *string* **\$s** source string
- *bool* **\$textmode** TRUE means newlines count as hard line breaks, FALSE is binary data
- *string* **\$newline** native character indicating end of line
- *int* **\$max\_length** indicates the limit for output lines (excluding the CRLF)

**convert string \$s from native format to quoted printable (RFC2045)**

this converts the input string \$s to quoted printable form as defined in RFC2045 (see <http://www.ietf.org/rfc/rfc2045.txt>). By default this routine assumes a line-oriented text input. This can be overruled by calling the routine with the parameter \$textmode set to FALSE: in that case the input is considered to be a binary string with no embedded newlines.

The routine assumes that the input lines are delimited with \$newline. By default this parameter is a LF (Linefeed) but it could be changed to another delimiter using the function parameter \$newline.

According to RFC2045 the resulting output lines should be no longer than 76 bytes, even though it is very well possible to use shorter lines. This can be done by setting the parameter \$max\_length to the desired value. Note that this value is forced to be in the range 4,...,76.

The encoding is defined in section 6.7 of RFC2045 with these five rules.

(1) General 8bit representation: any character may be represented as "=" followed by two uppercase hexadecimal digits.

(2) Literal representation characters "!" to "~" but excluding the

"=" may represent themselves.

(3) White space     Space " " and tab "\t" at the end of a line must use rule (1);     in all other cases either rule (1) or (2) may be applied.

(4) Line breaks     The (hard) line breaks in the input must be represented     using "\r\n" in the output.

(5) Soft line breaks     Output lines may not be longer than 76 bytes. This can be enforced by inserting a soft line break (the string "=\r\n") in the output. This     soft line break will disappear once the encoded string is decoded.

The basic conversion algorithm is constructed using two important variables:

- an integer value (\$remaining) indicating the number of bytes left in the current output line
- a boolean flag (\$next\_is\_newline) indicating if the next input character is a \$newline

The variable \$remaining keeps track of situations where the current character (either as (1) General 8bit representation or (2) Literal representation) might not fit on the current line (eg. 2 bytes left requires an 8bit representation to be moved to the next output line). The flag \$next\_is\_newline is used to make the best possible use of the available remaining space in the output, eg. if the current character is exactly as long as the remaining space, we can output that character on the current output line, because we are sure that it is the last character on the current output line so there cannot be a soft return next.

Note that spaces (ASCII 32) and tabs (ASCII 9) are treated differently depending on their position in the line. The rule is that both should be represented as " =20" or " =09" at the end of an input line and that it is allowed to use " " or "\t" when NOT at the end of an input line. In the latter case, the output line will always end with a soft line break "=\r\n" which makes sure that there are not trailing spaces/tabs in the output line anyway.

Also note that the end of the input \$s is also flagged via setting \$next\_is\_newline. This is an optimisation which treats spaces and tabs at the end of the input as if they were at the end of an input line, ie. converting to " =20" or " =09". This means that the output will never end with a space or a tab, even if the input does.

Note that in case of a binary conversion the input character(s) that might otherwise indicate a newline are to be considered as binary data. However, if the data is completely binary, it probably doesn't make sense to use Quoted-Printable in the first place (base64 would probably be a better choice).

Reference: see <http://www.ietf.org/rfc/rfc2045.txt>.

- **TODO** should we change the code to accomodate the canonical newline CRLF in the input?

*nothing* function redirect\_and\_exit(\$url, [\$message = "]) [*line 520*]

**Function Parameters:**

- *string* **\$url** the url to redirect to
- **\$message**

## redirect to another url by sending an http header

*string* function replace\_crlf(\$multiline\_string, [\$replacement = "]) [*line 315*]

**Function Parameters:**

- *string* **\$multiline\_string** the multiline string to strip
- *string* **\$replacement** (optional) the string to replace newlines

## unfold a possible multiline string

This removes all linefeeds and carriage returns from a string Typical use would be to strip a subject line in a mailmessage from newlines which might interfere with proper sending of mail headers.

*string* function sanitise\_filename(\$filename) [*line 1289*]

**Function Parameters:**

- *string* **\$filename** the string to sanitise

## sanitise a string to make it acceptable as a filename/directoryname

this routine analyses and maybe converts the input string as follows:

- all leading and trailing dots, spaces, dashes, underscores, backslashes and slashes are removed
- all embedded spaces, backslashes and slashes are converted to underscores
- only letters, digits, dots, dashes or underscores are retained
- all sequences of 2 or more underscores are replaced with a single underscore

- finally all 'forbidden' words (including empty string) get an underscore prefixed  
Note that this sanitising only satisfies the basic rules for filenames; creating a new file with a sanitised name may still clash with an existing file or subdirectory.

Also note that a full pathname will yield something that looks like a simple filename without directories or drive letter: C:\Program Files\Apache Group\htpasswd becomes C\_Program\_Files\_Apache\_Group\_htpasswd and /etc/passwd becomes etc\_passwd. Also this routine makes a URL look like a filename: http://www.example.com becomes http\_www.example.com.

Finally note that we don't even attempt to transliterate utf8-characters or any other characters between 128 and 255; these are simply removed.

- **TODO** should we check for overlong UTF-8 encodings: C0 AF C0 AE C0 AE C0 AF equates to ../ or is that dealt with already by filtering on letters/digits and embedded dots/dashes/underscores?

*bool* *long* function string2time(\$timestring) [*line 225*]

**Function Parameters:**

- *string* **\$timestring** date/time in the form yyyy-mm-dd hh:mm:ss

### convert a string representation of a date/time to a timestamp

this is a crude date/time parser. We collect digits and convert to integers. With the integers we fill an array with at least 6 integers, corresponding to year, month, day, hours, minutes and seconds. If there are less than six numbers in the source string the value 0 is used. for the remaining elements. Note that a number in this context is always a non-negative number because a dash (or minus) is considered a delimiter.

Note that valid date/time values are limited to how many seconds can be represented in a signed long integer, where 0 equates to 1970-01-01 00:00:00 (the Unix epoch). The upper limit for a 32-bit int is some date in 2038 (only 30 years from now).

*string* function t(\$phrase\_key, [\$full\_domain = "], [\$replace = "], [\$location\_hint = "], [\$language = "]) [*line 332*]

**Function Parameters:**

- *string* **\$phrase\_key** indicates the phrase that needs to be translated

- *string* **\$full\_domain** (optional) indicates the text domain (perhaps with a prefix)
- *array* **\$replace** (optional) an assoc array with key-value-pairs to insert into the translation
- *string* **\$location\_hint** (optional) hints at a directory location of language files
- *string* **\$language** (optional) target language

### **translation of phrases via a function with a very short name**

This is only a wrapper function for `$LANGUAGE->get_phrase()`

- **Uses** `$LANGUAGE`

# zip.class.php

## /program/lib/zip.class.php - create simple ZIP-archives

This file implements class Zip which allows for creating ZIP-archives on the fly

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl)>
- **Version** \$Id: zip.class.php,v 1.2 2011-02-03 14:04:04 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

ZIP\_TYPE\_BUFFER = buffer *[line 32]*  
ZIP\_TYPE\_FILE = file *[line 30]*  
ZIP\_TYPE\_NONE = ' *[line 29]*  
ZIP\_TYPE\_STREAM = stream *[line 31]*

## main\_admin.php

### /program/main\_admin.php - workhorse for site maintenance

This file deals with the administrator interface program for site maintenance. It is included and called from /admin.php.

The work is done in [main\\_admin\(\)](#).

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: main\_admin.php,v 1.3 2011-05-02 21:03:52 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

JOB\_ACCOUNTMANAGER = accountmanager *[line 55]*

**This is used to dispatch the account manager (users and groups)**

JOB\_CONFIGURATIONMANAGER = configurationmanager *[line 58]*

**This is used to dispatch the configuration manager**

JOB\_FILEBROWSER = filebrowser *[line 43]*

**This is used to dispatch the file manager in file browser mode (used with FCK Editor)**

JOB\_FILEMANAGER = filemanager *[line 40]*

**This is used to dispatch the file manager**

JOB\_FLASHBROWSER = flashbrowser *[line 49]*

**This is used to dispatch the file manager in flash browser mode (used with FCK Editor)**

JOB\_IMAGEBROWSER = imagebrowser *[line 46]*

**This is used to dispatch the file manager in image browser mode (used with FCK Editor)**

JOB\_MODULEMANAGER = modulemanager *[line 52]*

**This is used to dispatch the module manager**

JOB\_PAGEMANAGER = pagemanager *[line 37]*

**This is used to dispatch the page manager**

JOB\_STARTCENTER = start *[line 34]*

**This is used to dispatch the startcenter job**

JOB\_STATISTICS = statistics *[line 61]*

**This is used to dispatch the statistics**

JOB\_TOOLS = tools *[line 64]*

**This is used to dispatch the tool manager**

JOB\_UPDATE = update *[line 67]*

**This is used to dispatch the update manager**

void function add\_javascript\_popup\_function(&\$output, [\$m = ""]) *[line 461]*

**Function Parameters:**

- **&\$output**
- **\$m**

**add javascript code that implements a popup to the header part of the page**

void function add\_javascript\_select\_url\_function(&\$output, [\$m = ""]) *[line 493]*

**Function Parameters:**

- **&\$output**
- **\$m**

**add javascript code that implements a url selection (used in integration with FCKeditor)**

void/int function admin\_continue\_session() *[line 421]*

**continue the session from the previous call OR exit**

This tries to resume the session that was initiated before (when the user logged in



successfully). If the session cannot be resumed, we logout the user, show the login screen and exit. In other words: this routine guarantees that a valid session exists if and when this routine returns. If the routine returns, it returns the user\_id.

- Uses [dbsessionlib.php](#)
- Uses \$CFG;

*void/int* function admin\_login(\$step) [*line 391*]

**Function Parameters:**

- *mixed* \$step the step in the login procedure

**perform a step in the login procedure**

This routine may not return at all. If it returns, the user is logged in successfully and the return value is the user\_id (unique identification for the user, pkey in users table). The steps in the login procedure are defined in [loginlib.php](#).

- Uses [loginlib.php](#)
- Uses \$CFG

*void* function admin\_logout\_and\_exit() [*line 369*]

**logout the user and exit**

This logs out the user (ie kills the session) If there is an error (ie, there was no session in the first place) indicated by was\_logout() returning, we unconditionally show a login dialog and exit. So, this routine never returns.

- Uses [loginlib.php](#)

- **Uses** \$CFG

*void function admin\_show\_login\_and\_exit([\$message = "]) [line 450]*

**Function Parameters:**

- **\$message**

## show login dialog and exit

- **Uses** [loginlib.php](#)
- **Uses** \$CFG

*string function get\_versioncheck\_url() [line 518]*

### **construct URL for version check against the project's website**

this constructs the URL for checking the installed version against the current version on the project's website. The remote site will respond with a readable text and the user can decide to act on the information (or not). We don't want to force any upgrades etc.

*void function job\_start(&\$output) [line 306]*

**Function Parameters:**

- *object* **&\$output** output collector

### **generate the start centre page**

This is the handler for the start centre. This is the only handler that is NOT included from another file. Basically it shows a screen with hints on how to proceed with this program.

- **TODO** this routine is a stub

*void function main\_admin() [line 105]*

### **main program for site maintenance**

This is the main administrator program. First step is to deal with users logging in or out. If a user is not logged in, a login dialog is displayed. If a user is logged in but has no admin privileges, she is redirected to the public site (ie. index.php).

Once we have established that the user is an administrator, we setup an output collecting object and see what the user wants us to do by interpreting the parameter 'job'. If the user has access to the specified job, the corresponding code is included and the main routine of that handler is called. It is then the responsibility of that handler to further decide what needs to be done. After the handler returns, the collected output is sent to the user. This includes the main navigation (i.e. links to the various 'managers') and also the menu and the content generated by the handler.

If the user has no privilege to access a particular manager, an error message is displayed in both the message area and the content area. This makes it clear to the user that access is denied. Note that the inaccessible items are displayed in the main navigation via 'dimmed' (light-grey) links or black/white images. By showing these 'dimmed' links, the user will be aware that there is more than just what she is allowed to see. This is more transparent than suppressing items and keeping them secret.

- **TODO** should we cater for a special 'print' button + support for a special style sheet for media="print"?
- **Uses** \$USER;
- **Uses** \$LANGUAGE;
- **Uses** \$CFG;

## main\_cron.php

### /program/main\_cron.php - take care of recurring jobs

This file deals with executing cron jobs. It is included and called from /cron.php.

The work is done in [main\\_cron\(\)](#).

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: main\_cron.php,v 1.2 2011-02-03 14:04:02 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

*void* function main\_cron() [*line 32*]

## main\_file.php

### /program/main\_file.php - workhorse for serving files

This file deals with serving files It is included and called from /file.php.

The work is done in [main\\_file\(\)](#).

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl)>
- **Version** \$Id: main\_file.php,v 1.2 2011-02-03 14:04:02 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

*void/bool* function download\_source(\$component) [*line 396*]

#### **Function Parameters:**

- *string* **\$component** either 'program' or 'manual' or 'languages'

### **construct a zipfile with the current source and stream it to the visitor**

this routine streams a ZIP-archive to the visitor with either the current websiteatschool program code or the selected manual. This routine is necessary to comply with the provisions of the program license which basically says that the source code of the running program must be made available.

Note that it is not strictly necessary to also provide the manual, but this routine can do that nevertheless.

Note that we take special care not to download the (private) data directory \$CFG->datadir. Of course the datadirectory should live outside the document root and certainly outside the /program directory tree, but accidents will happen and we don't want to create a gaping security hole.

If there are severe errors (e.g. no manual is available for download or an invalid component was specified) the program exist immediately with a 404 not found error. Otherwise the ZIP-archive is streamed to the user. If all goes well, we return TRUE, if there were errors we immediately return TRUE (without finishing the task at hand other than a perhasp futile attempt to properly close the ZIP-archive). The last error message from the Zip is logged.

- Uses [download\\_source\\_tree\(\)](#)

*bool* function download\_source\_tree(&\$zip, \$path, \$vpath, &\$excludes) [line 528]

**Function Parameters:**

- *object* **&\$zip** Zip-archive
- *string* **\$path** physical directory to add to archive
- *string* **\$vpath** virtual pathname for this physical directory
- *array* **&\$excludes** array with 'forbidden' subdirectories

**workhorse function to recursively add most of a tree to a ZIP-archive**

this routine recursively adds the tree starting at \$path to the opened archive \$zip. If a directory is in the list of excluded directories in \$excludes it is skipped.

- Usedby [download\\_source\\_tree\(\)](#)
- Usedby [download\\_source\(\)](#)
- Uses [download\\_source\\_tree\(\)](#)

*void* function error\_exit404([\$filename = ""]) [line 363]

**Function Parameters:**

- *string* **\$filename** the file we were looking for and could not find

**exit with a 404 not found error**

*void* function main\_file() [line 94]

## main program for serving files

this routine is called from /file.php.

This routine is responsible for serving files to the visitor. These files are stored in a (virtual) file hierarchy that looks like this.

```
/areas/areaname
  /another
  /stillmore
  ...
/users/username
  /another
  /stillmore
  ...
/groups/groupname
  /another
  /stillmore
  ...
/websiteatschool/program
  /manual
  /languages
```

This structure maps to the real file system as follows. The (virtual) directories /areas, /users and /groups correspond to the physical directories {`$CFG->datadir`}/areas, {`$CFG->datadir`}/users and {`$CFG->datadir`}/groups respectively. The subdirectories correspond to a (unique) area, user or group and serve as a file repository for that area, user or group.

The (virtual) top-level directory /websiteatschool is a special case. It is used to serve the currently running website program code and the user-defined translations of active languages.

Before any file is transmitted to the visitor the access privileges are checked. The following rules apply.

### Access control for the /areas subdirectory

- an area must be active before any files are served
  - the visitor must have access to the private area if files are to be served
  - non-existing files yield a 404 Not Found error
  - non-existing areas also yield a 404 Not Found error
  - if the visitor has no access to the private area, also a 404 Not Found error is returned
- Access control for /users and /groups

- a user/group must be active before any files are served
  - non-existing users/groups yield 404 Not Found
  - non-existing files in existing directories also yield 404 Not Found
- Access control for /websiteatschool

- there is no limit on downloading the currently active program code or user-defined

- **TODO** the check on '/../' is inconclusive if the \$path is encoded in UTF-8: the overlong sequence 2F C0 AE 2E 2F eventually yields 2F 2E 2E 2F or '/../'. Reference: RFC3629 section 10.

*bool/int* function `readfile_chunked($path)` [line 568]

**Function Parameters:**

- *string* **\$path** fully qualified path of the file to send

**send a file to the visitor's browser in chunks**

This sends the file \$path to the browser in manageable chunks.

*string* function `rfc1123date([$t = 0])` [line 263]

**Function Parameters:**

- *int* **\$t** the date/time value to use, or 0 for current time

**generate an RFC1123-compliant date/time stamp**

This constructs a date/time stamp that is a fixed-length subset of RFC1123. This is the preferred format in HTTP (see RFC2616 section 3.3).

The format is as follows: `rfc1123-date = wkday " , " SP date SP time SP "GMT"`

`date` = 2DIGIT SP month SP 4DIGIT ; day month year (e.g., 02 Jun 1982)

`time` = 2DIGIT ":" 2DIGIT ":" 2DIGIT ; 00:00:00 - 23:59:59

`wkday` = "Mon" | "Tue" | "Wed" | "Thu" | "Fri" | "Sat" | "Sun"

`month` = "Jan" | "Feb" | "Mar" | "Apr" | "May" | "Jun" |  
"Jul" | "Aug" | "Sep" | "Oct" | "Nov" | "Dec"

If \$timevalue is less or equal to zero, the current time is used, otherwies \$timevalue is interpreted as a standard unix timestamp.

*void* function `send_file_from_datadir($file, $name, [$mimetype = "], [$ttl = 86400], [$download = FALSE])` [line 309]

**Function Parameters:**



- *string* **\$file** name of the file to send relative to \$CFG->datadir
- *string* **\$name** filename to suggest to the visitor/visitor's browser
- *string* **\$mimetype** the mime type of the file; if not specified we use an educated guess
- *int* **\$ttl** time to live (aka maximum age) in seconds, 0 implies file is not cacheable
- *bool* **\$download** if TRUE we try to force a download

### the designated file is sent to the visitor

This transmits the file {\$CFG->datadir}\$file from the data directory to the visitor's browser, suggesting the name \$name. The file is transmitted in chunks (see [readfile\\_chunked\(\)](#)).

Several different variations are possible.

- by specifying a Time To Live of 0 seconds, this routine tries hard to defeat any caching by proxies
- if the download flag is TRUE, this routine tries to prevent the visitor's browser to render the file in-line suggesting downloading instead  
Quirks
- There appears to be a problem with Internet Explorer and https:// and caching which requires a specific workaround. We simply check for 'https:' or 'http'.
- Adobe Acrobat Reader has a bad track record of infecting user's computers with malware when PDF's are rendered in-line. Therefore we force download for that kind of files.
- It is not easy to determine the exact mime type of files without resorting to a complex shadow-filesystem or a metadata table in the database. Therefore we 'guess' the mime type, either based on the information provided by the fileinfo PHP-module, or simply based on the extension of \$file (which is not very reliable, but we have to do `_something_`). See [get\\_mimetype\(\)](#) for details.

- Uses [get\\_mimetype\(\)](#)



## main\_index.php

### /program/main\_index.php - workhorse for visitor interface

This file deals with the visitor interface. It is included and called from /index.php.

The work is done in [main\\_index\(\)](#).

Parameters are passed like index.php?parm=val. Here is an overview of recognised global parameters that are handled here (and not in a module).

- **logout** - used to end a user's session (no need for a value, just the param is enough)
- **login=i** - step i of the login procedure
- **area=a** - indicates which area to access; if specified it should match the node, if that is specified
- **node=n** - indicates which node to access; if specified it should match the area, if that is specified
- **language=xx** - indicates the language to use; xx is a valid language code like 'en', 'de', 'fr' or 'nl'

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: main\_index.php,v 1.2 2011-02-03 14:04:02 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **TODO** add the performance results in a HTML-comment if not CFG->debug, in sight otherwise
- **License** [GNU AGPLv3+Additional Terms](#)

*bool|array* function calculate\_area(\$requested\_area, \$requested\_node) [*line 233*]

#### **Function Parameters:**

- *int|null* **\$requested\_area** the area the user specified or NULL if no area specifically requested
- *int|null* **\$requested\_node** the node the user specified or NULL if no node specifically requested

**try to retrieve a valid area record based on values of requested area and requested node**

this determines which area to use. If the user specifies nothing (no area, no node), we

simply go for the default area or the first available area. If the user does specify an area and/or a node, we use that information to get to the area. Note that if the user specifies both area and node, the two should match. That is: you cannot specify a node from area X and also request area Y: that yields no results. If only a node is specified, the area is calculated from the area to which the node belongs.

We let the database do most of the work by constructing and executing an appropriate SQL-statement.

- **Uses \$DB**

*bool/int function calculate\_default\_page(&\$tree, \$subtree\_id) [line 326]*

**Function Parameters:**

- *array* **&\$tree** a reference to the complete tree in the area of interest
- *int* **\$subtree\_id** the place where we need to start looking (usually the first\_child\_id of the parent)

### **try to find a default page within a subtree of pages and sections**

this walks the tree \$tree starting at \$subtree\_id looking for a default page. We give it three tries. First we look for a default node in the section of which \$subtree\_id is the first node. If we find a page, we're done, if we find a section we descend into that subtree. If there still is no default page, we go look for any page in the initial set of nodes. If that too doesn't yield a page, we descend into the subtrees. If THAT doesn't yield a page we give up and return FALSE, indicating no page to be found.

*bool/int function calculate\_node\_id(&\$tree, \$area\_id, \$requested\_node) [line 293]*

**Function Parameters:**

- *array* **&\$tree** a reference to the complete tree in area \$area\_id
- *int* **\$area\_id** the area where we are looking for a node
- *int/null* **\$requested\_node** the node\_id the user requested or NULL if none was specified

### **calculate and validate the node\_id to display**

this tries to determine a valid node to display based on the node the user requested and

the area that the user may or may not have requested.

Basic assumption is that the visitor has indeed view access to area \$area\_id. This means that the user is allowed to see the nodes in this area that are not under embargo (and not expired). We do have a complete overview of all nodes in this area in the array \$tree. (See [build\\_tree\(\)](#) for more information about the tree structure)

The parameter \$requested\_node is either an integer, indicating the user explicitly specified a node number in the page request, or null, indicating that the user did not explicitly specify a node. In the latter case the user may or may not have explicitly requested an area.

There are several cases we need to handle - if no node is explicitly requested, we need to identify the default page in the area - if the node is under embargo the node does not exist (from the POV of the user) - if the requested node is a section, we need to identify the default page in that section

*void function main\_index() [line 50]*

#### **main program for visitors**

this routine is called from /index.php. It is the main program for visitors.

- **TODO** cleanup login/logout-code

*bool|array function module\_load\_view(\$module\_id) [line 428]*

#### **Function Parameters:**

- *int \$module\_id* indicates which module to load

#### **load the visitor/view interface of a module in core**

this includes the 'view'-part of a module via 'require\_once()'. This routine first figures out if the view-script file actually exists before the file is included. Also, we look at a very specific location, namely: /program/modules/<modulename>/<module\_view\_script> where <modulename> is retrieved from the modules table in the database.

Note that if modulename would somehow be something like `"../..../etc/passwd\x00"`, we could be in trouble...

- **TODO** should we sanitise the modulename here? It is not user input, but it comes from the modules table in the database. However, if a module name would contain sequences of "../" we might be in trouble

*bool function module\_view(&\$theme, \$area\_id, \$node\_id, \$module\_id) [line 385]*

**Function Parameters:**

- *array* **&\$theme** a reference to the output object
- *int* **\$area\_id** the area where we are looking for a node
- *int* **\$node\_id** the node we are working with
- *int* **\$module\_id** the module connected to the node we are working with

**call the routine that generates the view (content) of module \$module\_id**

this loads the file containing the visitor interface for module \$module\_id in core and subsequently calls the routine responsible for displaying the content (function modulename\_view()). The routine module\_view() is supposed to deposit any output into the \$theme via the appropriate methods such as \$theme->add\_content().

*void function update\_statistics(\$node\_id) [line 465]*

**Function Parameters:**

- *int* **\$node\_id** the page (node) that was viewed

**update all statistics for the view of page \$node\_id**

this is a place for future extension. This routine is called once for every page view. It can be used to record relevant data in a table, for future reference, e.g.

- the IP-address of the visitor
- the \$node\_id
- the current date/time
- the number of views of node \$node\_id from the visitor's IP-address
- etc. etc.

Note that the table holding this information can quickly become very large. That requires some form of logrotate or condensing the data. This feature has yet to be developed.

- **TODO** maybe extend this routine to actually store more statistics information in a separate table

*void function update\_view\_count(\$node\_id) [line 478]*

***Function Parameters:***

- *int \$node\_id* the page (node) that need its view\_count incremented with 1

**update the view count for page \$node\_id**

# manual.php

## /program/manual.php - a kickstarter for the documentation

This script is an entry point; it can be called directly. It is also linked to from /program/admin.php, via the help button, implementing a context-sensitive help function. The following parameters are recognised:

- **language:** a language key, e.g. 'nl' (Dutch) or 'es' (Spanish). Default is 'en' (English)
- **topic:** one of the recognised topics, e.g. 'tools' or 'pagemanager'. Default is 'toc' (Table of contents)
- **subtopic:** one of the subtopics relevant in this topic, e.g. 'license' in the 'install' topic. Default is '' (None).

The actual work is done in the function [show\\_manual\(\)](#) below.

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: manual.php,v 1.4 2011-02-21 15:30:10 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

array function get\_available\_manuels(\$path) [*line 235*]

### **Function Parameters:**

- **string \$path** is the directory where to look for manuals (usually /program/manuals).

## **construct a list of 0 or more languages of available manuals**

This routine examines the directory \$path to see which subdirectories exist. Each subdirectory indicates a possible language. An array keyed with these languages and the full path to the directory containing the manual's index.html is returned (but it could be empty).

void function show\_manual([\$language = 'en'], [\$topic = 'toc'], [\$subtopic = '']) [*line 109*]

### **Function Parameters:**

- **string \$language** indicates the desired manual language



- *string* **\$topic** is the topic of interest to which we deep link
- *string* **\$subtopic** is a subtopic to allow for an even deeper link

**redirect the user to a specific place in the manual OR show helpful message about downloading the manual**

There is a Website@School Users' Guide available, in English. This is a separate download from the project's website. That means that it is optional to have the (English) manual installed. If it is installed, it is installed under /program/manuals/en/. There might also be translations available, say the Dutch version of the manual. That one would be installed in /program/manuals/nl/ which allows for peaceful co-existence of multiple translations of the manual. This script manual.php is designed to:

- redirect the user to the correct translation of the manual (if installed), and
- possibly use deep links to create context-sensitive help.

If the manual is not available in the requested language, the user is redirected to the English version (if that one IS installed). If no manual is installed at all, the user is shown a simple HTML-page which provides a link to the location where the manual(s) can be downloaded.

## version.php

### 'version.php' defines internal and external version numbers

The following constants are defined in this file:

- `WAS_VERSION` - the internal version number, e.g. 2008020100
- `WAS_RELEASE` - the external version number, e.g. 1.0 or 1.0.0
- `WAS_RELEASE_DATE` - the date that the distribution files were generated
- `WAS_ORIGINAL` - indicates the original (TRUE) or a modified version (FALSE) of this program

`WAS_VERSION` is used to see if the database version matches the program version. A difference between the two versions indicates an incomplete update. The version number is of the form `yyyymmddxx` where `yyyymmdd` is a date and the number `xx` is an auxiliary number that may or may not carry an extra meaning. `WAS_VERSION` is always greater than `WAS_VERSION` in a previous release of Website@School.

`WAS_RELEASE` is a free-format human-readable string indicating the the version of the program. It could take the form `major.minor` or `major.minor.patchlevel`.

`WAS_RELEASE_DATE` is the date on which the distribution package was generated. This date is set by editing this file `version.php` 'on the fly' from the `makedist.sh` script (see `/devel/tools/makedist.sh`).

`WAS_ORIGINAL` is a flag which indicates the original version (value TRUE) or a modified version (value FALSE) of the program. The License Agreement for Website@School states:

"In accordance with section 7(c) modified versions of the Program must clearly be marked in reasonable ways as different from the original version without misrepresenting the origin of the Program. This must be done by adding the phrase "Based on Website@School" to the Appropriate Legal Notices."

By defining `WAS_ORIGINAL` to FALSE, the phrase 'Powered by Website@School' in the interactive user interfaces will morph into 'Based on Website@School' automatically. The file `/program/about.html` should still be edited, though.

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: version.php,v 1.6 2011-05-11 20:45:51 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

WAS\_ORIGINAL = TRUE *[line 76]*

**A boolean flag indicating this is either the original (TRUE) or a modified (FALSE) version of Website@School**

WAS\_RELEASE = 0.90.2 *[line 68]*

**The external version number, like 1.0 or 1.0.0**

WAS\_RELEASE\_DATE = 2011-05-11 *[line 72]*

**Date of distribution file generation in ISO 8601 format: yyyy-mm-dd OR yyyy-mm-ddThh:mm:ss+0000**

WAS\_VERSION = 2011051100 *[line 64]*

**The internal version number, like 2008012873 or 2008020100 (31 bits will work until the year 2147)**

- **Used by** [error\\_exit\(\)](#) - indicate internal version in 'cryptic' message

# Package wascore Classes

## Class AclManager

[line 322]

**class for manipulating (edit+save) access control lists**

Overview

-----

Every user account is associated with an access control list. This access control list boils down to a total of six tables in the database:

- acls
- acls\_areas
- acls\_nodes
- acls\_modules
- acls\_modules\_areas
- acls\_modules\_nodes

These tables are defined as follows. acls:

acl\_id            serial\*  
permissions\_jobs    int  
permissions\_intranet int  
permissions\_modules int  
permissions\_nodes   int

acls\_areas:

acl\_id            int\* (link to acls)  
area\_id           int\* (link to areas)  
permissions\_intranet int  
permissions\_modules int  
permissions\_nodes   int

acls\_nodes:

acl\_id            int\* (link to acls)  
node\_id           int\* (link to nodes)  
permissions\_modules int  
permissions\_nodes   int

acls\_modules:  
 acl\_id int\* (link to acls)  
 module\_id int\* (link to modules)  
 permissions\_modules int

acls\_modules\_areas:  
 acl\_id int\* (link to acls)  
 module\_id int\* (link to modules)  
 area\_id int\* (link to areas)  
 permissions\_modules int

acls\_modules\_nodes:  
 acl\_id int\* (link to acls)  
 module\_id int\* (link to modules)  
 node\_id int\* (link to nodes)  
 permissions\_modules int

\*marked fields are (part of) the primary key

The six tables mentioned above deal with the following permission bitmasks.

- permissions\_jobs
- permissions\_intranet
- permissions\_modules
- permissions\_nodes

The reasons to split these permission masks into six tables are:

1. Some permissions only apply to the site-level and it makes no sense to specify them for a particular combination of area, node or module. Example: permissions\_jobs.
2. Some permissions can be granted for current and future objects. Example: permissions\_intranet. If these permissions are granted at the site level (in table acls), then they apply not only to all current protected areas but also to all future protected areas. The same permissions could be granted on a per-area-basis but that might require adjusting the permissions once a new protected area is added to the site.
3. Sometimes it is more convenient to specify the permissions on a higher level because otherwise the size of the database may get out of hand. Example: if every user has a permission bitmask for every node on the site, the corresponding acl would have number\_of\_users x number\_of\_nodes entries. That is completely unmanageable, even for small to medium size sites.

## Users and group/capacities

A user can also participate in a group in a particular capacity, e.g. member of group 'grade8' in the 'pupil'- or the 'teacher'-capacity. Every combination of group and capacity (eg

'grade8/pupil') is also associated with an access control list.

The full access control list for a user is the combination of the ACL directly associated with the user account and the ACLs associated with the group/capacities that apply to the user account. The effective permissions for a user are the result of OR'ing the permissions of all ACLs.

A specific permission is always indicated by a bit set to '1'. If a particular bit is set to '0', the user does not have the corresponding permission. This implies that the (special) bitmask 0 (zero, 32 bits are all not set) corresponds to 'no permissions at all'. It also implies that the (special) bitmask -1 (minus one, 32 bits are all set) equates to 'all permissions'.

Therefore, the *\*easy\** way to grant access is to set the permissions bitmask to -1. This is the so-called Guru-option or -role or the Guru-permissions. However, note that granting a user or a group/capacity Guru-permissions, means that that user (these users) can do serious harm to the system because she (they) are allowed to do anything. The *\*safe\** way is to grant as few permissions as possible.

## Roles

-----

In order to make it easier to setup the access controls and stay away from directly manipulating individual bits in a bitmask the various permission bits are combined into roles.

Two roles are always available for selection:

- permissions == 0: ROLE\_NONE
- permissions == -1: ROLE\_GURU

Defining other roles is done at the appropriate place, e.g. inside the code for a module.

Example: suppose that there is a module called 'Forum' which works with authenticated users. Depending on this module's permission bits the users are allowed to perform certain actions, e.g.

- read messages in the forum (bit 0, value 1)
- write messages in the forum (bit 1, value 2)
- edit their own messages (bit 2, value 4)
- edit other users' messages (bit 3, value 8)
- manage useraccounts for the forum (bit 4, value 16)

This leads to many possible combinations of set and reset bits. However, it is more practical to combine these bits into a few roles with a descriptive name:

- permissions = 1: ROLE\_FORUM\_VISITOR => "Visitor"
- permissions = 1+2+4 = 7: ROLE\_FORUM\_MEMBER => "Member"
- permissions = 1+2+4+8 = 15: ROLE\_FORUM\_MODERATOR => "Moderator"
- permissions = 1+2+4+8+16 = 31: ROLE\_FORUM\_ADMINISTRATOR => "Administrator"

By using these symbolic names for certain combinations of bitmasks it becomes easier to

manage many users and many forums without having to know what every bit means, exactly.

Obviously these roles (defined via the module in this example) will end up in a dropdown list where the appropriate role can be assigned.

Note that it is not necessary to have hierarchical roles as demonstrated in this example. It is very well possible to define two roles that must work together: `ROLE_EDITOR` could be a bitmask that allows for adding (1), editing (2), deleting (4), previewing (8) news articles whereas `ROLE_PUBLISHER` could be limited to previewing (8) and publishing (16) news articles, but not editing them. That would make sure that at least two different people are required to create and publish an article. (However, any 'Guru', with all permissions granted due to the -1 bitmask, could create + publish articles by herself.)

#### Module-permissions in `acls`, `acls_areas` and `acls_nodes`

-----

The fields `permissions_modules` in the tables `acls`, `acls_areas` and `acls_nodes` should be considered as 'blanket permissions'. If a permission is set in either of these tables, the permissions apply to *\*all\** modules at site level (`acls`), area\_level (`acls_areas`) or node\_level (`acls_nodes`).

Because these permissions apply to *\*all\** modules, the only realistic roles in these cases can be either `ROLE_NONE` (permissions = 0) or `ROLE_GURU` (permissions = -1). Any other role could be meaningless for one or more modules.

Furthermore, it is a little over the top to specify permissions for *\*all\** modules in a particular node. (It almost doesn't make sense). Therefore, the corresponding dialog only deals with these two roles `ROLE_NONE` and `ROLE_GURU` at the site level and the area level. The node level is not used for modules (but it is for pagemanager permissions - the field `permissions_nodes` - at the node level).

#### Typical usage

##### Example 1: displaying a dialog with intranet permissions for a group

```
$acl = new AclManager($output,$acl_id,ACL_TYPE_INTRANET);
$acl->set_action(array('job'=>'accountmanager','task'=>'groupsave','group'=>'8'));
$acl->set_dialog(GROUPMANAGER_DIALOG_INTRANET);
$acl->show_dialog();
```

... The result of this snippet is that a complete dialog is output to the content area of the `$output` object, including the current values from the database. The whole dialog is wrapped in a FORM-tag with action property based in the array set with the `set_action()` method. The dialog is POSTed with either a Save or a Cancel button.

##### Example 2: saving the data for the intranet permissions for a group

```
$acl = new AclManager($output,$acl_id,ACL_TYPE_INTRANET);
$acl->set_action(array('job'=>'accountmanager','task'=>'groupsave','group'=>'8'));
```

```

$acl->set_dialog($dialog);
if (!$acl->save_data()) {
    $acl->show_dialog(); // redo dialog, but without a distracting menu this time
    return;
}
...

```

The effect of this snippet is that an attempt is done to validate and save the data as it was POSTed (ie: the new values are available in `$_POST[]`). If, however, saving the data did not work, the dialog is displayed again, this time using the data from `$_POST[]` rather than from the database.

Example 3: displaying a dialog with admin permissions for a user

```

$related_acls = array($acl_id1 => "group1/capacity1", $acl_id2 => "group2/capacity2", ...);
$acl = new AclManager($this->output, $acl_id, ACL_TYPE_ADMIN);
$acl->set_related_acls($related_acls);
$acl->set_action(array('job'=>'accountmanager', 'task'=>'usersave', 'user'=>'23'));
$acl->set_dialog(USERMANAGER_DIALOG_ADMIN);
$acl->show_dialog();

```

This is comparable to example 1. The difference is that in a User-ACL there is an option to display existing permissions from the user's group/capacities. This information is displayed in the third column in the dialog. This provides a clue for the user that certain permissions might already be granted to the user via a group membership. The related permissions are communicated via an array with (integer) `acl_id`'s as key and a string value identifying the group/capacity.

- **Package** wascore
- **TODO** there is something not right with buffering the tabledefs. If an error occurs, we get FALSE instead of an array. Mmmmm....

**AclManager::\$acl\_id**

*int = 0 [line 330]*

- **Var** `$acl_id` identifies the ACL we are dealing with



### **AcIManager::\$acl\_type**

*int* = 0 [*line 333*]

- **Var** \$acl\_type identifies the type of ACL we are dealing with

### **AcIManager::\$area\_view\_areas\_open**

*array|bool* = FALSE [*line 374*]

- **Var** \$area\_view\_areas\_open identifies which areas are currently 'open' and 'closed'

### **AcIManager::\$area\_view\_a\_params**

*array* = NULL [*line 371*]

- **Var** \$area\_view\_a\_params holds the parameters for linking to opening/closing an area

### **AcIManager::\$area\_view\_enabled**

*bool* = FALSE [*line 377*]

- **Var** \$area\_view\_enabled if TRUE we add icons to areas so they can expand/collapse (default=FALSE)

### **AcIManager::\$a\_params\_save**

*array|null* = NULL [*line 339*]

- **Var** \$a\_params\_save holds the parameters for the action property of the HTML-form that is created

### **AcIManager::\$dialog**

*int = 0 [line 348]*

- **Var** \$dialog identifies the exact dialog and it is added to the dialog as hidden field

### **AcIManager::\$dialogdef**

*array = NULL [line 388]*

- **Var** \$dialogdef holds the current dialogdef, maybe including error messages from a failed validation

### **AcIManager::\$dialogdef\_areas**

*array = array() [line 395]*

- **Var** \$dialogdef\_areas holds information of zero or more areas and the number of contained nodes

### **AcIManager::\$dialogdef\_areas\_total**

*int = NULL [line 392]*

- **Var** \$dialogdef\_areas\_total holds the total number of items that could be displayed in the dialogdef

### **AcIManager::\$header**

*string = [line 342]*

- **Var** \$header the title of the dialog, displayed at the top of the content area

#### **AcIManager::\$intro**

*string* = [line 345]

- **Var** \$intro the introductory text for the dialog, displayed below the \$header

#### **AcIManager::\$output**

*object|null* = NULL [line 327]

- **Var** collects the html output

#### **AcIManager::\$pagination\_a\_params**

*array* = NULL [line 355]

- **Var** \$pagination\_a\_params holds the parameters for linking to another view of the dialog

#### **AcIManager::\$pagination\_enabled**

*bool* = FALSE [line 364]

- **Var** \$pagination\_enabled if TRUE we do try to paginate the display (default=FALSE)

#### **AcIManager::\$pagination\_limit**

*int* = NULL [line 358]

- **Var** \$pagination\_limit the preferred size of a screenfull of dialog lines

#### **AcIManager::\$pagination\_offset**

*int* = NULL [line 361]

- **Var** \$pagination\_offset the record where the current screen begins

#### **AcIManager::\$pagination\_total**

*bool* = 0 [line 384]

- **Var** \$pagination\_total holds the total number of elements to display

#### **AcIManager::\$related\_acls**

*array* = NULL [line 336]

- **Var** \$related\_acls if not NULL identifies a list of acl\_id => 'description' pairs with related ACLs

Constructor *void* function AcIManager::AcIManager(&\$output, \$acl\_id, \$acl\_type) [line 408]

#### **Function Parameters:**

- *object* **&\$output** holds the output that eventually is send to the user's browser
- *int* **\$acl\_id** identifies the ACL we are dealing with (primary key in acls table)
- *int* **\$acl\_type** identifies the type of ACL we are dealing with, e.g. ACL\_TYPE\_INTRANET or ACL\_TYPE\_ADMIN

#### **constructor for the AcIManager**

this constructs a new AcIManager object. Essential information such as the acl\_id and the

acl\_type are stored, for future reference.

array function AclManager::build\_tree(\$area\_id, \$acl\_id, \$related\_acls) [line 1694]

**Function Parameters:**

- *int* **\$area\_id** the area for which to build the tree
- *int* **\$acl\_id** the primary acl\_id (used for both users and groups)
- *array|null* **\$related\_acls** an array with related acls for this user keyed by 'acl\_id' or NULL for group acls

**build a tree of all nodes in an area**

this routine constructs a tree-structure of all nodes in area \$area\_id in much the same way as [build\\_tree\(\)](#) does. However, in this routine we keep the cargo limited to a minimum: the fields we retrieve from the nodes table and store in the tree are:

- node\_id
- parent\_id
- is\_page
- title
- link\_text
- module\_id

Also, the tree is not cached because that does not make sense here: we only use it to construct a dialogdef and that is a one-time operation too.

int|bool function AclManager::calc\_areas\_total(&\$areas) [line 896]

**Function Parameters:**

- *array* **&\$areas** an array with summary information about areas, including the # of nodes to show

**calculate the total number of items (site, areas, nodes) to show in dialog**

the 'open' or 'closed' status of an area is dictated by \$open\_areas:

- if \$open\_areas is an array the elements look like \$area\_id => \$show, where \$show == TRUE indicates the area is 'open' and \$show == FALSE indicates the area is 'closed'
- if \$open\_area is a boolean and the value is TRUE. \_all\_ areas are to be considered 'open'
- otherwise \_all\_ areas are to be considered 'closed'.

The returned value \$total is the sum of the number of areas and the number of 'showable' nodes (as per the information in \$open\_areas). If there are no areas at all, \$total is 0. If an error occurs, this routine returns FALSE.

The parameter `$areas` is used as a return value. It is keyed with `$area_id` and filled with pertinent information about the areas:

- `int $area_id`: the number of the area (also the key of the `$areas` array)
- `string $title` the name of the area
- `bool $is_active` indicating an active area (TRUE) or an inactive area (FALSE)
- `int $nodes` the total number of nodes in this area (could be 0 if no nodes were added yet)
- `int permissions_nodes` the bitmap containing the existing node permissions for this area  
Also, the following information is added to the resulting array:
- `bool $show` if TRUE, all nodes in this area should be displayed
- `int $first` indicating the offset of the row for this area, relative from the start of the list of areas
- `int $last` indicating the offset of the last item to show in this area (could be the same as `$first`)

The latter three values are used to skip `$offset` rows when constructing the dialog.

- **Uses \$DB;**

`array function AclManager::dialog_tableform($href, &$dialogdef, [$show_related = FALSE]) [line 1453]`

**Function Parameters:**

- *string* **\$href** the target of the HTML form
- *array* **&\$dialogdef** the array which describes the complete dialog
- **\$show\_related**

### **construct a form with a dialog in a table with 2 or 3 columns**

this constructs a 2- or 3-column table and fills it with data from the `dialogdef`.

The first column holds the labels for the widgets. The second column holds the corresponding widget, e.g. a list box with roles. The optional third column (depends on the flag `$show_related`) shows related information. This is used to list group/capacities and roles from related groups (ie. groups of which the user is a member).

The table has headers for the columns: 'Realm', 'Role' and optional 'Related'. Rows in the table can have alternating colours via the odd/even class. This is done via the stylesheet.

- **TODO** bailing out on non-array is a crude way of error handling: this needs to be fixed

*void function* `AcIManager::enable_area_view($a_params, $areas_open)` [line 532]

**Function Parameters:**

- *array* **\$a\_params** basic parameters (excluding \$area) that lead to the page where expand/collapse is processed
- *array|bool* **\$areas\_open** indicator(s) for 'open' and 'closed' areas

**further initialise the AcIManager and enable the area expand/collapse feature**

this stores the necessary information about 'open' and 'closed' areas. The parameter \$areas\_open indicates the current state of affairs: (\$areas\_open === FALSE) means all areas are closed (\$areas\_open === TRUE) means all areas are opened If \$areas\_open is an array, it contains area\_id's as key and TRUE or FALSE as value. A value of TRUE indicates that an area is currently 'open', FALSE or no value set means 'closed'.

The parameters in \$a\_params combined with \$WAS\_SCRIPT\_NAME yield an URL where the changes are processed.

*void function* `AcIManager::enable_pagination($a_params, $limit, $offset)` [line 504]

**Function Parameters:**

- *array* **\$a\_params** basic parameters (excluding \$offset and \$limit) that lead to the correct page
- *int* **\$limit** the preferred size of a screenfull of dialog lines
- *int* **\$offset** the record where the current screen begins

**further initialise the AcIManager and enable the dialog pagination feature**

this stores the information that is necessary when a dialog has to be broken up into two or more screens (via the pagination facility in \$output). This routine stores the essential information such as the parameters that lead to the correct page (in \$a\_params) and the current offset. The other necessary parameters are calculated dynamically before `add_pagination()` is called.

Note that pagination is only enabled after this routine is called at least once; by default we do NOT do pagination. (Actually: pagination is only used in the `acl_types ACL_TYPE_PAGEMANAGER` and `ACL_TYPE_MODULE`).

- **Uses** \$CFG;

array function AclManager::get\_dialogdef\_admin(\$acl\_id, [\$related\_acls = NULL]) [line 1137]

**Function Parameters:**

- *int* **\$acl\_id** the acl of interest
- *array* **\$related\_acls** NULL or a list of acl\_id => "group/capacity" pairs for related permissions

**construct an array with the admin dialog information**

this creates an array with widgets for all possible admin jobs for \$acl\_id.

This dialog is supposed to be rendered as a 2-column (group acl) or 3 column (user acl) table. The contents of the 3rd column is a list (an array) of related permissions, ie. the permissions a user has been granted via a group membership. The related information is stored in an extra array element 'related'.

The related information is constructed only in the case where \$related\_acls is not NULL.

The dialog is filled with the current values via \$item['value'] but as a side effect the current value is also recorded in \$item['old\_value']). This makes it easier to determine whether any values have changed (see [save\\_data\\_admin\(\)](#)).

- **TODO** handle the related information in this dialog

array function AclManager::get\_dialogdef\_intranet(\$acl\_id, [\$related\_acls = NULL]) [line 1020]

**Function Parameters:**

- *int* **\$acl\_id** the acl of interest
- *array* **\$related\_acls** NULL or a list of acl\_id => "group/capacity" pairs for related permissions



### construct an array with the intranet dialog information

this creates an array with 1 or more list boxes with the current roles for \$acl\_id for intranet access at the site level and for individual private areas. This dialog is supposed to be rendered as a 2-column (group acl) or 3 column (user acl) table. The contents of the 3rd column is a list (an array) of related permissions, ie. the permissions a user has been granted via a group membership. The related information is stored in an extra array element 'related'.

The related information is constructed only in the case where \$related\_acls is not NULL.

The dialog is filled with the current values via \$item['value'] but as a side effect the current value is also recorded in \$item['old\_value']). This makes it easier to determine whether any values have changed (see save\_data\_internet()).

- **TODO** handle the related information in this dialog

*void function* AclManager::get\_dialogdef\_pagemanager(\$acl\_id, \$related\_acls) [*line 1230*]

#### **Function Parameters:**

- **\$acl\_id**
- **\$related\_acls**

### construct a dialog definition for pagemanager permissions

*string function* AclManager::get\_icon\_area(\$area\_id, \$area\_is\_open, \$offset) [*line 1873*]

#### **Function Parameters:**

- *int* **\$area\_id** the area to open/close (0 means: open site level)
- *bool* **\$area\_is\_open** current status
- *int* **\$offset** the position of this icon in the current list of items

### construct a clickable icon to open/close this area

This is a toggle: if the area is closed the closed icon is shown, but the action in the A-tag is to open the icon (and vice versa).

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$CFG

*string* function AclManager::get\_icon\_blank() [*line 1913*]

**construct a spacer of standard icon width (to line up items)**

- **Uses** \$USER
- **Uses** \$CFG

*array* function AclManager::get\_permissions(\$acl\_id, [\$related\_acls = NULL]) [*line 1546*]

**Function Parameters:**

- *int* **\$acl\_id** the primary acl\_id (used for both users and groups)
- *array|null* **\$related\_acls** an array with related acls for this user or NULL for group acls

**retrieve an array with 0, 1 or more records with permissions from table 'acls'**

this constructs an array with all (or selected) permissions from the 'acls' table for the specified acl \$acl\_id and optionally for all related acl\_id's in \$related\_acls. The resulting array is keyed by acl\_id.

*array* function AclManager::get\_permissions\_areas(\$acl\_id, [\$related\_acls = NULL], [\$areas = NULL]) [*line 1580*]

**Function Parameters:**

- *int* **\$acl\_id** the primary acl\_id (used for both users and groups)
- *array|null* **\$related\_acls** an array with related acls for this user keyed by 'acl\_id' or NULL for group acls

- *array|null* **\$areas** an array with areas of interest keyed by 'area\_id' or NULL for all areas

#### **retrieve an array with 0, 1 or more records with permissions from table 'acls\_areas'**

this constructs an array with all permissions from the 'acls\_areas' table for the specified acl \$acl\_id and optionally for all related acl\_id's in \$related\_acls and optional areas. The resulting array is keyed by area\_id and acl\_id.

Note that by making the result keyed by area\_id first (and then acl\_id) it becomes possible to step through a list of areas and have 0,1 or more acls for that area in a single array, e.g. \$acls = \$permissions[16] yields the selected acls that apply to area 16. That is handy when constructing dialogs iterating through areas such as intranet permissions.

*array* function AclManager::get\_permissions\_nodes\_in\_area(\$area\_id, \$acl\_id, [\$related\_acls = NULL]) [*line 1635*]

##### **Function Parameters:**

- *array* **\$area\_id** the area where the nodes reside
- *int* **\$acl\_id** the primary acl\_id (used for both users and groups)
- *array|null* **\$related\_acls** an array with related acls for this user keyed by 'acl\_id' or NULL for group acls

#### **retrieve an array with 0, 1 or more records with permissions from table 'acls\_nodes'**

this constructs an array with all permissions from the 'acls\_nodes' table for the specified acl \$acl\_id and optionally for all related acl\_id's in \$related\_acls and optional nodes. The resulting array is keyed by node\_id and acl\_id.

Note that by making the result keyed by node\_id first (and then acl\_id) it becomes possible to step through a list of nodes and have 0,1 or more acls for that node in a single array, e.g. \$acls = \$permissions[16] yields the selected acls that apply to node 16. That is handy when constructing dialogs iterating through nodes such as pagemanager permissions.

*array* function AclManager::get\_roles\_intranet() [*line 1372*]

#### **construct an option list with roles for intranet access**

*array* function AclManager::get\_roles\_pagemanager([\$level = ACL\_LEVEL\_NONE]) [*line 1390*]

##### **Function Parameters:**

- *int* **\$level** limits permissions to level 'page', 'section', 'area' or 'site'

## construct an option list with roles for pagemanager access

*bool function AclManager::save\_data() [line 579]*

### **save the changed data for the selected acl\_type**

this interprets the data from the selected dialog and saves the (changed) permission data accordingly. This, too, is merely a dispatcher to the subroutines that do the actual work.

*bool function AclManager::save\_data\_admin() [line 763]*

### **save changed job permissions to the database**

this saves the changed job permissions to the acls table.

If the user selected the guru option, we simply set the permissions to JOB\_PERMISSION\_GURU (i.e. all permissions set). If not, we iterate through all existing permissions and set the corresponding bits. After that the data is saved to the correct acls-record.

- **TODO** fix the crude error check on dialogdef === FALSE here

*bool function AclManager::save\_data\_intranet() [line 640]*

### **save the changed roles for intranet access to the tables 'acls' and 'acls\_areas'**

this interprets the data from the intranet dialog and saves the changed roles accordingly

*bool function AclManager::save\_data\_pagemanager() [line 983]*

### **save the changed roles for pagemanager to the tables 'acls' and 'acls\_areas' and 'acls\_nodes'**

this interprets the data from the pagemanager dialog and saves the changed roles accordingly

*bool function AclManager::save\_data\_permissions() [line 655]*

### **save the changed roles in the dialog to the corresponding tables 'acls'**

this interprets the data from the current dialog and saves the changed roles accordingly. Note that the information about tables and fields etc. is all contained in the dialogdef so we can use this generic save\_data() routine.

`void function AclManager::set_action([$a_params = NULL]) [line 439]`

**Function Parameters:**

- *array* **\$a\_params**

**further initialise the AclManager with the dialog action property**

this stores an array with parameters that must be added to the action property of the HTML form that will be POSTed, i.e. the URL to which the dialog will be posted. Example of such an array is: `array('job' => 'accountmanager', 'task' => 'user_save', 'user' => 123);` The information in this array is later combined with `WAS_SCRIPT_NAME`.

`void function AclManager::set_dialog([$dialog = 0]) [line 480]`

**Function Parameters:**

- *int* **\$dialog** a unique identification (within this job) of the dialog

**further initialise the AclManager with the dialog identification**

this stores an integer number that is used to identify the dialog. This number is subsequently added to the dialog as a hidden field, which makes it possible to identify the dialog once it is POSTed

`void function AclManager::set_header([$header = ""]) [line 453]`

**Function Parameters:**

- *string* **\$header** text to show as title

**further initialise the AclManager with the dialog header**

this stores a string that is used as a title for the dialog Note that this header may be extended with a (translated) string like `'[{FIRST}]-{LAST} of {TOTAL}]'` in case of a paginated display.

`void function AclManager::set_intro([$intro = ""]) [line 466]`

**Function Parameters:**

- *string* **\$intro** introductory text for the dialog

### **further initialise the AclManager with the dialog introductory text**

this stores a string that is displayed after the dialog header. This text supposedly contains some more information about the dialog.

*void function AclManager::set\_related\_acls([\$related\_acls = NULL]) [line 423]*

#### **Function Parameters:**

- **array \$related\_acls** identifies a list with related ACLs

### **further initialise the AclManager with related Acl's**

this stores the array with 0, 1 or more key-value-pairs of the form \$acl\_id => \$group\_capacity\_name, e.g. 3 => 'staff/member', 4 => 'grade7/teacher'

*void function AclManager::show\_dialog() [line 547]*

#### **show the dialog where the selected Acl can be modified**

this shows the dialog corresponding to the acl\_type that was previously selected, including existing data from the previously selected acl\_id. Note that this routine is only a simple dispatcher; actual work is done in subroutines.

*void function AclManager::show\_dialog\_admin() [line 738]*

#### **display a tabular form for manipulating admin permissions**

This dialog is a table consisting of 2 (group acl) or 3 (user acl) columns. The first column holds the various job names/descriptions. The second column holds a checkbox for the job. The optional third column holds corresponding (existing) permissions based on a group/capacity membership of the user. This 3rd column is displayed only when there are related acls (indicated via related\_acls not empty)

*void function AclManager::show\_dialog\_intranet() [line 620]*

#### **display a tabular form for manipulating intranet permissions**

This dialog is a table consisting of 2 (group acl) or 3 (user acl) columns. The first column holds the text 'All areas' or the name of a private area (if any) The second column holds a listbox where the user can select 1 out of 3 roles: 0 = "--", 1 = "Access", -1 = "Guru". The optional third column holds corresponding (existing) roles based on a group/capacity membership of the user. This 3rd column is displayed only when there are related acls (indicated via related\_acls not empty)

*void function AclManager::show\_dialog\_pagemanager() [line 836]*

### **display a tabular form for manipulating pagemanager permissions**

This dialog is a table consisting of 2 (group acl) or 3 (user acl) columns. The first column identifies the site, areas or nodes within areas. The second column holds a listbox where the user can select a role for that particular item. The roles 0 = "--" and -1 = "Guru" are always available. The optional third column holds corresponding (existing) roles based on a group/capacity membership of the user. This 3rd column is displayed only when there are related acls (indicated by \$related\_acls not being empty).

The main purpose of this routine is to show some \$this->pagination\_limit table rows (starting at \$this->pagination\_offset) and corresponding [Save] and [Cancel] buttons that eventually lead to the save routine. (If pagination is not enabled, the full overview is displayed).

Note that the actual pagination is performed in [get\\_dialogdef\\_pagemanager\(\)](#). The additional feature of expanding/collapsing areas in the display is also done in [get\\_dialogdef\\_pagemanager\(\)](#).

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$CFG;

*void function AclManager::show\_tree\_walk(&\$dialogdef, &\$tree, &\$permissions\_nodes, &\$index, \$node\_id, \$first, \$last, \$acl\_id, &\$related\_acls) [line 1786]*

#### **Function Parameters:**

- *array* **&\$dialogdef** collects the widgets
- *array* **&\$tree** a reference to the complete tree built earlier
- *array* **&\$permissions\_nodes** contains permissions per node
- *int* **&\$index** only add node to dialogdef if \$index is between \$first and \$last, increments for every node
- *int* **\$node\_id** the first node of this tree level to show
- *int* **\$first** lower bound of interval
- *int* **\$last** upper bound of interval
- *int* **\$acl\_id** the acl we are rendering

- *array|null* **related\_acls** an array with related acs for this user keyed by 'acl\_id' or NULL for group acs

### **add the specified node to dialogdef, optionally all subtrees, and subsequently all siblings**

this routine adds a widget to the dialogdef for the specified node After that, any subtrees of this node are added too, using recursion This continues for all siblings of the specified node until there are no more (indicated by a sibling\_id equal to zero).

- **Usedby** [AcIManager::show\\_tree\\_walk\(\)](#)
- **Uses** [AcIManager::show\\_tree\\_walk\(\)](#)
- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$CFG

## **Class AdminOutput**

*[line 549]*

### **conveniently collect output**

This class allows for a convenient way to temporarily store output, in random order and still being able to output to the browser in the correct order (eg. headers() first, etc.).

This class 'knows' everything about the structure of a generated page. Most of this knowledge is contained in \$this->get\_html(); The actual layout is defined in the corresponding stylesheets, e.g. admin\_base.css.

Typical use of this object is to add HTML-code to various parts of the page via the add\_\*() methods and finally sending the collected output to the user's browser with \$this->send\_output(). That's it.



- **Package** wascore
- **TODO** carefully check if we need more headers in html-head section of document, see [AdminOutput\(\)](#).
- **TODO** add a 'funnel mode': disable all distracting links that could seduce the user to leave and leave locked records (eg. nodes)

#### **AdminOutput::\$breadcrumbs**

*array = array() [line 587]*

- **Var** a list URL components etc. identifying the path that leads to the current screen

#### **AdminOutput::\$content**

*array = array() [line 569]*

- **Var** collection of items/lines that are part of the content area

#### **AdminOutput::\$dtd**

*string = <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd"> [line 551]*

- **Var** the standard doctype (default: HTML 4.01 Transitional)

#### **AdminOutput::\$funnel\_mode**

*bool = FALSE [line 593]*

- **Var** if TRUE, the display should be in funnel-mode, ie. distracting links should be non-working

### **AdminOutput::\$helptopic**

*string = [line 584]*

- **Var** the additional parameter to add to the help link in the navigation

### **AdminOutput::\$high\_visibility**

*bool = FALSE [line 581]*

- **Var** this switches the navigation between image-based and text-based

### **AdminOutput::\$html\_head**

*array = array() [line 563]*

- **Var** collection of items/lines that will be output as part of the HTML-head section

### **AdminOutput::\$http\_headers**

*array = array() [line 560]*

- **Var** collection of individual http-headers that are to be sent *\_before\_* any HTML is sent

### **AdminOutput::\$menu**

*array = array() [line 566]*

- **Var** collection of items/lines that are part of the menu (could be empty)

**AdminOutput::\$messages\_bottom**

*array = array() [line 578]*

- **Var** collection of messages that are to be displayed via a javascript alert() at END of page

**AdminOutput::\$messages\_inline**

*array = array() [line 572]*

- **Var** collection of messages that are to be displayed just below the navigation bar

**AdminOutput::\$messages\_top**

*array = array() [line 575]*

- **Var** collection of messages that are to be displayed via a javascript alert() at START of page

**AdminOutput::\$pagination**

*array = array() [line 590]*

- **Var** a list URL components etc. comprising a list of links to paginated display of lists

**AdminOutput::\$subtitle**

*string = [line 557]*

- **Var** a subtitle displayed in the generated page (for the time being it is empty or has a &nbsp;)

### AdminOutput::\$suppress\_output

*bool* = FALSE [line 596]

- **Var** if TRUE, no output should be sent whatsoever

### AdminOutput::\$title

*string* = [line 554]

- **Var** the title to display in both the title tag and in the page itself (usually the sitename)

Constructor *void* function AdminOutput::AdminOutput([\$title = "], [\$subtitle = "]) [line 610]

#### **Function Parameters:**

- *string* **\$title** the title to display in both the title tag and inside the document
- *string* **\$subtitle** the text to display underneath the title in the document (or &nbsp; if empty)

### **constructor**

This sets up the object and adds the title and subtitle.

- **TODO** is it really wise to add a base header? It interferes with the session cookie whenever you login at another URL than the base+'admin.php'... Comment it out for now
- **TODO** do we need a link rel="shortcut icon" type of header too?
- **TODO** do we really need more meta-headers?

*void* function AdminOutput::add\_breadcrumb(\$href, [\$params = NULL], [\$attributes = NULL], [\$anchor = NULL])

[line 1452]

**Function Parameters:**

- *string* **\$href** holds the hypertext reference
- *string|array* **\$params** holds the parameters to add to the \$href
- *string|array* **\$attributes** holds the attributes to add to the tag
- *string* **\$anchor** the text that identifies the breadcrumb

**add a breadcrumb to the breadcrumb trail**

this stores information about a crumb in the breadcrumb trail into the breadcrumbs array. We store this information in pieces that are readily usable with [html\\_a\(\)](#). However, by constructing the links at the latest possible time, we are able to suppress the real links, by replacing the href + parameters with a bare "#". This trick can be used to keep the user focussed on the task at hand (in 'funnel-mode').

*void function AdminOutput::add\_content(\$content) [line 1409]*

**Function Parameters:**

- *string|array* **\$content** the line(s) of text to add

**add a line or array of lines to the content part of the document**

*void function AdminOutput::add\_html\_header(\$headerline) [line 1323]*

**Function Parameters:**

- *string* **\$headerline** headerline to add

**add a header to the HTML head part of the document**

*void function AdminOutput::add\_http\_header(\$headerline) [line 1314]*

**Function Parameters:**

- *string* **\$headerline** headerline to add

## add an HTTP-header

*void function AdminOutput::add\_menu(\$menuline) [line 1422]*

### **Function Parameters:**

- *string* **\$menuline** the line of text to add

## add a line to the menu part of the document

*void function AdminOutput::add\_message(\$message) [line 1361]*

### **Function Parameters:**

- *string/array* **\$message** message(s) to add inline

## add a message to the list of inline messages, part of the BODY of the document

*void function AdminOutput::add\_meta(\$meta) [line 1386]*

### **Function Parameters:**

- *array* **\$meta** an array with name-value-pairs that should be added to the HTML head part

## add a line with meta-information to the HTML head part of the document

*void function AdminOutput::add\_meta\_http\_equiv(\$meta) [line 1398]*

### **Function Parameters:**

- *array* **\$meta** an array with name-value-pairs that should be added to the HTML head part

## add a line with http-equiv meta-information to the HTML head part of the document

*int function AdminOutput::add\_pagination(\$href, \$base\_params, \$num\_records, \$limit, \$current\_offset, \$num\_links) [line 1510]*

### **Function Parameters:**

- *string* **\$href** the script to call

- *array* **\$base\_params** the necessary parameters to land on the correct page
- *int* **\$num\_records** the total length of the list
- *int* **\$limit** the preferred size of the screen to show
- *int* **\$current\_offset** the record that starts the current screen
- *int* **\$num\_links** the maximum number of pages to show in the navbar (excluding Prev/Next/All)

### add a pagination navigation bar to the output

this adds a pagination navbar to the output making it easier to step through a long listing of items a screen at a time

Features:

- the 'Prev' and 'Next' buttons do wrap: whenever we hit the begin/end of the list, we start again at the end/begin.
- if there are more screens to show than \$num\_links, we show at most \$num\_links links whenever we are NOT at the start of the list, the smallest link is displayed differently (via translation), e.g. via a left bracket '&lt;' or three dots '...'
- the same trick is used at the end of the list to indicate there's more (via a different translation), e.g. via a right bracket '&gt;' or three dots '...'

This function returns the number of screens that is required to show all the items in screens of at most \$limit items. The number of screens is at least 1.

*void* function AdminOutput::add\_pagination\_item(\$href, [\$params = NULL], [\$attributes = NULL], [\$anchor = NULL]) [*line 1476*]

#### **Function Parameters:**

- *string* **\$href** holds the hypertext reference
- *string|array* **\$params** holds the parameters to add to the \$href
- *string|array* **\$attributes** holds the attributes to add to the tag
- *string* **\$anchor** the text that identifies the link

### add a link to screen of a paginated list to the existing list

this stores information about a screen in the paginated display of a list. We store this information in pieces that are readily usable with [html\\_a\(\)](#). However, by constructing the links at the latest possible time, we are able to suppress the real links, by replacing the href + parameters with a bare "#". This trick can be used to keep the user focussed on the task at hand (in 'funnel-mode').

*void function AdminOutput::add\_popup\_bottom(\$message) [line 1347]*

**Function Parameters:**

- *string|array* **\$message** message(s) to add

**add a message to the list of popup-messages at the BOTTOM of the document**

*void function AdminOutput::add\_popup\_top(\$message) [line 1333]*

**Function Parameters:**

- *string|array* **\$message** message(s) to add

**add a message to the list of popup-messages at the TOP of the document**

*void function AdminOutput::add\_stylesheet(\$url) [line 1375]*

**Function Parameters:**

- *string* **\$url** url of the stylesheet

**add a link to a stylesheet to the HTML head part of the document**

*string function AdminOutput::get\_address([\$m = ""]) [line 1227]*

**Function Parameters:**

- *string* **\$m** left margin for increased readability

**return the reconstructed URL in a single (indented) line**

This constructs the exact URL (including the GET-parameters) of the current script. This URL is returned as HTML so it can be displayed. It is NOT meant to be a clickable link, but as a documentation of the actual URL that was used. Note that this URL can be suppressed by an appropriate 'display:none' in the stylesheet, making it an item that only appears on a hardcopy (media="print") and not on screen.

*string function AdminOutput::get\_bottomline([\$m = ""]) [line 1201]*



### ***Function Parameters:***

- *string \$m* left margin for increased readability

### **report basic performance indicators in a single line**

This calculates the execution time of the script and the number of queries. Note a special trick: we retrieve the translated string in a dummy variable before calculating the number of queries because otherwise we might miss one or more query from the language/translation subsystem.

Note that the message containing the performance indicators is only generated when debug is TRUE; the information is not that interesting for ordinary users.

*string* function AdminOutput::get\_breadcrumbs([\$m = ""]) [*line 1250*]

### ***Function Parameters:***

- *string \$m* left margin for increased readability

### **retrieve/construct a list of 0 or more clickable breadcrumbs**

this reads the breadcrumbs-array and constructs the breadcrumb trail. If \$this->funnel\_mode is TRUE, the links are still clickable but the href-part is replaced with a "#" instead of the 'real' href + parameters.

*string* function AdminOutput::get\_content([\$m = ""]) [*line 778*]

### ***Function Parameters:***

- *string \$m* left margin for increased readability

### **get all lines in the content DIV in a single properly indented string**

*string* function AdminOutput::get\_div\_messages([\$m = ""]) [*line 827*]

### ***Function Parameters:***

- *string \$m* left margin for increased readability

### **get a perhaps bulleted list of messages in a DIV**

This constructs an unordered list with messages, if there are any. If there is no message at all, an empty string is returned (without DIV). If there is a single message, no bullet is added to the message. If there are two or more messages, bullets are added.

Note that this routine is an exception with respect to the DIV-tags: this helper routine DOES generate its own DIVs whenever there is at least 1 message. This means that there is no DIV at all when there are no messages.

*string* function AdminOutput::get\_html() [*line 705*]

### **construct an output page in HTML**

This constructs a full HTML-page, starting at the DTD and ending with the html closing tag.

The page is constructed using nested DIVs, the layout is taken care of in a separate style sheet. All knowledge about the structure of the page is contained in this routine.

The performance of the script (# of queries, execution time) is calculated as late as possible, to catch as much as we can. Therefore the construction is done in two parts and performance is calculated last.

The contents of the various DIVs is constructed in various helper routines in order to make this routine easy to read (by humans that is). The various helper routines all are called with a string of space characters; this should improve the readability of the page that is generated eventually.

Note that the routine `$this->get_div_messages()` does in fact generate its own DIV tags. This is done in order to completely get rid of the message DIV, we do not even want to see an empty DIV if there are no message.

*string* function AdminOutput::get\_html\_head([\$m = ""]) [*line 768*]

#### **Function Parameters:**

- *string* **\$m** left margin for increased readability

### **get all lines in the HTML head section in a single properly indented string**

*string* function AdminOutput::get\_lines(\$a, [\$m = ""]) [*line 801*]

#### **Function Parameters:**

- *string* **\$m** left margin for increased readability

- **\$a**

### **get lines from an array in a single properly indented string**

This is a workhorse to convert an array of lines to a properly indented block of text.

*string* function AdminOutput::get\_logo([\$m = ""]) [*line 895*]

#### **Function Parameters:**

- *string* **\$m** left margin for increased readability

### **construct an image tag with the W**

*string* function AdminOutput::get\_menu([\$m = ""]) [*line 788*]

#### **Function Parameters:**

- *string* **\$m** left margin for increased readability

### **get all lines in the menu DIV in a single properly indented string**

*string* function AdminOutput::get\_navigation([\$m = "], [\$textonly = FALSE]) [*line 1027*]

#### **Function Parameters:**

- *string* **\$m** left margin for increased readability
- *bool* **\$textonly** if TRUE, no images are used to construct navigation links

### **construct a navigation bar for various jobs the user is allowed to do**

This constructs an unordered list (UL) with items, where each item is a clickable link to one of the various 'managers' (e.g. page manger, file manager, etc.).

There are several different 'modes' for this function. The type of output not only depends on the \$textonly flag, but also on the user's permissions for the various 'managers'. This information is retrieved from the global \$USER object.

The list of available options is stored in an array of arrays. This should make it easier to add a new 'manager' in the future: simply add another element to the \$items array below (and of course the necessary changes in the dispatcher in main\_admin() above).

As a rule the links are presented to the user in the form of clickable images (icons) of 32x32 pixels. If no image is specified, a text-link is used instead. If the optional flag \$textonly is set, `_all_` links are displayed as a text-link.

Depending on the user's privileges, access to some 'managers' is denied. This is visualised by displaying either a black/white 32x32 image (instead of the coloured icon) or by adding the class 'dimmed' to the text-based anchor tags. This makes it possible to show 'dimmed' or 'greyed out' text if the user has no access. Note, however, that these 'forbidden' links are not suppressed: the W@S philosophy says that everything should be transparent as possible and that rules out the option to suppress the things the user is not supposed to do. If the user does follow the 'dimmed' links, an error message is displayed (see the code in the dispatcher in [main\\_admin\(\)](#) above). One last note on this issue of denying access in a transparent way: the mousover already indicate that access will be denied. That should provide an extra clue to the user.

The list of items contains a link to the start centre (the first link) and also a link to the documentation (the last link). Both items are governed by the same privilege mask: `JOB_PERMISSION_STARTCENTER`. Basically it means that everyone with minimal administrator privileges has access to both the start centre and the help function. Effectively this is everyone that has access to `admin.php` so the images `startcenter-bw.gif` and `help-bw.gif` do not really make sense, but for completeness sake...

- **TODO** we need to clean up this code and properly implement the funnel mode (2009-12-18)

*string* function AdminOutput::get\_pagination([\$m = ""]) [line 1285]

**Function Parameters:**

- *string* **\$m** left margin for increased readability

### **retrieve/construct a list of 0 or more clickable links to paginated screens**

this reads the pagination-array and constructs a list of links to individual screens of a paginated display of a list.

If `$this->funnel_mode` is `TRUE`, the links are still clickable but the href-part is replaced with a `"#"` instead of the 'real' href + parameters.

*string* function AdminOutput::get\_popups(\$messages, [\$m = ""]) [line 862]

**Function Parameters:**

- *string* **\$m** left margin for increased readability
- *array* **\$messages** @messages a collection of message to display via alert()

### **construct javascript alerts for messages**

This constructs a piece of HTML that yields 0 or more calls to the javascript alert() function, once per message. If no messages need to be displayed an empty string is returned.

*string* function AdminOutput::get\_quickbottom([\$m = ""]) [line 970]

#### **Function Parameters:**

- *string* **\$m** left margin for increased readability

### **construct a list of quicklinks for bottom of page**

This creates HTML-code for a few links that can be displayed at the bottom of the page. Currently this list has 1 link. Possible links are

- a logout link (which will end the user's session)
- a link to the main site (i.e. /index.php without any addition parameters)
- a link to the version checker on the project's home page  
(see also [get\\_quicktop\(\)](#)).

*string* function AdminOutput::get\_quicktop([\$m = ""]) [line 926]

#### **Function Parameters:**

- *string* **\$m** left margin for increased readability

### **construct a list of quicklinks for top of page, including logout link**

This creates HTML-code for a few links that can be displayed at the top of the page. These links are:

- a logout link (which will end the user's session)
- a link to the main site (i.e. /index.php without any addition parameters)
- a link to the version checker on the project's home page

Note that the latter opens in a smallish new window that can be easily dismissed without 'losing' the main page.

*void function AdminOutput::send\_headers() [line 641]*

#### **send collected HTTP-headers to user's browser**

This sends the headers that still need to be sent. These are collected in the array `$this->http_headers`. If headers are already sent, this fact is logged (and the collected headers are not sent).

*void function AdminOutput::send\_output() [line 670]*

#### **send collected output to user's browser**

This first sends any pending HTTP-headers and subsequently outputs the page that is constructed by `$this->get_html()`. However, if the flag `suppress_output` is set then nothing is sent, not even a header. This allows for routines that interact directly with the user, e.g. a function to download a file.

*bool function AdminOutput::set\_funnel\_mode(\$funnel\_mode) [line 1585]*

#### **Function Parameters:**

- *bool* **\$funnel\_mode** if TRUE, funnel mode is switched on and distracting navigation links rendered inactive

### **manipulate the funnel mode**

*string function AdminOutput::set\_helptopic(\$topic) [line 1431]*

#### **Function Parameters:**

- *string* **\$topic** the topic in the help function

### **set the additional help topic to show when user clicks help button**

*bool function AdminOutput::set\_suppress\_output(\$suppress\_output, \$suppress) [line 1597]*

#### **Function Parameters:**

- *bool* **\$suppress** if TRUE, the actual output is suppressed (effectively disables `send_output()`)
- **\$suppress\_output**

## Class Area

[line 42]

### Methods to access properties of an area

- **Package** wascore
- **TODO** refactor/change the way the default node and area are calculated from the requested node and area. We now go the the database too often.

#### Area::\$area\_exists

*bool* = FALSE [line 65]

- **Var** FALSE if area uninitialised/not found, otherwise TRUE

#### Area::\$area\_id

*int* = NULL [line 50]

- **Var** the actual area id, calculated from \$requested\_area and \$requested\_node

#### Area::\$area\_record

*array* = FALSE [line 62]

- **Var** cached area record from database

#### **Area::\$module**

*the = NULL [line 75]*

- **Var** module that actually provides the content

#### **Area::\$nodes**

*array = array() [line 56]*

- **Var** list of cached node records keyed with node\_id

#### **Area::\$node\_id**

*int = NULL [line 53]*

- **Var** the actual node id, calculated from \$requested\_area and \$requested\_node

#### **Area::\$requested\_area**

*int|null = NULL [line 44]*

- **Var** the requested area or NULL if not specified

#### **Area::\$requested\_node**

*int|null = NULL [line 47]*



- **Var** the requested node or NULL if not specified

**Area::\$table\_areas\_prefix**

*string = [line 68]*

- **Var** the name of the areas table including table prefix

**Area::\$table\_nodes\_prefix**

*string = [line 71]*

- **Var** the name of the nodes table including table prefix

**Area::\$tree**

*array = array() [line 59]*

- **Var** list of arrays acting as a tree structure of all nodes in the area

Constructor *void* function Area::Area([\$requested\_area = NULL], [\$requested\_node = NULL], \$area\_id, \$node\_id)  
[line 91]

**Function Parameters:**

- *int|null* **\$area\_id** the number of the area the user requested (or NULL if none specified)
- *int|null* **\$node\_id** the number of the node to display (or NULL if none specified)
- **\$requested\_area**
- **\$requested\_node**

**construct an Area object**

This initialises the Area by calculating the correct node\_id (of a page to show) and area\_id. If all goes well, initialisation continues with retrieving `_all_` node records in an (ordered) array `$this->nodes` and subsequently constructing the complete navigation tree from the retrieved node records, taking 'hidden' pages/sections into account. If all is well, the module referenced by the node `$node_id` is initialised. Success is indicated by setting the variable `$this->exists` to TRUE.

- **Uses \$DB**

*bool function Area::area\_is\_private() [line 150]*  
**determine if an area is private or public**

*bool function Area::build\_tree\_of\_nodes(&\$records, \$records) [line 664]*  
**Function Parameters:**

- *array* **\$records** pointer to ordered array of node records (pointer to save stack space)
- **&\$records**

### **construct a complete tree from node records (including 'hidden' nodes)**

This iterates through all node records `$records` and constructs a tree. Nodes/sections without children are automatically set to 'hidden'. If all children of a node/section are hidden, that node/section is also hidden.

The resulting tree is actually an array keyed with the node\_id (and with an additional 'node' 0, see notes below). The order of the array is not relevant because any node can be accessed directly via the key. However, the order is the same as the order of the incoming `$records` array but with 'node' 0 prepended.

Note 1 It is essential that the incoming array `$record` is properly ordered, i.e. all nodes first grouped by parent\_id and after that sorted by sort\_order. This way it is possible to easily construct a linked list of siblings in the correct sort order.

Note 2 The root node of the whole tree has node\_id 0. The value 0 is also used to indicate the end of a linked list. Note that there is no node with node\_id 0 in the database; the first node has node\_id = 1 so there are no conflicts here.

Note 3 The root node in the tree structure has node\_id 0. In order to have the top level nodes (ie. nodes directly under the root node) have their parent\_id's set to 0 instead of to their own node\_id. The reason to use parent\_id = node\_id is that referential integrity requires that a the

parent\_id field should have a valid node\_id and 0 is not a valid node\_id in the database.

*bool/int* function Area::calculate\_default\_descendant\_node\_id(\$area\_id, \$subtree\_id, &\$node\_cache, \$node\_cache) [line 562]

**Function Parameters:**

- *int* **\$area\_id** a valid indicator of the area to look at
- *int|null* **\$subtree\_id** the id of the starting node of the subtree to search OR null if searching whole area
- *array* **\$node\_cache** contains cached records, used to identify circular reference
- **&\$node\_cache**

**calculate the default page in the subtree \$subtree\_id in area \$area\_id**

This searches for the first default page in the subtree starting at node (of type section) \$subtree\_id. If \$subtree\_id is empty, the whole area is searched for a default page.

- **Uses** MAXIMUM\_ITERATIONS - limits the number of levels to try to a sensible maximum (no endless loops)

*bool/int* function Area::calculate\_node\_id(\$requested\_area, \$requested\_node, &\$node\_cache) [line 376]

**Function Parameters:**

- *\$requested\_area* **\$requested\_area** integer|null the requested node number or null if none specified
- *\$requested\_node* **\$requested\_node** integer|null the requested area number or null if none specified
- *\$node\_cache* **&\$node\_cache** array this referenced variable holds the node records retrieved from the database

**determine which node in which area to show**

*bool/int* function Area::calculate\_validate\_default\_node\_id(\$requested\_area, &\$node\_cache) [line 400]

#### **Function Parameters:**

- *\$requested\_area* **\$requested\_area** integer|null the requested area number or null if none specified
- *\$node\_cache* &**\$node\_cache** array this referenced variable holds the node records retrieved from the database

#### **calculate and validate the default node from an area or the default area**

This determines the default node in the specified area or in the default area if no area was explicitly requested. Returns the node\_id OR FALSE if no suitable node can be found.

As a side-effect the node-records that are retrieved from the database in the process are cached in \$node\_cache, with the corresponding node\_id as the key.

*bool/int* function Area::calculate\_validate\_node\_id(\$requested\_area, \$requested\_node, &\$node\_cache) [*line 455*]

#### **Function Parameters:**

- *\$requested\_area* **\$requested\_area** integer|null the requested node number or null if none specified
- *\$requested\_node* **\$requested\_node** integer|null the requested area number or null if none specified
- *\$node\_cache* &**\$node\_cache** array this referenced variable holds the node records retrieved from the database

#### **calculate and validate the node to display based on a node and an area or the default area**

This determines whether the specified node (and area if specified) is a valid node. If the specified node is not a page (but a section), we descend into the subtree starting at that node until we find a (default) node that is also a page.

If no suitable node can be found, this routine returns FALSE. Otherwise the valid node\_id of the page is returned, even if the requested node was a section. In other words: this routine may return another node\_id than the one that was requested.

*bool* function Area::exists() [*line 132*]

#### **determine existence of area**

*string* function Area::get\_area\_title() [*line 164*]

### fetch the title to be used in a HTML-title-tag in the head section

This tries to retrieve the area title. If that title is not defined (i.e. empty), the global title of the site is used.

- **Uses \$CFG**

*bool|array* function Area::get\_breadcrumb\_anchors([\$node\_id = NULL], [\$attributes = NULL]) [*line 240*]

#### **Function Parameters:**

- *int* **\$node\_id** indicates which node, NULL means the default node
- *array|null* **\$attributes** NULL or an array of key-value-pairs to add to the anchors

### fetch breadcrumb trail for a node

*array* function Area::get\_childeren(\$node\_id, [\$show\_hidden\_too = FALSE]) [*line 275*]

#### **Function Parameters:**

- *int* **\$node\_id** the direct parent of the nodes that will be returned
- *int* **\$show\_hidden\_too** if TRUE also the 'hidden' childeren are returned

### get an ordered array of node records with parent equal to \$node\_id

This returns an ordered array of all childeren (pages and sections) of node \$node\_id. If \$node\_id is itself a page, then an empty array is returned. Note that only the direct descendants are returned, not the grandchildren.

*string* function Area::get\_node\_link\_href([\$node\_id = NULL]) [*line 297*]

#### **Function Parameters:**

- *int|null* **\$node\_id** indicates the node to look at or the default node if NULL

### get the link\_href property of a node

This retrieves the link\_href property of the specified \$node\_id or the default node.

*bool|array* function Area::get\_node\_record([\$node\_id = NULL]) [*line 203*]

**Function Parameters:**

- *int* **\$node\_id** indicates the node record to retrieve

### **get a node record, maybe from the cache**

This retrieves a node record, either from the cache or otherwise from the database. If data is retrieved from the database it is added to the cache. The possible embargo is taken into account.

*bool|string* function Area::get\_node\_title([\$node\_id = NULL]) [*line 183*]

**Function Parameters:**

- *int* **\$node\_id** indicates which node, NULL implies the default node

### **fetch the title of a node**

This tries to retrieve the title of the node. The result could be an empty string; there is no 'built-in' title such as 'page \$node\_id' or something.

*int* function Area::get\_theme\_id() [*line 141*]

**determine the theme to use**

*string* function Area::node2anchor(\$node\_record, [\$attributes = NULL], [\$textonly = FALSE]) [*line 328*]

**Function Parameters:**

- *array* **\$node\_record** the node record to convert
- *array* **\$attributes** optional attributes to add to the HTML A-tag
- *bool* **\$textonly** if TRUE, no clickable images will be returned

### **construct an anchor from a node record**

This constructs an array with key-value-pairs that can be used to construct an HTML anchor tag. At least the following keys are created in the resulting array: 'href', 'title' and

'anchor'. The latter is either the text or a referent to an image that is supposed to go between the opening tag and closing tag. Furthermore an optional key is created: target. The contents of the input array \$attributes is merged into the result.

If the parameter \$textonly is TRUE the key 'anchor' is always text. If \$textonly is NOT TRUE, the 'anchor' may refer to an image.

Note that the link text is always non-empty. If the node record has an empty link\_text, the word 'node' followed by the node\_id is returned. (Otherwise it will be hard to make an actual clickable link).

*void function Area::retrieve\_nodes\_from\_database(\$area\_id) [line 623]*

**Function Parameters:**

- *int \$area\_id* the area for which all nodes are to be retrieved

**get an array of all available node records in the selected area as assoc arrays**

This yields an array of all available (i.e. visible and hidden) nodes in the area. The expired nodes and nodes under embargo are not retrieved; these are considered non-existing.

The array with nodes is ordered by parent\_id and sort\_order and keyed with the node\_id. This sort order helps to create an ordered list of nodes per level.

*bool function Area::subtree\_is\_hidden(\$node\_id, &\$tree, \$tree) [line 748]*

**Function Parameters:**

- *int \$node\_id* start of the subtree
- *array \$tree* a pointer to the tree (pointer to save stack space)
- **&\$tree**

**recursively determine whether all children of a node are hidden**

This walks the subtree starting at \$node\_id and returns TRUE if all children of this node are hidden or FALSE if at least 1 is not hidden. As a side-effect, a section/node is made hidden if all children are hidden, i.e. the results are recorded in the nodes in the \$tree.

This recursive routine can be called at most MAXIMUM\_ITERATIONS times, preventing endless loops. When this limit is reached, a message is logged (but only once).

Note that the results of subtrees are OR'ed with the is\_hidden property of the current node.

This means that IF a subtree has all nodes hidden, the node will be made hidden too. However, if a subtree has at least one non-hidden node, the node will not be forced to be unhidden: if it was already hidden it stays that way.

## Class AreaManager

[line 62]

### Methods to access properties of an area

This class is used to manage areas. The following functions are supplied

- add a new area (requires PERMISSION\_SITE\_ADD\_AREA)
- set default area (requires PERMISSION\_AREA\_EDIT\_AREA)
- delete existing area (requires PERMISSION\_SITE\_DROP\_AREA)
- edit area properties (requires PERMISSION\_AREA\_EDIT\_AREA)
- view list of areas (requires permissions for add, edit, delete or ACL\_ROLE\_INTRANET\_ACCESS)

The default action is to show a list of existing areas for which the user has some form of permission. This could be either one of the permissions mentioned above or the permission to view the area (intranet).

- **Package** wascore
- **TODO** we need to take care of spurious spaces in inputs (or do we?)

### AreaManager::\$areas

*array = array()* [line 67]

- **Var** list of cached area records keyed with area\_id

### AreaManager::\$output

*object|null = NULL* [line 64]



- **Var** collects the html output

#### **AreaManager::\$show\_parent\_menu**

*bool = FALSE [line 70]*

- **Var** if TRUE the calling routing is allowed to use the menu area (e.g. show config mgr menu)

Constructor *void* function AreaManager::AreaManager(&\$output) [line 79]

#### **Function Parameters:**

- *object* **&\$output** collects the html output

#### **construct an AreaManager object**

This initialises the AreaManager and also dispatches the chore to do.

- **Uses** \$CFG

*void* function AreaManager::area\_add() [line 287]

#### **present a dialog where the user can enter minimal properties for a new area**

this displays a dialog where the user can enter the minimal necessary properties of a new area. These properties are:

- name
- public or private
- the theme to use

Other properties will be set to default values and can be edited later on, by editing the area.

The new area is saved via performing the 'chore' AREAMANAGER\_CHORE\_SAVE\_NEW.

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER

*void function AreaManager::area\_delete() [line 407]*

#### **delete an area from this site after confirmation**

this either presents a confirmation dialog to the user OR deletes an area. First the user's permissions are checked and also there should be no nodes left in the area before anything is done. Only allowing deletion of an empty area is safety measure: we don't want to accidentally delete many many nodes from an area in one go (see also task\_node\_delete()). Also, we don't want to introduce orphaned node records (by deleting the area record without deleting nodes).

Note that this routine could have been split into two routines, with the first one displaying the confirmation dialog and the second one 'saving the changes'. However, I think it is counter-intuitive to perform a deletion of data under the name of 'saving'. So, I decided to use the same routine for both displaying the dialog and acting on the dialog.

- **TODO** since multiple tables are involved, shouldn't we use transaction/rollback/commit? Q: How well is MySQL suited for transactions? A: Mmmmm.... Which version? Which storage engine?
- **TODO** should we also require the user to delete any files associated with the area before we even consider deleting it? Or is it OK to leave the files and still delete the area. We do require that nodes are removed from the area, but that is mainly because of maintaining referential integrity. Mmmmm... Maybe that applies to the files as well, especially in a private area. Food for thought.
- **Uses** \$USER

*void function AreaManager::area\_edit() [line 661]*

#### **show the basic properties edit dialog and the edit menu**

Note that this dialog does NOT show every area property: the path to the datafiles is missing. It feels too complicated to allow the user to actually change the path because in that case we need to move all existing files to the new location, etc. etc. I did consider to allow the GURU to perform that task (ie editing the path), but eventually decided against it: it is simply not worth it. However, if you know the way to the database and manually edit the path field you can do so, but in that case you're on your own... As a result we don't even show the path to the data directory (it is commented out in the get\_dialogdef() routine).

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER

*void function AreaManager::area\_edittheme() [line 509]*

### **show the theme/area configuration dialog and the edit menu**

this displays the list of configurable properties of the theme currently associated with this area in a dialog so that the user can modify the values. Since the area-theme configuration is a more or less 'standard' list of properties, we can use the generic configuration manipulator contained in the ConfigAssistant class.

- **Uses** [ConfigAssistant](#)
- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$CFG

*void function AreaManager::area\_overview() [line 197]*

### **display list of areas with edit/delete icons etc. and option to add an area**

this constructs the heart of the area manager: an optional link to add an area followed by a list of links for all areas to which the user has access. From here the user can set the default area, attempt to delete an area and edit the basic and advanced properties of an area. All actions that manipulate an area return here eventually.

Note that the calling routine (the configuration manager) is allowed to display a menu because we set the parameter `show_parent_menu` to `TRUE` here.

The constructed list looks something like this:

```

Add an area
[H] [D] [E] (public) Exemplum Primary School (1, 10)
[ ] [D] [E] (private) Exemplum Intranet (2, 20)
[ ] [D] [E] (public) Exemplum Inactive (3, 30) (inactive)
...

```

The clickable icons [H] and [ ] manipulate the default area The clickable icons [D] lead to a Delete area confirmation dialog The clickable icons [E] lead to the Edit area (theme parameters) The clickable titles lead to the

Edit area (basic parameters) The clickable link 'Add an area' leads to the add new area dialog.

The area titles are dimmed (grayed-out) if the user is able to see these areas (because they're public or the user has at most intranet access for that area). Private areas for which the user has no access at all don't show up in the list. If the user has Edit-permissions, the area title is not dimmed and the area can be edited.

- **TODO** should we add a paging function to the list of areas? Currently all areas are shown in a single list...
- **TODO** should we make two categories: 'public' and 'private' in the list of areas? Maybe handy when there are many manu areas, but it would be inconsistent with the page manager menu which simply lists the areas in the sort order. Easy way out: the user is perfectly capable to set the sort order in such a way that the sort order already groups the public and private areas. Oh well....
- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$CFG
- **Uses** \$USER

*void function AreaManager::area\_resettheme() [line 575]*

#### **reset the theme configuration to the factory defaults**

this is a two-step process: we either show a confirmation dialog or we actually overwrite the existing theme configuration with the default values.

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$DB
- **Uses** \$CFG

*void function AreaManager::area\_save() [line 705]*

#### **validate and save modified data to database**

this saves data from both the edit and the edit theme dialog if data validates. If the data does NOT validate, the edit screen is displayed again otherwise the area overview is displayed again.

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$CFG

*void function AreaManager::area\_savenew() [line 872]*

#### **save the newly added area to the database**

This saves the essential information of a new area to the database, using sensible defaults for the other fields. Also, a data directory is created and the relative path is stored in the new area record.

If something goes wrong, the user can redo the dialog, otherwise we return to the area overview.

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$CFG

*void function AreaManager::area\_setdefault() [line 328]*

#### **make the selected area the default for the site**

this sets a default area. First we check permissions and if the user

- is allowed to set the default bit on the target area, AND
- is allowed to reset the default bit on the current default area

We actually

- reset the default bit from the current default (if there is one), AND
- set the default bit for the selected node.

Note: if the user sets the default node on the current default node, the default is reset and subsequently set again (two trips to the database), This also updates the mtime of the record.

- **TODO** should we send alerts? If so, can we use the routine to queue messages from

pagemanager? A reason not to send alerts: the alerts will be sent as soon as a page is added to the new area, so why bother?

- **TODO** should we acknowledge the changed default to the user or is it enough to see the icon 'move'?
- **Uses \$USER**

*array function AreaManager::a\_param(\$chore, [\$area\_id = NULL]) [line 1490]*

**Function Parameters:**

- *string* **\$chore** the next chore that could be done
- *int|null* **\$area\_id** the area of interest or NULL if none

### shorthand for the anchor parameters that lead to the area manager

*int function AreaManager::count\_existing\_theme\_properties(\$area\_id, \$theme\_id) [line 1593]*

**Function Parameters:**

- *int* **\$area\_id**
- *int* **\$theme\_id**

### determine the number of existing properties for a theme in an area

*array function AreaManager::get\_dialogdef\_add\_area() [line 1015]*

#### **construct the add area dialog**

this constructs an add area dialog definition with the bare minimal fields.

*array function AreaManager::get\_dialogdef\_edit\_area(\$area\_id) [line 1078]*

**Function Parameters:**

- *int* **\$area\_id** indicates for which area

#### **construct the edit area basic properties dialog**

Note that this dialog makes the private/public flag readonly; this field is only displayed. Also note that the datadirectory path is shown readonlye too. It is simply too much hassle to

allow the user to change this path because that would imply that the existing files should move along. We'll keep it simple. However, it must be possible to look up the name of the data dir, so therefore we do display it.

*void* function AreaManager::get\_dialog\_data(&\$dialogdef, \$record) [*line 1164*]

**Function Parameters:**

- *array* **&\$dialogdef** contains dialog definition that requires the data
- *array* **\$record** conveniently holds a copy of the area record

**fill the dialog with current area data from the database**

Note that `area_path` is no longer a part of the dialogdef (see also [get\\_dialogdef\\_edit\\_area\(\)](#)) but if it were, the data would still be fetched.

*string* function AreaManager::get\_icon\_delete(\$area\_id) [*line 1425*]

**Function Parameters:**

- *int* **\$area\_id** the area to delete

**construct a clickable icon to delete this area**

- **TODO** should we check to see if the area is empty before showing delete icon? Or is it soon enough to refuse deletion when the user already clicked the icon? I'd say the latter. For now...
- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$CFG

*string* function AreaManager::get\_icon\_edit(\$area\_id) [*line 1458*]

**Function Parameters:**

- *int* **\$area\_id** the area to edit

## construct a clickable icon to edit theme properties of this area (edit advanced)

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$CFG

*string* function AreaManager::get\_icon\_home(\$area\_id, &\$areas) [*line 1362*]

### **Function Parameters:**

- *int* **\$area\_id**
- *array* **&\$areas** records with area information of all areas

## construct a clickable icon to set the default area

the 'default' icon is displayed for the default area, the 'non-default' icon for all others. The user is allowed to make the area the default area if the user has edit permissions for both the old and the new default area.

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$CFG

*array* function AreaManager::get\_options\_themes() [*line 1208*]

### **fetch a list of themes available for an area**

this retrieves a list of themes that can be used as a list of options in a listbox or radiobuttons. Only the active themes are considered. The names of the themes that are displayed in the list are translated (retrieved from the themes language files). The list is ordered by that translated theme name.



*array/bool* function AreaManager::get\_theme\_records([*\$forced* = FALSE]) [*line 1249*]

**Function Parameters:**

- *bool* ***\$forced*** if TRUE forces reread from database (resets the cache)

**retrieve a list of all available theme records**

this returns a list of active theme-records or FALSE if none are available The list is cached via a static variable so we don't have to go to the database more than once for this. Note that the returned array is keyed with theme\_id.

*TRUE* function AreaManager::reset\_theme\_defaults(*\$area\_id*, *\$theme\_id*) [*line 1546*]

**Function Parameters:**

- *int* ***\$area\_id***
- *int* ***\$theme\_id***

**reset the theme properties of an area to the default values**

this deletes any existing properties for the combination of *\$area\_id* and *\$theme\_id* from the properties table. After that, a copy of the defaults of the theme *\$theme\_id* is inserted in the areas-themes properties table. \_Eventually\_ this may exhaust the available primary keys in the area-theme-properties table. Oh well: with a handful of properties each time you need a lot of resets...

This routine returns TRUE on success or FALSE on error. In the latter case either we were not able to delete old values OR we were not able to insert a copy of the default properties.

*void* function AreaManager::show\_dialog\_confirm\_delete(*\$area\_id*, &*\$areas*) [*line 1272*]

**Function Parameters:**

- *int* ***\$area\_id***
- *array* &***\$areas*** records with area information of all areas

**show the name of an area and ask the user for a confirmation of deletion**

this displays a confirmation question for deletion of an area. If the user presses Delete button, the area will be deleted, if the user presses Cancel then nothing is deleted.

*void function AreaManager::show\_edit\_menu(\$area\_id, [\$current\_chore = ""]) [line 1309]*

**Function Parameters:**

- *int* **\$area\_id** the area currently being edited
- *string* **\$current\_chore** the currently selected edit screen (used to emphasize the option in the menu)

**display the edit menu via \$this->output**

This displays a clickable menu on in the menu area.

*bool function AreaManager::show\_parent\_menu() [line 139]*

**allow the caller to use the menu area (or not)**

this routine tells the caller if it is OK to use the menu area (TRUE returned) or not (FALSE returned).

*int function AreaManager::sort\_order\_new\_area([\$at\_begin = FALSE]) [line 1513]*

**Function Parameters:**

- *bool* **\$at\_begin** if TRUE the new area is placed before all others, otherwise it is added at the end

**determine the value for the sort order of a new area**

this calculates a new sort order value based on the existing minimum or maximum values of existing areas (if any).

Note The default sort order for areas differs from that of pages and sections: we assume that the person managing areas knows where to find the newly added area (at the bottom) whereas for a page/section maintainer it is probably more convenient to have a new page/section added at the top of the (perhaps very long) list.

## Class ConfigAssistant

[line 259]

## class for editing standard configuration tables

### Overview

-----

A configuration table works like this: every parameter (property, configuration item) is stored in a record in the configuration table. The core of a configuration table consists of these fields:

- name varchar(240): this is the name of the configuration parameter
- type varchar(2): parameter type: b=bool, c=checkbox, d=date, dt=date/time, f=float(double), i=int, l=list, r=radio, s=string, t=time (see below for more information)
- value text: string representation of parameter value OR a comma-delimited list of values in case of a checkbox
- extra text: a semicolon-delimited list of name=value pairs with additional dialog/validation information, e.g. maxlength=80 or options=true,false,filenotfound (see below for more information)
- sort\_order integer: this determines the order in which parameters are presented when editing the configuration
- description text: an optional short explanation of the purpose of this parameter (in English, for internal use only)

There can be additional fields, e.g. links to parent tables in a 1-on-N relation, e.g. themes and themes\_properties via theme\_id. Also, the configuration table can have a separate primary key to uniquely identify a record but this is not necessary. In the config table the primary key is the name of the parameter.

### Parameter types

-----

Here is an overview of the various parameter types. - b=bool:

This type is used to store yes/no type of parameters. The parameter is considered 'TRUE' whenever the integer value of the value field is non-zero. If the integer value of the value field is zero, the parameter is considered to be 'FALSE'. Note that the NULL value also yields a zero integer value and hence 'FALSE'.

#### - c=checkbox:

This type is an array of boolean parameters. The value of a parameter of this type is stored as a comma-delimited list of values which are to be considered 'TRUE'. If none of the elements of this array are 'TRUE', the comma-delimited list is empty. The list of possible values MUST be specified in the 'extra' field in the 'options=' item. (see below for more information about the 'extra' field).

#### - d=date:

This type is used to store (valid) dates, in the standard format 'yyyy-mm-dd'. (Validated in [valid\\_datetime\(\)](#), values from '0000-01-01' - '9999-12-31').

#### - dt=date/time:

This type is used to store (valid) date/time combinations, in the standard

format 'yyyy-mm-dd hh:mm:ss'. (Validated in [valid\\_datetime\(\)](#), values from '0000-01-01 00:00:00' - '9999-12-31 23:59:59').

- f=float(double):

This type is used to store real (floating point) numbers with double precision.

- i=int:

This type is used to store integer numbers.

- l=list:

This type is used to store a single value from a list of available options (a 'picklist'). The current value is stored in the value field, and a list of possible values MUST be specified in the 'extra' field in the 'options=' item. (see below for more information about the 'extra' field).

- r=radio:

This type is also used to store a single value from a list of available options, much like the list-type (a 'picklist'). The difference is the representation in a dialog: a list parameter uses only a single line, whereas a group of radio buttons usually uses as many lines as there are available options. The current value is stored in the value field, and a list of possible values MUST be specified in the 'extra' field in the 'options=' item. (see below for more information about the 'extra' field).

- s=string:

This type is used to store generic text information. The maximum length of the string is the maximum length of the text field in the database (in MySQL this is 65535 bytes).

- t=time:

This type is used to store a (valid) time, in the format 'hh:mm:ss'. (Validated in [valid\\_datetime\(\)](#), values from '00:00:00' - '23:59:59').

## The Extra field

-----

This field can contain additional information about the parameter, either for validation or for display purposes. The contents of this field is a list of semicolon-delimited name=value-pairs. The following items are recognised (see also [dialoglib.php](#) - rows=<int>

This is the number of rows to display in a dialog. It can apply to string-type variables and yield a textarea-tag (as opposed to an input-tag of type 'text'). It can also apply to a set of radio buttons in a very specific way: if the number of rows is 1, the radio buttons are displayed on a single line in the dialog.

- columns=<int>

This is number of columns to use for input (but not the necessary the maximum length of the input). If this item is omitted, default values apply, e.g. 30 for date, time, datetime; 20 for float (double) and 10 for integer, etc.

- minlength=<int>  
This is the minimum number of characters that must be input. When this item is set to 1, an empty string is not allowed.
- maxlength=<int>  
This is the maximum number of characters that can be input.
- minvalue=<mixed>  
This is the minimum value for the field. The type of the minimum value is the same as the type of the variable itself. It applies to integers, floats, dates, datetimes and times.
- maxvalue=<mixed>  
This is the maximum value for the field. The type of the maximum value is the same as the type of the variable itself. It applies to integers, floats, dates, datetimes and times.
- decimals=<int>  
This is the number of decimals that should be displayed in dialogs. It applies to floats.
- options=option1,option2,option3,...  
This is a comma-delimited list of valid values for a list, radio or checklist parameter. The value of the parameter is one of the options in this list (for parameter types list and radio) OR a comma-delimited list of zero or more items (for checklists).
- viewonly=<int>  
If the integer value of this item is non-zero, the user is not allowed to edit the value of the parameter. However, it is supposed to be displayed in the dialog nevertheless.

#### Generating dialogs for editing

-----

The ConfigAssistant is clever enough to read and write the configuration parameters from the specified table, using a where-clause when necessary. Also, the ConfigAssistant automatically constructs translations of screen prompts in a very specific way when constructing dialogs.

The translation keys are constructed as follows. - simple string-like parameters (string, date, time, etc.)

```
name = <prefix><name>
label = <prefix><name>_label
title = <prefix><name>_title
```

- bool parameter  
name = <prefix><name>

```
label = <prefix><name>_label  
title = <prefix><name>_title  
option = <prefix><name>_option
```

- list or radio parameter

```
name  = <prefix><name>  
label = <prefix><name>_label,  
title = <prefix><name>_title  
options:  
label = <prefix><name>_<option1>_label  
title = <prefix><name>_<option1>_title  
...  
label = <prefix><name>_<optionN>_label  
title = <prefix><name>_<optionN>_title
```

- checklist parameter

```
name  = <prefix><name>  
label = <prefix><name>_label  
title = <prefix><name>_title  
options:  
title = <prefix><name>_<option1>_title  
option = <prefix><name>_<option1>_option  
...  
title = <prefix><name>_<optionN>_title  
option = <prefix><name>_<optionN>_option
```

The string <prefix> can be used to avoid name clashes in the 'admin' (or other) language file. The translations are then looked up in the specified language domain (default: admin).

## Examples

-----

Example 1: sending a dialog to the user for editing all the parameters in the the main config table:

```
$table = 'config';  
$keyfield = 'name';  
$assistant = new ConfigAssistant($table,$keyfield);  
$href = 'index.php?job=(...)&task=editconfig';  
$assistant->show_dialog($output,$href);
```

Example 2: saving the modified data to the table

```
$table = 'config';  
$keyfield = 'name';  
$assistant = new ConfigAssistant($table,$keyfield);  
if (!$assistant->save_data($output)) {  
    echo "FAILED";  
} else {
```

```
    echo "SUCCESS saving configuration";  
}
```

Sounds easy to use, doesn't it?

- **Package** wascore
- **TODO** implement checklist
- **Usedby** [AreaManager::area\\_edittheme\(\)](#)

#### **ConfigAssistant::\$dialogdef**

*array = NULL [line 282]*

- **Var** \$dialogdef an array with a dialog ready to use for [dialog\\_quickform\(\)](#)

#### **ConfigAssistant::\$dialogdef\_hidden**

*array = [line 285]*

- **Var** \$dialogdef\_hidden array with additional fields that should be included in the dialog

#### **ConfigAssistant::\$fields**

*array = array('name','type','value','extra') [line 264]*

- **Var** \$fields the list of essential fields to retrieve from the the table

#### **ConfigAssistant::\$keyfield**

*string* = [line 270]

- **Var** \$keyfield a string indicating the keyfield to uniquely identify the configuration parameter

#### **ConfigAssistant::\$language\_domain**

*\$string* = [line 279]

- **Var** \$domain the language domain where to look for translations (default: 'admin')

#### **ConfigAssistant::\$prefix**

*\$string* = [line 276]

- **Var** \$prefix is prepended for every translation/language key and the dialog item name

#### **ConfigAssistant::\$records**

*array* = NULL [line 273]

- **Var** \$records the cached list of configuration values straight from the database

#### **ConfigAssistant::\$table**

*string* = [line 261]

- **Var** \$table the table that contains the configuration

#### **ConfigAssistant::\$where**



*mixed* = [line 267]

- **Var** *\$where* a string with a whereclause (without 'WHERE') or an array with conditions

Constructor *void* function ConfigAssistant::ConfigAssistant(\$table, \$keyfield, [\$prefix = ''], [\$domain = ''], [\$where = ''], [\$dialogdef\_hidden = '']) [line 300]

**Function Parameters:**

- *string* **\$table** the table where the configuration parameters are stored
- *string* **\$keyfield** the field that uniquely identifies the configuration parameters
- *string* **\$prefix** is prepended for every translation/language key and the also dialog item name
- *string* **\$domain** the language domain where to look for translations (default: 'admin')
- *mixed* **\$where** a whereclause (without 'WHERE') or an array with contions
- *array* **\$dialogdef\_hidden** additional fields for inclusion in dialog definition

**constructor for the configuration assistant**

This stores the parameters, sets defaults when applicable and subsequently reads selected config parameters into the *\$this->records* for future reference.

*array* function ConfigAssistant::get\_dialogdef() [line 391]

**construct an array with the dialog information**

- **TODO** implement checklist

*array* function ConfigAssistant::get\_extra(\$type, \$extras) [line 503]

**Function Parameters:**

- *string* **\$type** variable type (necessary for calculating minvalue/maxvalue)
- *string* **\$extras** semicolon-delimited list of name=value pairs

### construct an array based on name=value pairs in an 'extra' field

This constructs an array based on the name=value pairs in the extras string. Most recognised parameters yield an integer value. Exceptions are: minvalue and maxvalue: these yield a variable of the same type as the config parameter itself options yields an array with all options from the comma delimited list Unknown name=value pairs are logged with LOG\_DEBUG.

void function ConfigAssistant::get\_options\_from\_extra(\$extra, \$name) [*line 545*]

#### **Function Parameters:**

- **\$extra**
- **\$name**

void function ConfigAssistant::save\_data(&\$output) [*line 337*]

#### **Function Parameters:**

- *object* **&\$output** the object that collects the output

### save the modified configuration parameters to the database

- Uses [dialog\\_validate\(\)](#)

void function ConfigAssistant::show\_dialog(&\$output, \$href) [*line 324*]

#### **Function Parameters:**

- *object* **&\$output** the object that collects the output
- *string* **\$href** the target for the form that will be created

### add a complete dialog to the content area of the output

- Uses [dialog\\_quickform\(\)](#)

## Class DatabaseMysql

[line 58]

### MySQL database

This implements access to the MySQL database.

- **Package** wascore

### DatabaseMysql::\$db\_link

*resource = [line 78]*

- **Var** \$db\_link is the database link identifier

### DatabaseMysql::\$db\_name

*string = [line 72]*

- **Var** \$db\_name is the name of the database to use, e.g. 'was'

### DatabaseMysql::\$db\_password

*string = [line 69]*

- **Var** \$db\_password is part of credentials for database access

#### **DatabaseMysql::\$db\_server**

*string = [line 63]*

- **Var** \$db\_server is the name of the database server, e.g. 'localhost' or 'db.example.com:3306'

#### **DatabaseMysql::\$db\_type**

*string = [line 60]*

- **Var** \$db\_type is the database type, always 'mysql' for this class

#### **DatabaseMysql::\$db\_username**

*string = [line 66]*

- **Var** \$db\_username is part of credentials for database access

#### **DatabaseMysql::\$db\_version**

*string = [line 81]*

- **Var** \$db\_version is the database version string. e.g. '5.1.32' or '4.0.23a' or FALSE if unavailable

#### **DatabaseMysql::\$debug**

*bool = [line 93]*

- **Var** \$debug if TRUE switch debugging on

#### **DatabaseMysql::\$errno**

*integer = [line 87]*

- **Var** \$errno is the error number generated by the latest mysql command

#### **DatabaseMysql::\$error**

*string = [line 90]*

- **Var** \$error is the error message generated by the latest mysql command

#### **DatabaseMysql::\$prefix**

*string = [line 75]*

- **Var** \$prefix is the table name prefix, e.g. 'was\_'

#### **DatabaseMysql::\$query\_counter**

*integer = [line 84]*

- **Var** \$query\_counter is the number of queries executed sofar

#### **DatabaseMysql::\$utf8\_support**

*int = [line 96]*

- **Var** \$utf8\_support is the level of UTF-8 support: (none), 3 (limited), 4 (full, but with a quirky name)

Constructor *void* function DatabaseMysql::DatabaseMysql(\$prefix, [\$debug = FALSE]) *[line 105]*

**Function Parameters:**

- *string* **\$prefix** table name prefix, e.g. 'was\_'
- *bool* **\$debug** if TRUE extra information is displayed (handy for debugging the code)

**initialise query counter and other variables, store the table prefix**

*bool* function DatabaseMysql::close() *[line 171]*

**close the connection to the database**

this closes the connection and resets the resource \$this->db\_\_link, in order to prevent use of the connection after it is already closed.

*bool/string* function DatabaseMysql::column\_definition(\$fielddef) *[line 576]*

**Function Parameters:**

- *array* **\$fielddef** an array that describes a field in a generic way

**convert a fielddef array to a MySQL specific column definition**

this creates a MySQL specific column definition based on a generic field description. The following keywords are recognised:

- **name**: the name of the field (required)
- **type**: the generic type of the field (see table below for supported types) (required)
- **length**: the size of a numeric field or the length of a textual field
- **decimals**: the number of decimals in real numbers (implies length)
- **unsigned**: used for numeric fields that don't need negative values (see note 5 below)
- **notnull**: if true, the field is not allowed/able to contain the NULL value
- **default**: the default value for the field
- **enum\_values**: an array with allowable values for the enum field
- **comment**: a string that can be used to document the field definition

The generic field types are mapped to actual MySQL data types via a lookup table. Most types have a number of boolean flags which indicate how the field definition must be interpreted. Entries with an empty type are considered special cases.

- `len = 1`: look for a length parameter and use it if it is defined.
- `dec = 1`: look for a decimals parameter and use it if it is defined. Implies `len`.
- `unsigned = 1`: look for an unsigned parameter and use it if it is defined and true (see note 5 below).
- `default = 1`: look for a default parameter, and use it if it is defined.
- `quote = 1`: if a default is allowed AND defined, use single quotes + escaped string.

Note 1: a 1 in the table means that the field type `_allows_` the corresponding parameter, and 0 means that this parameter is NOT allowed. It doesn't say anything about parameters being `_required_` (e.g. a varchar must have a length). It is the responsibility of the author of the field definition to provide all necessary parameters.

Note 2: `enum_values` are not used at this time; an enum-field simply maps to a varchar field and that's it. Adding the `enum_values` to a data definition does help to document the purpose of the field. The reason for not (yet) implementing enums in full is the issues associated with the translations in the UI. Furthermore, using native enums in MySQL is a royal PITA. For now the application should know what it is doing when using and updating enums in a table.

Note 3: at this time it is not possible to set the default value of a text-type field to the string consisting of the letters N, U, L and L: that caseinsensitive string is always interpreted as the NULL-value in the database, ie. it yields "DEFAULT NULL" and not "DEFAULT 'NULL'" or "DEFAULT 'Null'" or "DEFAULT 'null'".

Note 4: even though comments may or may not be stored in the MySQL database, the corresponding COMMENT-clauses are generated, if only for documentation/debugging purposes. These clauses are correctly parsed by MySQL but they are subsequently discarded in old MySQL-versions.

Note 5: As of version 2009051401 (0.0.5) the parameter 'unsigned' is deprecated. This is because even though MySQL implements an unsigned attribute for numeric fields, other RDBMSs might not. Therefore we stay away from this MySQL-specific construct as much as possible. Also, the translation from the 'serial' fieldtype no longer adds the unsigned attribute to the actual MySQL definition.

- **TODO** should we allow both int and integer?
- **TODO** 'enum' type equivalent with varchar, `enum_values[]` array is not used at all, only as a form of documentation

*concatenation* function DatabaseMysql::concat(\$string1, \$string2) [line 274]

**Function Parameters:**

- *string \$string1* contains a quoted/escaped string, a fieldname or other expression
- *string \$string2* contains a quoted/escaped string, a fieldname or other expression

## helper function for string concatenation in sql statements

From <http://troels.arvin.dk/db/rdbms/#functions-concat>:

SQL Standard: Core feature ID E021-07: Concatenating two strings is done with the || operator:

`string1 || string2`

If at least one operand is NULL, then the result is NULL.

MySQL: Badly breaks the standard by redefining || to mean OR. Offers instead a function, CONCAT(string, string), which accepts two or more arguments.

In order to try and stay as database-independent as possible without losing this concatenation feature, we have to resort to a database-specific function. Aaargggghh!

Typical use of this function:

```
...
$sql = 'UPDATE {'$DB->prefix}table ' .
      'SET message = ' . $DB->concat('message', "'". $DB->escape("addition to
message\n")."'").' ' .
      'WHERE table_id = ' . $some_id;
$DB->exec($sql);
...
```

and that's exactly the kind of hairy code I'd like to stay away from, because of the necessary delicate balancing of quotes and the amount of thought it requires to get a query right. Obviously it is much easier (and less quote-error prone and almost elegant) to do something like this:

```
$record = db_select('tablename', 'message', array('table_id' => $some_id));
$value = $record['message'] . "addition to message\n";
db_update('tablename', array('message' => $value), array('table_id' => $some_id));
```

Note that 'Standard-SQL' would yield almost as much trouble with concatenation, even if it were possible to use in MySQL, e.g.:

```
...
$sql = 'UPDATE {'$DB->prefix}table ' .
      "SET message = message || ' " . $DB->escape("addition to message\n")." ' .
      'WHERE table_id = ' . $some_id;
$DB->exec($sql);
...
```

No matter what: this is ugly. The reason I still want to use this kind of code is that (much) more expensive to use series of SELECT / UPDATE statements with concatenation in PHP, not to mention the fact that using two separate SQL-statements introduces race conditions, so there. Alas this is database specific.

Note that some of the quote-hell can be dealt with via [db\\_escape\\_and\\_quote\(\)](#):

```
$sql = 'UPDATE {'$DB->prefix}table ' .
      'SET message = ' . $DB->concat('message', db_escape_and_quote("addition to
message\n")).' ' .
      'WHERE table_id = ' . $some_id;
$DB->exec($sql);
```



- **TODO** perhaps extend this function to accept more than 2 strings?

*bool function DatabaseMysql::connect(\$db\_server, \$db\_username, \$db\_password, \$db\_name) [line 133]*

**Function Parameters:**

- *string* **\$db\_server** database server, e.g. 'localhost' or 'db.example.com:3306'
- *string* **\$db\_username** part of credentials
- *string* **\$db\_password** part of credentials
- *string* **\$db\_name** database to use, e.g. 'was'

### **connect to the database server and open the database**

this opens a connection to the database, perhaps sets some connection parameters and subsequently selects the requested database. If anything goes wrong, FALSE is returned and additional information can be retrieved from the variables \$this->errno and \$this->error.

Note that for 4.1.x <= MySQL < 5.5.3 we use charset utf8 for the connection, whereas for 5.5.3 and up we use the utf8mb4 charset which can handle UTF-8 with upto 4-byte sequences.

- **TODO** weigh pros and cons of persistent database connections, perhaps add as config option?

*int|bool function DatabaseMysql::create\_table(\$tabledef) [line 439]*

**Function Parameters:**

- *array* **\$tabledef** a generic table definition (not database-specific)

### **create a table via a generic (non-MySQL-specific) table definition**

this executes a MySQL-specific CREATE TABLE statement based on a generic table definition. The actual work is done in create\_table\_sql(), which makes it possible to see the result of converting a generic definition to an actual table; very handy while debugging.

- **TODO** document correct link for documentation of generic table definition 'tabledefs.php'

*string|bool* function DatabaseMysql::create\_table\_sql(\$tabledef) [*line 461*]

**Function Parameters:**

- *array* **\$tabledef** a generic table definition (not database-specific)

**create the MySQL-specific SQL statement to create a table via a generic table definition**  
 this creates a MySQL-specific CREATE TABLE statement from a generic table definition.  
 See [tabledefs.php](#) for more information about the format of this generic table definition.

Note that this routine takes the level of UTF-8-support into account; for level 3 we use charset 'utf8' and for level 4 'utf8mb4' (see also [connect\(\)](#)).

- **TODO** document correct link for documentation of generic table definition 'tabledefs.php'
- **TODO** find a way to deal with the enum values: where do we keep them? Or do we keep them at all?

*int|bool* function DatabaseMysql::drop\_table(\$tablename) [*line 403*]

**Function Parameters:**

- *string* **\$tablename** the name of the table to drop (prefix will be added automatically)

## unconditionally drop the specified table

*bool* function DatabaseMysql::dump(&\$data, [\$drop = TRUE], [\$tables = ""]) [*line 703*]

**Function Parameters:**

- *string* **&\$data** receives the dump of the tables

- *bool* **\$drop** if TRUE add code to drop the table before the data definition
- *mixed* **\$tables** array with names of tables to dump, empty (string, array) means all our tables

### make a text dump of our tables in the database suitable for backup purposes

This creates a text dump of the selected tables in parameter `$data`. If `$tables` is empty we dump all the tables in the database that start with 'our' prefix (there could be other websites using the same table with another prefix, we won't dump those). If `$tables` is an array, it is assumed to be an array with table names without our prefix. In this case we will prepend the prefix. If parameter `$drop` is TRUE, we add code to drop the table from the database (if it exists) before we recreate it.

If there were no errors, we return TRUE (and `$data` contains the dump). If errors were encountered, we return FALSE and `$this->errno` and `$this->error` can tell the caller what happened. If there were errors, `$data` is undefined.

Strategy is as follows. First we make a valid list of tables to dump, either by asking the database for a list of tables LIKE "{`$prefix`}" or by manipulating and validating the array `$tables` that was provided by the caller.

Subsequently we let the database generate a CREATE TABLE statement and then we step through the data (if any) and add it to `$data`.

Note MySQL is quite liberal in what it accepts as field values. However, I try to generate INSERT INTO-statements as clean as possible by NOT quoting numeric values. HTH. It still is a MySQL-specific dump, though. You cannot simply use the result 'as-is' to migrate to another database.

*string|bool* function DatabaseMysql::escape(`$unesescaped_string`) [*line 197*]

#### **Function Parameters:**

- *string* **\$unesescaped\_string** the string to escape

### escape special characters in string

this makes sure that dangerous characters like single quotes are properly escaped. this routine has a special twist because of the limited support for UTF-8 in some MySQL-versions. If support is limited (`$this->utf_support` equals 3), we strip any 4-byte UTF-8 characters from the string and we replace those with the generic substitution character U+FFFD (see als [mysql\\_utf8mb3](#)).

The (bold) assumptions here are:

1. the \$unesescaped\_string is in fact proper UTF-8 (see [utf8\\_validate\(\)](#)), and
2. all strings that are headed for the database are funneled through this routine, always.

*int|bool* function DatabaseMysql::exec(\$sql) [*line 292*]

**Function Parameters:**

- *string* **\$sql** valid SQL statement

**execute an action query and return the number of affected rows**

this method should be used to execute SQL-statements that do NOT return a result set, use query() for that. This method works well for INSERTs, DELETEs and UPDATEs. If there is an error this method returns FALSE. Otherwise it returns the number of affected lines. Note that there is a difference between 0 affected lines and FALSE.

*int|bool* function DatabaseMysql::last\_insert\_id([\$table\_name = "], [\$field\_name = "]) [*line 340*]

**Function Parameters:**

- *string* **\$table\_name** (optional) tablename (unused in MySQL)
- *string* **\$field\_name** (optional) fieldname (unused in MySQL)

**retrieve the most recent automatically inserted id ('auto\_increment')**

this method returns the id that was automatically generated in the previous INSERT-query or 0 if the previous query was not an INSERT query.

Note: as per the MySQL manual this function returns an int and not a bigint. If the auto\_increment field is a bigint, this method returns an incorrect result. There is a work-around (e.g. SELECT LAST\_INSERT\_ID()) but this is not the way it works in Website@School; all id's are simple int's and not bigint's, so there is no need to generate yet another query after every insert.

Note that this method can be called with a table name and a field name. This is a hook for future expansion; this MySQL-driver does not actually use it. However, it is handy to always call this method with table and field name to make adding a new database driver easier.

*string* function DatabaseMysql::mysql\_utf8mb3(\$utf8str) [*line 879*]

**Function Parameters:**

- *string* **\$utf8str** valid UTF-8 encoded string

### message string to contain only 3-byte UTF8-sequences

this replaces an otherwise perfectly valid 4-byte UTF-8 sequence in \$utf8str with a 3-byte UTF-8 sequence equivalent with the Unicode replacement character U+FFFD.

The effect is that it leaves a hint that there used to be some character instead of silently discarding 4-byte sequences which MySQL does.

*int|bool* function DatabaseMysql::mysql\_utf8\_support(\$db\_link) [*line 849*]

#### **Function Parameters:**

- *resource* **\$db\_link** the MySQL connection

### determine the level of UTF-8 support based on MySQL-server version

MySQL support for UTF-8 was non-existent before 4.1.x and limited until 5.5.3. In this context 'limited' means: only the Basic Multilingual Plane (U+0000 ... U+FFFF) is supported, i.e. a maximum of 3-byte sequences per character.

As of 5.5.3 the full UTF-8 specification according to RFC 3629 is implemented. MySQL now has 'invented' yet another proprietary name for this character set: 'utf8mb4' (WTF?), and introduces the alias 'utf8mb3' for the pre 5.5.3 limited support for 'utf8' (WTF??), hinting that the meaning of 'utf8' may change in future versions to indicate 'utf8mb4' (WTF???). IM(NS)HO this is yet another reason to go looking for a decent replacement for MySQL. YMMV.

This routine returns exactly one of the values below (based on the server version).

- 0: there is no UTF-8 support available in this server
- 3: the limited 3-byte sequences are supported
- 4: full support for 4-byte sequences available, but using the stupid ad-hoc name 'utf8mb4' or the value FALSE if version information could not be obtained.

As a side effect, we record the server version information in \$this->db\_version (which is handy when creating a backup and also for debugging purposes).

*object|bool* function DatabaseMysql::query(\$sql, [\$limit = "], [\$offset = "]) [*line 371*]

#### **Function Parameters:**

- *string* **\$sql** valid SQL statement

- *int* **\$limit** optional limitation of the number of records returned
- *int* **\$offset** optional number of records to skip; \$offset = 0 means start with the first

### execute a select query and return a result set

this method should be used to execute SQL-statements that do return a result set: SELECT, SHOW, EXPLAIN and DESCRIBE. Use exec() for action queries . If there is an error this method returns FALSE. Otherwise it returns a result set in the form of a DatabaseMysqlResult object.

if parameters \$limit and \$offset are set the result set contains at most \$limit rows, starting at offset \$offset. it is OK to specify just \$limit; \$offset is taken into account only when \$limit is specified too. Note that different databases have a different syntax for limiting the number of returned records. MySQL supports both 'LIMIT limit OFFSET offset' (which we use here) and 'LIMIT offset,limit'.

the LIMIT-clause is blindly appended to the SQL-statement; it is up to the caller to decide whether specifying a limit and an offset make sense or not.

*bool* function DatabaseMysql::table\_exists(\$tablename) [*line 414*]

#### **Function Parameters:**

- *string* **\$tablename** name of the table to check (prefix will be added automatically)

**see if the named table exists**

## Class DatabaseMysqlResult

[*line 895*]

### MySQL database result

This implements access to database result sets

- **Package** wascore

#### DatabaseMysqlResult::\$errno

*integer = [line 900]*

- **Var** the error number generated by the latest mysql command

#### DatabaseMysqlResult::\$error

*string = [line 903]*

- **Var** the error message generated by the latest mysql command

#### DatabaseMysqlResult::\$num\_rows

*integer = [line 906]*

- **Var** the number of rows in the result set

#### DatabaseMysqlResult::\$result

*resource = [line 897]*

- **Var** the resource associated with the result set

Constructor *void* function DatabaseMysqlResult::DatabaseMysqlResult(\$result) *[line 912]*

#### **Function Parameters:**

- *resource* **\$result** the resource associated with the result set

## constructor

*bool* function DatabaseMysqlResult::close() [*line 924*]

**free the memory associated with the result set**

*array* function DatabaseMysqlResult::fetch\_all() [*line 954*]

**fetch all rows as a 0-based array of 0-based enumerated arrays**

*array* function DatabaseMysqlResult::fetch\_all\_assoc([\$keyfield = ""]) [*line 974*]

### **Function Parameters:**

- *string* **\$keyfield** field to use as the key in the returned array or empty for 0-based numeric array key

### **fetch all rows as an array (0-based or keyed) of associative arrays**

This returns an array of assoc arrays (one per record). If \$key is not empty, we use the contents of the field as the array key, otherwise we simply use a 0-based numeric key. By specifying a single unique field (e.g. the primary key) all records in the array can be accessed via their unique value.

*array/bool* function DatabaseMysqlResult::fetch\_row() [*line 936*]

**fetch the next result row as a 0-based enumerated array**

*array/bool* function DatabaseMysqlResult::fetch\_row\_assoc() [*line 945*]

**fetch the next result row as a associative array**

## Class Email

[*line 46*]

### **Email implements a simple interface to send mail**

This class can be used to send mail from Website@School, e.g. alerts, new passwords, feedback to the project (with translations), etc.

Typical use: require\_once('email.class.php');  
\$mailer = new Email;



```
$mailer->set_mailto($email,$name);  
$mailer->set_subject($subject);  
$mailer->set_message($message);  
$mailer->add_attachment($data,$name);  
$mailer->send();
```

- **Package** wascore

#### **Email::\$attachments**

*array = array() [line 69]*

- **Var** \$attachments array of arrays with attachment properties: body, name, mimetype, charset, encoding

#### **Email::\$charset**

*string = UTF-8 [line 75]*

- **Var** \$charset default character set to use in display names and subject

#### **Email::\$eol**

*string = \r\n [line 72]*

- **Var** \$eol end of line character(s), usually CR + LF

#### **Email::\$headers**

*array = array() [line 63]*

- **Var** \$headers associative array with field names and field values of additional headers

#### **Email::\$mailcc**

*array = array() [line 57]*

- **Var** \$mailcc contains an array of arrays containing addr and name for Cc: (array of addresses)

#### **Email::\$mailfrom**

*array = array() [line 48]*

- **Var** \$mailfrom contains addr and name for From: (single address)

#### **Email::\$mailreplyto**

*array = array() [line 51]*

- **Var** \$mailreplyto contains addr and name for Reply-To: (single address)

#### **Email::\$mailto**

*array = array() [line 54]*

- **Var** \$mailto contains addr and name for To: (single address)

#### **Email::\$max\_length**

*int = 76 [line 81]*

- **Var** \$max\_length limit for line length

#### Email::\$message

*array = array()* [line 66]

- **Var** \$message associative array with message properties: body, mimetype, charset, encoding

#### Email::\$minimal

*bool = FALSE* [line 78]

- **Var** \$minimal default value of flag for limiting the literal representation in [rfc2047\\_qchar\(\)](#)

#### Email::\$subject

*string =* [line 60]

- **Var** \$subject contains the message subject

Constructor *void* function Email::Email() [line 87]

**constructor resets all variables to a known (default) state**

*void* function Email::add\_attachment(\$attachment, \$name, [\$mimetype = 'application/octet-stream'], [\$charset = 'UTF-8'], [\$encoding = 'base64']) [line 223]

#### **Function Parameters:**

- *string* **\$attachment** presumably 8bit data to attach to the message
- *string* **\$name** the suggested filename to use when receiving the attachment

- *string* **\$mimetype** type of the content, usually the generic 'application/octet-stream'
- *string* **\$charset** character set to use (only applicable when \$mimetype indicates 'text')
- *string* **\$encoding** the desired encoding (defaults to base64 because we expect binary data)

### add an attachment

This simply adds an attachment with associated properties. Multiple attachments can be added by calling this routine multiple times.

*void* function Email::add\_mailcc(\$addr, [\$name = "]) [*line 183*]

#### **Function Parameters:**

- *string* **\$addr** the address eg. 'acackl@example.com'
- *string* **\$name** the name, eg. 'Amelia Cackle'

### add an address and name for the Cc: header

Embedded CRs LFs "<" and ">" are removed from \$addr, and the result is stored, together with \$name. Note that this function can be called multiple times, where each call adds an address to the list.

*bool* function Email::is\_7bit(\$source) [*line 684*]

#### **Function Parameters:**

- *string* **\$source** the text to examine

### a small utility routine to determine if a string has only 7bit characters

- **Usedby** [Email::rfc2047\\_qstring\(\)](#)
- **Usedby** [Email::send\(\)](#)

*void* function Email::reset\_all() [*line 95*]

## reset all variables to their default values

*string* function Email::rfc2047\_qchar(\$c, &\$required\_len, [\$minimal = FALSE]) [*line 654*]

### **Function Parameters:**

- *int* **\$c** the character to encode
- *int* **&\$required\_len** returns the space required for this encoded char (UTF8-aware)
- *bool* **\$minimal** if TRUE, only [0-9A-Za-z] use literal representation, otherwise encoding is more relaxed

## encode an 8-bit byte according to Q-encoding in RFC2047

This routine encodes a single integer ASCII code into either

- literal representaion
- generic 8bit representation, ie. "=" followed by 2 (uppercas)e hexdigits
- an underscore character

If \$minimal is FALSE, all printable ASCII characters from 33 "!" to 126 "~" except 61 "=", 63 "?" and 95 "\_" use literal representation. Character 32 " " is represented as an underscore (for improved readabilitu/deciphering).

If \$minimal is TRUE, only digits "0" - "9" and letters "A" - "Z" and "a" - "z" use literal representation and character 32 " " uses generic 8bit encoding "=20".

The latter case yields only digits, letters, equal-sign and question mark, which should travel undisturbed through any mail transdfer agent.

There is a special situation when encoding UTF8 where characters can span multiple octets. The length of such a sequence can be determined by the number of most significant 1's in a row in the first octet. If \$c is the first octet of a UTF8-sequence, we tell the caller the total length of the encoded sequence, not just the length of the encoded 1st octet (which would always be 3). This forces the caller to start a new 'encoded-word' with enough room for the complete sequence if necessary, preventing a multi-octet sequence to span two 'encoded-words'. Note that characters in a UTF8-tail yield length 3, even when more UTF8-tail octets follow. That is OK because the first character already 'reserved' the space when the first octet was processed.

Here is a small truth table for sequence lengths (see also RFC3629).

bit pattern	range	len	comments
0xxx.xxxx	0-127	3	ASCII
10xx.xxxx	128-191	3	octet is part of UTF8-tail
110x.xxxx	192-223	6	UTF8-2, beginning of a sequence of 2 octets
1110.xxxx	224-239	9	UTF8-3, beginning of a sequence of 3 octets
1111.0xxx	240-247	12	UTF8-4, beginning of a sequence of 4 octets
1111.10xx	248-251	3	sequence of 5 characters not defined in RFC3929, settle for length 3
1111.110x	252-253	3	sequence of 6 characters not defined in RFC3929, settle for length 3
1111.111x	254-255	3	no sequence at all, settle for length 3

Note that if \$c is NOT UTF8 but say ISO-5988-1, the worst that can happen is that a perfectly valid single octet character in the range 192-247 would indicate a length of more than the necessary 3, pushing up to 4 characters to the next 'encoded-word'. Oh well, I can live with that.

References: <http://www.ietf.org/rfc/rfc2047.txt>, <http://www.ietf.org/rfc/rfc3629.txt>.

- Used by [Email::rfc2047\\_qstring\(\)](#)

*string* function `Email::rfc2047_qstring($source, &$remaining, [$charset = "UTF-8"], [$minimal = FALSE], [$max_length = 76], [$eol = "\r\n"])` [line 543]

**Function Parameters:**

- *string* **\$source** the string to encode (could be 7bit)
- *int* &**\$remaining** the number of bytes remaining on the current output line (not counting any CR+LF)
- *string* **\$charset** indicates character set used in \$source
- *bool* **\$minimal** if TRUE, `rfc2047_qchar()` limits literal encoding to digits and letters
- *int* **\$max\_length** limit on output line length (and indirect of the 'encoded-word' length) to max 76 (75)
- *string* **\$eol** the end of line character(s), default as per RFC5322 (RFC822) is CR `chr(13)` + LF `chr(10)`

### **encode a string according to RFC2047 (Message Header Extensions for Non-ASCII Text)**

This routine encodes \$source according to RFC2047 (Message Header Extensions for Non-ASCII Text) using the 'Q'-encoding (somewhat comparable to `quoted_printable`). However, if the \$source uses only harmless 7bit characters and falls within the limit of \$remaining characters it is returned unchanged and the number of \$remaining characters is updated accordingly.

In all other cases (\$source contains bytes > 127, \$source is longer than \$remaining, etc.) this encodes the string into 'encoded-word's of max 75 chars. These 'encoded-word's look like this: `"=?" charset "?" encoding "?" encoded-text "?>"` with 'encoding' always equal to "Q" (similar to quoted printable). The actual encoding of characters is done in

[rfc2047\\_qchar\(\)](#). The boolean flag `$minimal` can be used to limit the literal representation to only digits and letters, using generic 8bit encoding by setting it to `TRUE`.

If multiple 'encoded-word's are necessary, they are separated from each other by a folding space, i.e. newline (using `$eol`) followed by a normal space (ASCII 32). The end result never ends with such a folding space; the returned value always ends with the "?>" of the last 'encoded-word'.

Note 1: I found it quite hard to read the combination of RFC5322 and RFC2047 because I had some trouble distinguishing the rules for RFC5322-type headers. I finally settled for this simplified set

- From:, To:, Cc: and Reply-To: are all of type 'mailbox' to me (KISS, no 'group's and stuff)
- A 'mailbox' can be either written as [ 'display-name' ] "<" addr-spec ">" OR as  
addr-spec "(" ctext ")", which both allow for FWS (folding white space)
- A Subject: field is simply 'unstructured', which also allows for FWS  
Furthermore, this routine simply encodes non-ASCII text and therefore makes no assumptions about the contents of `$source`; it is the caller's responsibility to make sure that the 'ctext' or 'unstructured' or 'display-name' conforms to RFC5322.

Note 2: I have not implemented fancy and streamlined code to minimise the amount of encoded characters, ie. leaving pure ASCII-words unencoded and encoding only non-ASCII words or words containing "=?" because I could not invest that amount of time. Maybe in a later version... (famous last words). I did optimise for short and pure and simple ASCII strings because I expect that generated Subject: headers and other headers will be ASCII most of the time. We'll see how that works out.

Note 3: Quirk: if initially there is not enough space for the shortest possible 'encoded-word', we insert a FWS even if `$source` has no WSP at that point. Basically it means that we add a character to the result. This may or may not be a problem for the caller. OTOH: the caller should provide enough space in the first place, so there.

References: see <http://www.ietf.org/rfc/rfc2047.txt> and <http://www.ietf.org/rfc/rfc5322.txt>.

- **TODO** maybe optimise this routine to let pure ASCII-words through unencoded (in a later version)
- **Usedby** [Email::rfc5322\\_address\(\)](#)
- **Usedby** [Email::send\(\)](#)
- **Uses** [Email::rfc2047\\_qchar\(\)](#)

- Uses [Email::is\\_7bit\(\)](#)

*string* function `Email::rfc5322_address($addr_spec, &$remaining, [$display_name = ''], [$legacy = FALSE], [$charset = "UTF-8"], [$minimal = FALSE], [$max_length = 76], [$eol = "\r\n"])` [line 746]

**Function Parameters:**

- *string* **\$addr\_spec** is an address of the form 'local-part' "@" 'domain' (RFC5322 section 3.4.1)
- *int* **&\$remaining** indicates how much space is left on the current output line
- *string* **\$display\_name** is the human readable name associated with \$addr\_spec
- *bool* **\$legacy** if TRUE, output is in the legacy format 'addr-spec' "(" 'ctext' ")"
- *string* **\$charset** indicates character set used in \$display\_name
- *bool* **\$minimal** if TRUE, eventually `rfc2047_qchar()` limits literal encoding to digits and letters
- *int* **\$max\_length** limit on output line length (and indirect of the 'encoded-word' length) to max 76 (75)
- *string* **\$eol** the end of line character(s), default as per RFC5322 (RFC822) is CR `chr(13)` + LF `chr(10)`

### construct an address field according to RFC5322 (RFC822)

This routine constructs an address according to (simplified) rules in RFC5322 section 3.4. Depending on the \$legacy flag, the parameters are used to construct either an 'angle-addr' `DQUOTE $display_name DQUOTE SPACE "<" $addr_spec ">"` or an address with the display-name "hidden" in a comment `$addr_spec SPACE "(" $display_name ")"`

Basically the \$addr\_spec is not modified; it is assumed that this string obeys the rules for 'addr-spec' in RFC5322. Specifically we do not encode this information (with [rfc2047\\_qstring\(\)](#) or otherwise). However, we DO strip any CR and/or LF characters because these might cause problems lateron (eg. an unwanted extra blank line in the mail headers). Also, we definately do not want to have angle brackets, so we remove those too, just to be sure.

The \$display\_name can be modified. Reading RFC5322 yields the following (simplified) rules. 'display-name' => 'phrase' => 1\*'word'; 'word' => 'atom' | 'quoted-string'. In other words: it is allowed to use a quoted string, ie.

- a DQUOTE, followed by
- a string with printable ASCII characters not being DQUOTE or the quote character backslash, followed by
- a DQUOTE.

Note that FWS (folding white space) is allowed between the two DQUOTEs. This leads



an easy way out of to stripping DQUOTES and backslashes before the 'display-name' is encoded and/or folded.

If the legacy-flag is set, we use the parameter `$display_name` to construct a (simplified) comment, ie.

- a "(", followed by
- a string of ctext characters not containing "(", ")" or a backslash, followed by
- a ")".

Here, too, folding whitespace is allowed between the opening "(" and closing ")". This variant leads the easy way out of stripping parentheses and backslashes before the 'display-name' is encoded and/or folded as a comment.

Note: All this cleaning up of CR, LF, DQUOTE, etc. does NOT weed out other CTLs (ASCII 0...ASCII 31).

- **Used by** [Email::send\(\)](#)
- **Uses** [Email::rfc2047\\_qstring\(\)](#)

*string* function `Email::rfc5322_message_id()` [*line 836*]

### **construct a message-id conforming to RFC5322 (RFC2822, RFC822)**

This constructs a message id according to specifications in section 3.6.4 in RFC5322 Internet Message Format (October 2008), see <http://www.ietf.org/rfc/rfc5322.txt>.

Note that the 'id-left' in the 'msg-id' also contains the remote IP-address. This could be an IPv4 address in the usual dotted-decimal form but it could also be an IPv6 address like ':::1' (3 characters) or '[FEDC:BA98:7654:3210:FEDC:BA98:7654:3210]' (41 characters). The total maximum-length of 'id-left' may add up to 11 (32-bit signed pid) + 1 (dot) + 41 (full IPv6 w/ brackets) + 1 (hash) + 11 (32-bit signed remote port) + 1 (dot) + 14 (date/time) + 11 (signed unique number) = 91 characters. This is longer than the recommended linelength of 78 characters, but the absolute maximum of 998 characters will probably NOT be reached. OTOH: we do not actually check for huge domain names and/or server names. Oh well.

Note that we massage the IPv6 address by replacing any ':', '[' and ']' with '!', '{' and '}' respectively because the former are not allowed in a dot-atom-text. As a matter of fact we translate most 'specials' to 'atext' (RFC5322 3.2.3). Notable exception: the dot stays.

- **TODO** how about UTF-8 hostnames? Mmmm...
- **Usedby** [Email::send\(\)](#)

*bool function Email::send() [line 317]*

**send the message using the prepared information (To:, Subject:, the message and attachments etc.)**

This actually sends the message (using PHP's mail() command), using all the prepared data & headers etc.

Depending on the contents of the message and the number of added attachments, there are the following possibilities.

1. the message is a single plain 7bit ASCII-text with lines shorter than 76 characters, no attachments
2. the message is a text with either 8bit values OR lines longer than 76 characters but still no attachments
3. there are attachments too
  - Ad 1: no need for MIME in that case; simply use the message as-is, using the default
  - 7bit encoding and US-ASCII charset. Easy
  - Ad 2: need MIME but not multipart: headers to add:
    - MIME-Version: 1.0
    - Content-Type: text/plain; charset="UTF-8"
    - Content-Transfer-Encoding: quoted-printable
  - Ad 3. need MIME Multipart; headers to add:
    - MIME-Version: 1.0
    - Content-Type: multipart/mixed; boundary="\$boundary"

and in the body we need to construct the sequence of message and 1 or more attachments, each with their own headers like

    - Content-Type: text/plain; charset="US-ASCII"
    - Content-Transfer-Encoding: 7bit

or

    - Content-Type: text/plain; charset="UTF-8"
    - Content-Transfer-Encoding: quoted-printable

and for the attachments (could be more than 1):

    - Content-Type: application/octet-stream; name="\$name"
    - Content-Transfer-Encoding: base64
    - Content-Disposition: attachment; filename="\$name"

and of course with a \$boundary between the various parts of the message

Note that we listen to the caller most of the time, ie. if the caller specifies an attachment is of type 'application/x-zip', who are we to question that (in [add\\_attachment\(\)](#)). However, if a message is clearly 7bit ASCII with short lines and of type 'text' (text/plain or text/html or some other text-subtype), we do change the charset to US-ASCII and encoding to 7bit, to make the message just a little bit more readable for the receiver.

Finally, we use the `mail()` command to actually send the message. We add an additional parameter which should instruct `sendmail` to use the from-address also as the return path (if that is allowed and the webserver is a 'trusted user').

- Uses [Email::rfc5322\\_message\\_id\(\)](#)
- Uses [Email::rfc5322\\_address\(\)](#)
- Uses [Email::rfc2047\\_qstring\(\)](#)
- Uses [Email::is\\_7bit\(\)](#)

`void function Email::set_header($name, [$value = ""]) [line 259]`

**Function Parameters:**

- *string* **\$name** is the name of the header field
- *string* **\$value** is the contents of the header field

### manually add a header to the mail message

This adds a header to the message headers. Possible candidates are

- 'Priority' with possible values (from RFC2156): "normal" | "non-urgent" | "urgent"
- 'Importance' with possible values (from RFC2156): "low" | "normal" | "high"

Note that the following headers may be overwritten in the course of constructing the message to send (see [send\(\)](#)):

- To: (depending on how `mail()` handles the first parameter internally)
- Subject: (depending on how `mail()` handles the second parameter internally)
- From:
- Reply-To:
- Cc:
- X-Mailer:
- Message-ID:
- MIME-Version:
- Content-Type:
- Content-Transfer-Encoding:

It is possible to use tricks such as using a different capitalisation to defeat this. (I said it was a simple class, didn't I?)

- **TODO** should we bring the Capi-Tali-Sation of \$name in line with the default capitalisation in the list above?

*void function Email::set\_mailfrom(\$addr, [\$name = "]) [line 133]*

**Function Parameters:**

- *string* **\$addr** the address eg. 'webmaster@example.com'
- *string* **\$name** the name, eg. 'Exemplum Primary School'

**record the address and the name for the From: header**

Embedded CRs LFs "<" and ">" are removed from \$addr, and the result is stored, together with \$name.

*void function Email::set\_mailreplyto(\$addr, [\$name = "]) [line 149]*

**Function Parameters:**

- *string* **\$addr** the address eg. 'info@example.com'
- *string* **\$name** the name, eg. 'Exemplum Primary School'

**record the address and the name for the Reply-To: header**

Embedded CRs LFs "<" and ">" are removed from \$addr, and the result is stored, together with \$name.

*void function Email::set\_mailto(\$addr, [\$name = "]) [line 165]*

**Function Parameters:**

- *string* **\$addr** the address eg. 'hparkh@example.com'
- *string* **\$name** the name, eg. 'Helen Parkhurst'

**record the address and the name for the To: header**

Embedded CRs LFs "<" and ">" are removed from \$addr,

and the result is stored, together with \$name.

*void function Email::set\_message(\$message, [\$mimetype = 'text/plain'], [\$charset = 'UTF-8'], [\$encoding = 'quoted-printable']) [line 203]*

**Function Parameters:**

- *string* **\$message** content to send
- *string* **\$mimetype** type of the content, usually 'text/plain'
- *string* **\$charset** character set to use
- *string* **\$encoding** the desired encoding (defaults to quoted-printable because we expect text)

**set the message**

This simply stores the message body until it can be sent. Note that there can be just 1 message. It is assumed to be plain text. However, perhaps it could be a multipart/alternative (not tested).

*void; function Email::set\_subject(\$subject) [line 119]*

**Function Parameters:**

- *string* **\$subject**

**store the subject of the mail message**

Embedded CRs and LFs in \$subject are removed and the result is stored until message send time.

## Class FileManager

*[line 70]*

### File Manager

This class implements the File Manager.

This class is also used to browse files and images from FCKEditor. Distinction is made via the

\$job parameter in the constructor.

All the work is directed from the constructor, so it is enough to simply instantiate a new object and let the constructor do the work. The only thing needed is an output object (see [AdminOutput](#)).

- **Package** wascore

#### **FileManager::\$areas**

*null|array = NULL [line 78]*

- **Var** \$areas holds all area records (for future reference) or NULL if not yet set

#### **FileManager::\$current\_directory**

*string = [line 87]*

- **Var** \$current\_directory links to the session-variable that holds the current working directory

#### **FileManager::\$ext\_allow\_browse**

*bool|array = FALSE [line 96]*

- **Var** \$ext\_allow\_browse holds browsable filename extensions (lowercase), FALSE (none) or TRUE (all)

#### **FileManager::\$ext\_allow\_upload**

*bool|array = FALSE [line 93]*

- **Var** \$ext\_allow\_upload holds uploadable filename extensions (lowercase), FALSE (none) or TRUE (all)

#### **FileManager::\$job**

*string = [line 75]*

- **Var** \$job indicates how we are called (eg. as 'filemanager' or as 'filebrowser' or 'imagebrowser')

#### **FileManager::\$output**

*object|null = NULL [line 72]*

- **Var** \$output collects the html output

#### **FileManager::\$show\_thumbnails**

*bool = FALSE [line 99]*

- **Var** \$show\_thumbnails if TRUE we display files graphically (as a thumbnail), otherwise in table format

#### **FileManager::\$sort**

*int = SORTBY\_FILE\_ASC [line 90]*

- **Var** \$sort holds the current sort order in directory listings (default SORTBY\_FILE\_ASC)

#### **FileManager::\$usergroups**

*null|array* = NULL *[line 81]*

- **Var** \$usergroups holds all \$USER's group records (for future reference) or NULL if not yet set

#### **FileManager::\$vpaths**

*array* = array() *[line 84]*

- **Var** \$vpaths is a cache of virtual paths (see [vpath\(\)](#))

Constructor *void* function FileManager::FileManager(&\$output, [\$job = JOB\_FILEMANAGER]) *[line 115]*

#### **Function Parameters:**

- *object* **&\$output** collects the html output
- *string* **\$job** indicates the mode: filemanager, filebrowser (FCKEditor) or imagebrowser (FCKEditor)

#### **construct a FileManager object (called from /program/main\_admin.php)**

This initialises the FileManager, checks user permissions and finally dispatches the tasks. If the specified task is not recognised, the default task TASK\_LIST\_DIRECTORY is executed.

Note that many commands act on the directory contained in the SESSION-variable `current_directory`.

- **TODO** a nice filter for JOB\_IMAGEBROWSER and also an alternative user interface for browsing/selecting images

*bool|array* function FileManager::allowed\_extensions(\$allowed\_extensions\_list) *[line 2916]*

#### **Function Parameters:**



- *string* **\$allowed\_extensions\_list** comma-delimited string with allowable extensions (or empty string)

### **convert a comma-delimited list of allowable extensions to an array (or FALSE if none are allowed)**

this converts the comma-delimited list of allowable filename extensions to an array with one element per allowable extension OR to a boolean with value FALSE if no allowable extensions are specified. The input is converted to lower case and also spaces and dots are removed (in anticipation of users entering the bare extension with the dot while we use the bare extension here. Also, it appears very natural to specify a list including spaces (which we don't want), so there.

*int* function FileManager::cmp\_entries\_bydate\_asc(\$a, \$b) [*line 2235*]

#### **Function Parameters:**

- *array* **\$a** first entry
- *array* **\$b** second entry

### **callback for comparing two directory entries by mtime**

Comparison between a file and a directory always shows directories first.

*int* function FileManager::cmp\_entries\_bydate\_desc(\$a, \$b) [*line 2261*]

#### **Function Parameters:**

- *array* **\$a** first entry
- *array* **\$b** second entry

### **callback for comparing two directory entries by date (descending)**

Comparison between a file and a directory always shows directories first, nevermind that we are sorting in descending order.

*int* function FileManager::cmp\_entries\_byfile\_asc(\$a, \$b) [*line 2143*]

#### **Function Parameters:**

- *array \$a* first entry
- *array \$b* second entry

### **callback for comparing two directory entries by filename**

Comparison between a file and a directory always shows directories first.

*int* function FileManager::cmp\_entries\_byfile\_desc(\$a, \$b) [*line 2164*]

#### **Function Parameters:**

- *array \$a* first entry
- *array \$b* second entry

### **callback for comparing two directory entries by filename (descending)**

Comparison between a file and a directory always shows directories first, nevermind that we are sorting in descending order.

*int* function FileManager::cmp\_entries\_bysize\_asc(\$a, \$b) [*line 2184*]

#### **Function Parameters:**

- *array \$a* first entry
- *array \$b* second entry

### **callback for comparing two directory entries by size**

Comparison between a file and a directory always shows directories first.

*int* function FileManager::cmp\_entries\_bysize\_desc(\$a, \$b) [*line 2210*]

#### **Function Parameters:**

- *array \$a* first entry
- *array \$b* second entry

### **callback for comparing two directory entries by size (descending)**

Comparison between a file and a directory always shows directories first, nevermind that we are sorting in descending order.

*int* function FileManager::cmp\_groups(\$a, \$b) [*line 2100*]

**Function Parameters:**

- *array* **\$a** first array with groupdata (straight copy from database record)
- *array* **\$b** second array with groupdata (straight copy from database record)

**callback for comparing two group records**

This routine is used to order a list of groups by full\_name, groupname.

*bool* function FileManager::delete\_directory(\$path, \$directories, \$entries) [*line 1570*]

**Function Parameters:**

- *string* **\$path** the directory containing the directories to delete
- *array* **\$entries** list of subdirectories to delete, keyed by subdirectory name
- **\$directories**

**workhorse function that actually removes directories**

This routine first deletes the files "index.html" and "THUMBNAIL\_PREFIX\*" in the directory to remove and subsequently the directory itself. This is more or less the reverse of the mkdir function (see [task\\_add\\_directory\(\)](#)) but with a twist: we consider any remaining thumbnails as trash and we will happily delete those without further ado.

If anything goes wrong, the routine returns FALSE and some details are written to the logfile. Note that if the directory somehow contains symlinks or devices or named pipes we bail out: we cannot handle those kinds of directory entries.

Note that the routine is able to delete an array of directories, even though it is currently called/used with only a single entry. We don't want to make it too easy to remove many directories at once (an attempt to protect the user against herself).

- **Uses \$CFG**

*bool function FileManager::delete\_files(\$path, \$entries) [line 1521]*

**Function Parameters:**

- *string* **\$path** the directory containing the files to delete
- *array* **\$entries** list of files to delete

**workhorse function that actually deletes files, and possibly the corresponding thumbnails**

This routine deletes the files specified in the array \$entries from directory \$path. If a thumbnail-file exists (ie. a file with a similar name but with the THUMBNAIL\_PREFIX prepended), it is deleted too.

- **Uses \$CFG**

*array function FileManager::explode\_path(\$path) [line 1712]*

**Function Parameters:**

- *string* **\$path** the path to split

**shorthand for splitting a path into an array with path components**

This routine splits \$path into components. Path components are supposed to be delimited with a forward slash '/', but if somehow a backslash '\' is encountered, it is translated to a forward slash first. This means that it is impossible to have backslashes as part of a path name, even though the underlying filesystem would happily accept a component (filename or directoryname) with an embedded backslash.

*string function FileManager::file\_url(\$path) [line 2575]*

**Function Parameters:**

- *string* **\$path** the name of the file including path

### construct a url that links to a file via /file.php

This constructs a URL that links to a file, either

`/file.php/path/to/file.txt`

or

`/file.php?file=/path/to/file.txt`

depending on the global setting for proxy-friendly urls. Note that we try to make the link as short as possible, eg. by omitting the `http://` part if possible (see `$CFG->www_short`).

array function FileManager::get\_dialogdef\_add\_files([*\$num\_files* = 1]) [*line 2289*]

#### **Function Parameters:**

- *int* ***\$num\_files*** the maximum number of file upload fields to add to the dialog (default 1)

### construct a dialog definition for adding (uploading) files

this constructs an array which defines a file(s) upload dialog. Note that we make a subtle difference between a single-file upload and a multifile upload: I think it looks stupid to start numbering a list of files to upload when there is in fact only a list of exactly 1 file(s). The cost is minimal: two extra strings in the translation file.

array function FileManager::get\_entries(*\$path*) [*line 1945*]

#### **Function Parameters:**

- *string* ***\$path*** the directory to list

### generate a list of selected files and subdirectories in \$path

This creates an array containing a (filtered) listing of the directory *\$path*, keyed by filename. we items are suppressed:

- current directory `'.'`
- parent directory `'..'`
- `index.html` if it has size 0 (used to 'protect' directory against prying eyes)
- `THUMBNAIL_PREFIX*` the thumbnails of images
- symbolic links

- **Uses** `$USER`;
- **Uses** `$CFG`;

*array function FileManager::get\_entries\_areas() [line 1801]*

**generate a list of (virtual) directories for areas the user can access**

This generates a list of (virtual) area directories for which the user has access permissions. The list is ordered based on the sort order (in the areas table).

- **Uses** \$USER;
- **Uses** \$CFG;

*array function FileManager::get\_entries\_groups() [line 1837]*

**generate a list of (virtual) directories for groups the user can access**

This generates a list of (virtual) group directories for which the user has access permissions. The list is ordered by groupname.

- **Uses** \$USER;
- **Uses** \$CFG;

*array function FileManager::get\_entries\_root() [line 1729]*

**generate a list of (virtual) directories at the root level**

This generates a list of up to 4 'directories' which are equivalent to 'My Files', 'Areas', 'Groups' and 'Users'. Permissions and group memberships are taken into account, i.e. if a user has no group memberships (and is not an account manager), the 'Groups' directory is suppressed.

- **Uses** \$USER
- **Uses** \$CFG

*array* function FileManager::get\_entries\_users() [*line 1885*]

**generate a list of (virtual) directories for users this user can access**

This generates a list of (virtual) user directories for which this user has access permissions. The list is ordered by full name.

- **Uses** \$USER;
- **Uses** \$CFG;

*bool* function FileManager::has\_allowed\_extension(\$filename, &\$extensions) [*line 2887*]

**Function Parameters:**

- *string* **\$filename** the filename to examine
- *bool/array* **&\$extensions** array with allowable extensions or FALSE for none or TRUE for all

**see if the filename extension is allowed**

Note that an 'empty' extension could be acceptable.

*string* function FileManager::human\_readable\_size(\$size) [*line 2077*]

**Function Parameters:**

- *int* **\$size** value to convert

**convert an integer filesize to a human readable form**

This routine displays a file size in bytes, kilobytes, megabytes or gigabytes or bytes with space-delimited groups of 3 digits depending on the size. No decimals are used.

*void* function FileManager::make\_thumbnail(\$directory, \$filename) [*line 2618*]

**Function Parameters:**

- *string* **\$directory** the working directory (relative to \$CFG->datadir)

- *string* **\$filename** the name of the image file (including extension if any)

### try to create a thumbnail of the image in file \$filename (best effort)

this routine attempts to create a thumbnail of file \$filename. First we determine whether this is actually a graphics file and whether GD is available. Then we decide if scaling is needed at all. If the file is of one of the currently supported image formats, we load the file, resample it and write the resulting (smaller) image to a file which name is prepended with the thumbnail prefix.

Design considerations:

- we use a square box (of \$thumb\_dimension x \$thumb\_dimension) to fit the images
- we do not create thumbnails for images smaller than that square box
- the aspect ratio is preserved
- we use default quality settings for write jpeg and png thumbnails
- all errors are logged, successes are logged to LOG\_DEBUG
- this routine totally relies on GD
- we try to extend our stay with set\_time\_limit() every time a thumbnail is created because image processing is quite time-consuming

Note that this is a best effort: if something goes wrong, we do not try very hard to correct the error; creating a thumbnail is considered 'nice to have'. As a matter of fact we leave immediately on error (after cleaning up memory hogs, naturally).

Note that we only use GD to create thumbnails. I did consider Imagick, but eventually I decided against it because it appears that support for that extension requires PHP 5.1.3. Perhaps we can add support in a later version of the FileManager.

*string* function FileManager::sanitise\_filetype(\$path, \$name, \$type) [line 2458]

#### **Function Parameters:**

- *string* **\$path** full path to the actual file (from \$\_FILES[\$i]['tmp\_name'])
- *string* **\$name** the requested name of the file to examine (from \$\_FILES[\$i]['name'])
- *string* **\$type** the suggested filetype of the file (from \$\_FILES[\$i]['type'])

### try to make sure that the extension of file \$name makes sense or matches the actual filetype

this checks or changes the \$name of the file in line with the mimetype of the actual file (as established by get\_mimetype()).

The reason to do this is to make it harder to 'smuggle in' files with deceptive filenames/extensions. Quite often the extension is used to determine the type of the file, even



by browsers that should know better. By uploading a malicious .PDF using an innocuous extension like .TXT, a browser may be tricked into rendering that .PDF inline. By changing the extension from .TXT to .PDF we can mitigate that risk, at least a little bit. (People somehow trust an extension even though they should know better and file(1) says so...)

Strategy is as follows. If the mimetype based on the \$name matches the actual mimetype, we can simply allow the name provided.

If there is a difference, we try to find an extension that maps to the same mimetype as that of the actual file. IOW: we put more trust in the mimetype of the actual file than we do in the mimetype suggested by the extension.

*void function* FileManager::show\_breadcrumbs(\$path) [*line 1348*]

**Function Parameters:**

- *string* **\$path** the directory path to show

### display a clickable path to the directory \$path

*dialog function* FileManager::show\_dialog\_confirm\_delete\_directory(\$path, \$entries\_to\_delete) [*line 1481*]

**Function Parameters:**

- *string* **\$path** the working directory
- *array* **\$entries\_to\_delete** an array with directory entries identifying the files to delete keyed by name

### show a dialog that ask the user to confirm the removal of a directory

Show the first directory from \$entries\_to\_delete and ask the user to confirm with [Delete] button or to cancel with [Cancel] button. The name of the directory to delete is part of the href rather than a POSTed field. We only allow a single directory to be removed at a time.

*dialog function* FileManager::show\_dialog\_confirm\_delete\_files(\$path, \$entries\_to\_delete) [*line 1427*]

**Function Parameters:**

- *string* **\$path** the working directory
- *array* **\$entries\_to\_delete** an array with directory entries identifying the files to delete keyed by name

### show a dialog that ask the user to confirm a mass file delete

Show a list of files from \$entries\_to\_delete and ask the user to confirm with [Delete] button or to cancel with [Cancel] button. The names of the files to delete are communicated via hidden fields. Once the form is submitted the data is validated against the existing files in the directory \$path.

- **Usedby** [FileManager::task\\_remove\\_file\(\)](#)
- **Usedby** [FileManager::task\\_remove\\_multiple\\_files\(\)](#)

*void function FileManager::show\_directories(&\$entries, \$parent) [line 1300]*

#### **Function Parameters:**

- *array* **&\$entries** ready to use data describing all subdirectories to show
- *bool/string* **\$parent** suppress link to parent if FALSE otherwise path of parent

### output a simple list of directories (for navigation only)

This outputs a simple list of subdirectories based on information in the array \$entries. The subdirectories can not be deleted and no files or subdirectories can be added. (because this is either '/', 'Areas','Groups' or 'Users')

- **Usedby** [FileManager::show\\_list\(\)](#)
- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$CFG

*void function FileManager::show\_directories\_and\_files(\$path, [\$show\_thumbnails = TRUE]) [line 919]*

#### **Function Parameters:**

- *string* **\$path** the directory to display
- *bool* **\$show\_thumbnails** if TRUE files are displayed as thumbnails, table rows otherwise

### display a list of subdirectories and files in directory \$path

This long routine displays the following items to the user

- (optional) navigation link to add (upload) a file
- (optional) navigation link to add (create) a directory
- a 4, 5 or 6 column table with
  - . navigation link to the parent directory
  - . 0, 1 or more rows with delete and navigation links to subdirectories (if any)
  - . 0, 1 or more rows with a checkbox and delete and preview links to files (if any)
  - . (optional) a 'select all' checkbox
- (optional) Delete-button to mass-delete files

The table can be ordered in various ways: by name, by size and by date, either ascending or descending. Clicking the relevant column header yields another sort order. This toggles between ascending and descending. Default sort order is by name ascending.

The checkbox 'select all' works with Javascript in the most simple way: an ad-hoc script connected to the onclick attribute of the select all checkbox. However, the select all checkbox itself is rendered via Javascript. The effect is that this feature is only available if Javascript is enabled in the browser. If it isn't, no select all is visible so it can not distract the user. This is part of the attempt to make this CMS usable even without Javascript.

If the flag \$show\_thumbnails is set we display file entries as thumbnails. This is done mostly to cater for the visual interactive selection of images from FCK Editor.

- **TODO** This routine is way too long, it should be split up into smaller subroutines
- **Usedby** [FileManager::show\\_list\(\)](#)
- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$CFG

*output* function FileManager::show\_file\_as\_thumbnail(\$directory, \$entry, \$delete\_file, \$index, [\$m = ""]) [*line 2771*]

#### **Function Parameters:**

- *string* **\$directory** the current working directory (necessary to construct (full) paths)

- *array* **\$entry** information about the file to show, see [get\\_entries\(\)](#) for the format
- *bool* **\$delete\_file** if TRUE, user is allowed to delete the file (used for generating delete icon)
- *int* **\$index** a counter used to generate a unique field name for the checkbox
- *string* **\$m** optional margin for better code readability

### show a thumbnail of a single (image) file perhaps including clickable links for selection in FCK Editor

This constructs a single clickable image with either a selection of the file (for FCK Editor, in file/image browser mode) or a link to the file preview. If a file is not an image or otherwise no suitable thumbnail is found, a large question mark is displayed (unknown.gif). Otherwise the existing thumbnail is shown, maintaining the original aspect ratio. Either way the image is scaled to the currently specified thumbail dimension so the image fits the corresponding DIV-tag.

The strategy for finding a thumbnail is as follows: - is the file to show an image at all? If not, show unknown.gif - if the file `zz_thumb_{filename.ext}` exists, use that, otherwise - if not AND the original file is smaller than a thumbailm use the original file, otherwise - use 'unknown.gif' after all.

If the flag `$delete_file` is set, we also generate a checkbox and a delete icon. This means that even in file/image browser mode files can be deleted by the user. In fact the file/image browser is basically the same old filemanager.

- **Uses** `$WAS_SCRIPT_NAME`
- **Uses** `$USER`
- **Uses** `$CFG`

*void function* FileManager::show\_list(\$path) [*line 854*]

#### **Function Parameters:**

- *string* **\$path** the (virtual) path to the directory to list

### display a list of directories and files in \$path

This yields a list of directories (for \$path is '/', '/areas', '/groups' or '/users') or a list of directories and files (\$path is anything else). In the latter case, if the current user has

sufficient permissions, various additional links are added such as upload a file or create directory. The actual work is done in two separate workhorses.

- Uses [FileManager::show\\_directories\\_and\\_files\(\)](#)
- Uses [FileManager::show\\_directories\(\)](#)

*void function FileManager::show\_menu([\$current\_path = "]) [line 1391]*

***Function Parameters:***

- *string* **\$current\_path** indicator for highlighting the current directory subtree

### **show a menu that is equivalent with the root directory**

*void function FileManager::sort\_entries(&\$entries, \$sort, \$sortorder) [line 2120]*

***Function Parameters:***

- *array* **&\$entries** array with directory entries
- *int* **\$sortorder**
- **\$sort**

### **sort directory entries**

- **TODO** it is a pity I cannot reference `$this->sort` from within the 6 cmp-functions...

*void function FileManager::task\_add\_directory() [line 624]*

#### **create a new subdirectory**

This routine either shows a dialog where the user can specify the name of a new directory to add OR processes the dialog.

In case of directory name too short, already exists, etc. the user is returned to the dialog to try again. If all goes well the new directory is created and at the same time the empty file 'index.html' is created to "protect" the directory from prying eyes.

*void function FileManager::task\_add\_file() [line 469]*

**add one or more new files to a directory**

This routine either shows a dialog where the user can specify the names of one or more (maximum \$CFG->upload\_max\_files) files OR processes the dialog.

Various checks are performed before the files are actually saved, e.g. checks for viruses (via ClamAV), resolve name clashes, allowed filetypes and extensions, etc. This is all done in a separate worker routine.

*void function FileManager::task\_change\_directory() [line 240]*

**make another directory the current (working) directory and optionally change the sort order**

This changes the current working directory to the user-supplied path (after thorough validation, naturally). The new current directory is stored in \$this->current\_directory and via that reference in the \$\_SESSION array, for future reference. If a valid directory was specified, we also take a look at the optional sort order parameter and set the sort order of the directory listing accordingly.

After (perhaps) changing the current directory, and perhaps changing the sort order, the contents of that directory is displayed via [task\\_list\\_directory\(\)](#).

*void function FileManager::task\_list\_directory() [line 214]*

**show a directory listing of the current working directory and links to add/delete files/directories etc.**

This is the main routine to show a list of subdirectories and files in the current working directory (\$\_SESSION['current\_directory']).

*void function FileManager::task\_preview\_file() [line 259]*

**preview a file via file.php**

After validation of the specified path, the user is redirected to [file.php](#) in order to show the selected file.

*void function FileManager::task\_remove\_directory() [line 395]*

**show a confirmation dialog for removing a single directory OR actually removes a directory**

This shows a confirmation dialog for removing of a single directory OR actually removes

a directory.

*void function FileManager::task\_remove\_file() [line 353]*

#### **show a confirmation dialog for deleting a single file**

This shows a confirmation dialog for deletion of a single file. We reuse the code for deletion of multiple files, see [task\\_remove\\_multiple\\_files\(\)](#).

- **Uses** [FileManager::show\\_dialog\\_confirm\\_delete\\_files\(\)](#)

*void function FileManager::task\_remove\_multiple\_files() [line 280]*

#### **show confirmation dialog for multiple file delete OR perform actual file delete**

this routine either shows a list of files to be deleted, asking the user for confirmation or actually deletes the specified files if the user did confirm the delete. We bail out if the user pressed the cancel button in the confirmation dialog. The real work is done in workhorse routines in order to combine the single-file-delete and the batch-delete into a single confirmation routine. For actual deletion, however, we always return here and not in the single file delete (see `{link task_remove_file()}`).

- **Uses** [FileManager::show\\_dialog\\_confirm\\_delete\\_files\(\)](#)

*string function FileManager::unique\_filename(\$directory, \$name) [line 2531]*

#### **Function Parameters:**

- *string* **\$directory** the target directory for the file upload
- *string* **\$name** the (sanitised) name of the file

#### **construct a unique filename taking existing files into account**

this constructs a filename that is unique within the target directory. If a file of the name \$name already exists, a new name is constructed from the basename of \$name, an integer sequence number and the extension of \$name.

There is no guarantee that this name will stay unique between the moment we test for it and the moment the file is actually moved into place (a classical race condition). However, the chance that this will be happening is small enough I guess.

- **TODO** Should we take care of the race condition in this routine? Should we already create an empty file or is that clutter?
- **Uses** \$CFG

*string|bool* function FileManager::valid\_path(\$path) [line 759]

**Function Parameters:**

- *string* **\$path** the path (file or directory) to check, relative to \$CFG->datadir

### **access control and validation for selected directory or file**

This routine checks to see if the current user has access to the specified file or directory. If not, FALSE is returned, otherwise the valid path is returned, with a starting slash. If \$path doesn't start with a slash a slash is assumed nevertheless. The path is relative to \$CFG->datadir.

It is not allowed to reference parent directories in the path. This prevents tricks like '../../etc/passwd' (leaking the system passwd file) or '/users/foo/../bar' (access to bar's userdata with permissions for just foo's files). Furthermore, symbolic links are NOT acceptable as part of the path, i.e. symlinks like '/users/foo/etc -> /etc' or '/users/foo/passwd -> /etc/passwd' are considered invalid.

Required permissions for access are:

- areas: \$USER must have the admin\_pagemanager permissions for that area.
- groups: \$USER must be a member of that group OR \$USER must have access to the Account Manager.
- users: \$USER must be that user OR \$USER must have access to the Account Manager.

- **TODO** the check on '../' is inconclusive if the \$path is encoded in UTF-8: the overlong sequence 2F C0 AE 2E 2F eventually yields 2F 2E 2E 2F or '../'. Reference: RFC3629 section 10.
- **Uses** \$USER



- **Uses \$CFG**

*int* function FileManager::virusscan(\$path, [\$name = ""]) [*line 2352*]

**Function Parameters:**

- *string* **\$path** the path of the file to scan
- *string* **\$name** the name of the file as provided by the uploader (from \$\_FILES)

### scan a file for viruses

this scans \$path for viruses, returns 0 if file considered clean, 1 for infected file, or 2 if something else went wrong.

If the flag \$CFG->clamscan\_mandatory is set, we consider the file infected if we are not able to run the virus scanner (better safe than sorry). However, if no virusscanner is configured at all (\$CFG->clamscan\_path is empty), we indicate a 'clean' file even though we did not scan it. Rationale: it doesn't make sense to make scanning mandatory and at the same time NOT configuring a scanner at all.

If scanning succeeds and a virus is found we send an alert to the website owner address (or the reply-to-address) immediately. Furthermore everything is logged.

- **TODO** This routine is quite \*nix-centric. I'm not sure how this would work other server platforms. Should we do something about that?
- **TODO** maybe use MIME for sending alert if not 7bit message?
- **Uses \$USER**
- **Uses \$CFG**

*string* function FileManager::vname(\$path) [*line 1641*]

**Function Parameters:**

- *string* **\$path** the path to examine

### construct the (possibly translated) name of the last directory in the path

This examines \$path and returns a string with the last directory component. There are a few special cases:

- the empty string indicates the root directory
- /users/<userpath> maps to a (translated) string t('filemanager\_personal')
- /areas maps to a (translated) string t('filemanager\_areas')
- /groups maps to a (translated) string t('filemanager\_groups')
- /users maps to a (translated) string t('filemanager\_users')

All other variations yield the last component in the list of components.

*string* function FileManager::vpath(\$path) [line 2010]

#### **Function Parameters:**

- *string* **\$path** the path to translate

### translate a path to the corresponding virtual path

This translates a path like '/users/webmaster/foo' into 'My Files/foo' and '' into 'All Files', etc. The result of the translation is cached in \$this->vpaths, for future reference.

## Class GroupManager

[line 37]

### Group management

- **Package** wascore
- **TODO** Perhaps this class should be merged with the UserManager class because there is a lot of overlap. Mmmmm.... maybe in a future refactoring operation.

### GroupManager::\$group\_capacity\_records

*array|null* = NULL [line 42]

- **Var** caches the list of group-capacity-combinations

### **GroupManager::\$output**

*object|null = NULL [line 39]*

- **Var** collects the html output

### **GroupManager::\$show\_parent\_menu**

*bool = FALSE [line 45]*

- **Var** if TRUE the calling routing is allowed to use the menu area (e.g. show account mgr menu)

Constructor *void* function GroupManager::GroupManager(&\$output) *[line 53]*

#### **Function Parameters:**

- *object* **&\$output** collects the html output

### **construct a GroupManager object**

This initialises the GroupManager and also dispatches the task to do.

*bool* function GroupManager::acl\_delete(\$acl) *[line 1679]*

#### **Function Parameters:**

- *int|array* **\$acl** the key(s) to the ACL(s) to delete

### **remove all records relating to 1 or more acl\_id's from various acl-tables**

this bluntly removes all records from the various acls\* tables for the specified acl\_id's. Whenever there's an error deleting records, the routine bails out immediately and returns

FALSE. If all goes well, TRUE is returned. Any errors are logged, success is logged to DEBUG-log.

- **TODO** should this routine be moved to an acl-object? Hmmm....

*void function GroupManager::add\_group\_capacity(\$group\_id, \$capacity\_code, \$sort\_order) [line 1711]*

**Function Parameters:**

- **\$group\_id**
- **\$capacity\_code**
- **\$sort\_order**

*array|bool function GroupManager::areas\_expand\_collapse(\$areas\_open, \$area\_id) [line 1824]*

**Function Parameters:**

- *array|bool* **\$areas\_open** current state of indicator(s) for 'open' and 'closed' areas
- *int|null* **\$area\_id** the area to expand/collapse or NULL if nothing needs to be done

**manipulate the current state if indicator(s) for 'open' and 'closed' areas**

this manipulates the current state of 'open' and 'closed' areas in \$areas\_open. If \$area\_id is NULL, we don't have to do anything but simply return the current state. If \$area\_id is 0 (zero), we need to toggle all areas at once (area\_id = 0 implies the site level toggle) If \$area\_id is an integer, it is assumed to be a valid area\_id and that area should be toggled.

*array function GroupManager::a\_params([\$task = NULL], [\$group\_id = NULL], [\$capacity\_code = NULL], [\$module\_id = NULL]) [line 1559]*

**Function Parameters:**

- *string|null* **\$task** the next task to do or NULL if none
- *int|null* **\$group\_id** the group of interest or NULL if none
- *int|null* **\$capacity\_code** the capacity of interest or NULL if none

- *int|null* **\$module\_id** the module of interest or NULL if none

## shorthand for the anchor parameters that lead to the group manager

*void* function GroupManager::calc\_acl\_id(\$group\_id, \$capacity\_code) [*line 1637*]

### **Function Parameters:**

- **\$group\_id**
- **\$capacity\_code**

*void* function GroupManager::capacity\_admin() [*line 1024*]

## **show a dialog for modifying admin permissions for a group/capacity**

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$CFG

*void* function GroupManager::capacity\_intranet() [*line 987*]

## **show a dialog for modifying intranet permissions for a group/capacity**

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$CFG

*void* function GroupManager::capacity\_overview() [*line 821*]

## **display an overview of all members of a group with a particular capacity**

this constructs a clickable list of users that are associated with a particular combination of group\_id and capacity\_code. The name of the user is a link to the usermanager for that user. Users are sorted by name.

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$DB

*void function GroupManager::capacity\_pagemanager() [line 1061]*

**show a dialog for modifying page manager permissions for a group/capacity**

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$CFG

*void function GroupManager::capacity\_save() [line 877]*

**save data from a dialog for a group/capacity**

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$CFG

*bool function GroupManager::delete\_group\_capacities\_acls(\$group\_id) [line 1767]*

**Function Parameters:**

- *int* **\$group\_id** the group to delete

**actually remove a group and all associated data**

this actually deletes the group \$group\_id and associated data, in the following order: First all acls associated with the group-capacities are deleted. If that worked, we delete the group-capacity records. If that worked, we delete the group record itself.

- **TODO** should we also require the user to delete any files associated with the area before we even

consider deleting it? Or is it OK to leave the files and still delete the area. We do require that nodes are removed from the area, but that is mainly because of maintaining referential integrity. Mmmmm... Maybe that applies to the files as well, especially in a private area. Food for thought.

- **TODO** since multiple tables are involved, shouldn't we use transaction/rollback/commit? Q: How well is MySQL suited for transactions? A: Mmmmm.... Which version? Which storage engine?

*array* function GroupManager::get\_dialogdef\_add\_group() [*line 1359*]

### **construct the add group dialog**

*array|bool* function GroupManager::get\_dialogdef\_edit\_group(\$group\_id) [*line 1418*]

#### **Function Parameters:**

- *int* **\$group\_id** the group that will be edited

### **construct the edit group dialog**

*void* function GroupManager::get\_groupname(\$group\_id) [*line 1631*]

#### **Function Parameters:**

- **\$group\_id**

*void* function GroupManager::get\_group\_capacity\_names(\$group\_id, [\$capacity\_code = 0]) [*line 1661*]

#### **Function Parameters:**

- **\$group\_id**
- **\$capacity\_code**

*array|bool* function GroupManager::get\_group\_capacity\_records([\$force = FALSE]) [*line 1531*]

#### **Function Parameters:**

- **\$force**

### **return an array of group-capacity records (possibly buffered)**

- **Uses** \$DB

*string* function GroupManager::get\_icon\_delete(\$group\_id) [*line 1584*]

**Function Parameters:**

- *int* **\$group\_id** the group to delete

**construct a clickable icon to delete this group**

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$CFG

*string* function GroupManager::get\_icon\_edit(\$group\_id) [*line 1611*]

**Function Parameters:**

- *int* **\$group\_id** the group to edit

**construct a clickable icon to edit the properties of this group**

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$CFG

*void* function GroupManager::get\_options\_capacities() [*line 1513*]

*void* function GroupManager::groups\_overview() [*line 163*]



### display list of existing groups and an option to add a group

this constructs the heart of the group manager: a link to add a group followed by a list of links for all existing groups and additional links per capacity per group.

This list of groups is ordered as follows. All active groups come first, the inactive groups follow. The sort order is based on the (short) name of the group.

Example:

Add a group

[D] [E] faculty (Member, Principal)

[D] [E] grade12 (Pupil, Teacher)

...

[D] [E] zebra (Member, Project lead)

[D] [E] aardvark (inactive)

[D] [E] grade45 (inactive)

Note that both the links '[E]' and 'faculty' lead to edit of group properties The links 'Member' and 'Principal' lead to the group-capacity overview screen The link '[D]' leads to a group delete confirmation screen

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$CFG

*void function GroupManager::group\_add() [line 282]*

### present 'add group' dialog where the user can enter minimal properties for a new group

this displays a dialog where the user can enter the minimal necessary properties of a new group. These properties are:

- name (e.g. 'grade7')
- full name (e.g. 'Pupils of grade 7')
- the active flag
- the allowable capacities for this group (e.g. 'Pupil' and 'Teacher')

Other properties (if any) will be set to default values and can be edited later on by editing the group.

The new group is saved via performing the task TASK\_GROUP\_SAVE\_NEW

- **Uses** \$WAS\_SCRIPT\_NAME

*void function GroupManager::group\_delete() [line 712]*

**delete a group after confirmation**

this either presents a confirmation dialog to the user OR deletes a group with associated capacities and acls.

Note that this routine could have been split into two routines, with the first one displaying the confirmation dialog and the second one 'saving the changes'. However, I think it is counter-intuitive to perform a deletion of data under the name of 'saving'. So, I decided to use the same routine for both displaying the dialog and acting on the dialog.

- **TODO** should we also require the user to delete any files associated with the group before we even consider deleting it? Or is it OK to leave the files and still delete the group. Food for thought.
- **TODO** since multiple tables are involved, shouldn't we use transaction/rollback/commit? Q: How well is MySQL suited for transactions? A: Mmmmm.... Which version? Which storage engine?

*void function GroupManager::group\_edit() [line 448]*

**show a dialog with the basic properties of a group**

- **Uses** \$WAS\_SCRIPT\_NAME

*void function GroupManager::group\_save() [line 479]*

**save an edited group to the database, including adding/modifying/deleting group/capacity-records**

Note: no error checking when inserting new capacity because we more or less know that that capacity does not exist already or it would have been in the array already. (But what if there are more than GROUPMANAGER\_MAX\_CAPACITIES in the database? Mmmmm....

- **Uses** \$WAS\_SCRIPT\_NAME;

*data* function GroupManager::group\_savenew() [*line 316*]

#### **save a new group to the database**

this saves a new group to the database. This quite a complex task because of the number of tables involved.

First we have the table 'groups' which stores the basic group information. Then there is the table 'groups\_capacities'. For every combination of group and capacity requested by the user a record must be added to this table. Then there is also a separate acl for every group\_capacity, so there.

The strategy should be something like this. new\_group\_id = insert\_new\_group\_into\_groups() for all GROUPMANAGER\_MAX\_CAPACITIES do if capacity != CAPACITY\_NONE && capacity\_not\_added\_yet() prepare\_new\_acl\_record(); new\_acl\_id = insert\_new\_acl\_in\_acls(); prepare\_new\_groups\_capacities\_record(); insert\_new\_group\_capacity\_in\_table()

- **TODO** maybe we should find a more elegant way to check a field for uniqueness
- **TODO** should we delete the datadirectory if something goes wrong?

*bool* function GroupManager::has\_job\_permission(\$group\_id, \$capacity\_code, \$job) [*line 1242*]

#### **Function Parameters:**

- *int* **\$group\_id** group to check
- *int* **\$capacity\_code** capacity of this group to check
- *int* **\$job** job a bitmask indicating a particular job

#### **determine whether a group/capacity has permissions for a particular job**

this determines whether this group/capacity has permissions to access the specified job, e.g. do they have access to the page manager. If so, we can display the menu option, otherwise we can suppress it and keep the menu clean(er).

*void function GroupManager::show\_breadcrumbs\_addgroup() [line 1329]*

**display breadcrumb trail that leads to the add new group dialog**

- **Uses \$WAS\_SCRIPT\_NAME;**

*void function GroupManager::show\_breadcrumbs\_group() [line 1257]*

**display breadcrumb trail that leads to groups overview screen**

- **Uses \$WAS\_SCRIPT\_NAME;**

*void function GroupManager::show\_breadcrumbs\_groupcapacity(\$group\_id, \$capacity\_code) [line 1137]*

**Function Parameters:**

- **\$group\_id**
- **\$capacity\_code**

**display breadcrumb trail that leads to group capacity overview screen**

- **Uses \$WAS\_SCRIPT\_NAME;**

*void function GroupManager::show\_menu\_group(\$group\_id, [\$current\_task = NULL], [\$current\_capacity\_code = NULL]) [line 1282]*

**Function Parameters:**

- **\$group\_id**
- **\$current\_task**
- **\$current\_capacity\_code**

show a menu for a group including links to the group's capacity overview screens

- **Uses** \$WAS\_SCRIPT\_NAME;

*void function GroupManager::show\_menu\_groupcapacity(\$group\_id, \$capacity\_code, [\$current\_task = NULL], [\$current\_module\_id = NULL]) [line 1167]*

**Function Parameters:**

- **\$group\_id**
- **\$capacity\_code**
- **\$current\_task**
- **\$current\_module\_id**

*void function GroupManager::show\_parent\_menu() [line 122]*

*void function GroupManager::valid\_group\_capacity(\$group\_id, \$capacity\_code) [line 1650]*

**Function Parameters:**

- **\$group\_id**
- **\$capacity\_code**

## Class Language

[line 33]

Translations of messages in different languages

- **Package** wascore

### Language::\$default\_domain

*string* = [line 41]

- **Var** \$default\_domain the text domain to use if none is specified

### Language::\$languages

*array* = array() [line 38]

- **Var** \$languages a cached list of all language records

### Language::\$phrases

*array* = array() [line 35]

- **Var** \$phrases a cache of translated phrases

Constructor *void* function Language::Language([\$default\_domain = ""]) [line 51]

#### **Function Parameters:**

- *string* **\$default\_domain** used when no domain is specified when requesting a translation

### **constructor**

Set up the instance of this class. If no default domain is specified, 'was' is used. We always read the current list of all languages into core, for future reference.

*array* function Language::get\_active\_language\_names() [line 109]

### **return an array with active languages and language names**

this returns an array with language\_key => language\_name pairs, one entry per active

language, ordered by language name. This array can be used in language picklists or to translate a language key to readable form. Note that we use the name of a language expressed in the language itself.

*string* function Language::get\_current\_language() [*line 144*]

#### **determine the default language to use for translation of phrases**

This routine determines which language to use for prompts and messages if not specified explicitly in calls to `$this->get_phrase()`. There are various ways in which a language can be determined. Here's the list, in order of significance:

- `$_GET['language']`
- `$_SESSION['language_key']`
- `$USER->language_key`
- `$CFG->language_key`
- constant value 'en' (the native language)

Note that all languages are validated against the list of valid and active languages as collected in `$this->languages`. If a language is NOT valid, the next test is tried. If all else fails we return 'en' for English, which is the native language and which should always be valid.

- **Uses** `$USER`;
- **Uses** `$CFG`

*array* function Language::get\_filenames\_to\_try(`$full_domain`, `$location_hint`, `$language_key`) [*line 453*]

#### **Function Parameters:**

- *string* **`$full_domain`** indicates the text domain including optional module/theme/addon prefix
- *string* **`$location_hint`** hints at a location of language file(s)
- *string* **`$language_key`** target language

#### **calculate an ordered list of filenames to try for translation of phrases**

WAS uses a separate language file for every text domain; basically the name of the text domain is the name of the file without the .php-extension. However, in order to prevent name clashes, modules and themes and addons have their own prefix: 'm\_' for modules and 't\_' for themes and 'a\_' for addons.

The language translations for the installer are based on more or less the same trick: the prefix

'i\_' identifies files in the directory /program/install/languages.

This trick with prefixing leads to the following search orders for generic phrases and module-, theme- and addon-specific phrases.

Example 1: phrases with \$domain='login': { \$CFG-  
>progdire}/languages/{ \$language\_key}/login.php { \$CFG-  
>datadire}/languages/{ \$language\_key}/login.php

Example 2: phrases with \$domain='m\_guestbook': { \$CFG-  
>progdire}/modules/guestbook/languages/{ \$language\_key}/guestbook.php { \$CFG-  
>progdire}/languages/{ \$language\_key}/m\_guestbook.php { \$CFG-  
>datadire}/languages/{ \$language\_key}/m\_guestbook.php

Example 3: phrases with \$domain='login' and a hint in \$location\_hint: { \$CFG-  
{ \$location\_hint}/{ \$language\_key}/login.php { \$CFG-  
>datadire}/languages/{ \$language\_key}/login.php

Example 4: phrases with \$domain='m\_guestbook' and a hint in \$location\_hint: { \$CFG-  
{ \$location\_hint}/{ \$language\_key}/guestbook.php { \$CFG-  
{ \$location\_hint}/{ \$language\_key}/m\_guestbook.php { \$CFG-  
>datadire}/languages/{ \$language\_key}/m\_guestbook.php

Example 5: phrases with \$domain='i\_demodata': { \$CFG-  
>progdire}/install/languages/{ \$language\_key}/demodata.php { \$CFG-  
>datadire}/languages/{ \$language\_key}/i\_demodata.php

- **Uses \$CFG**

array function Language::get\_languages\_to\_try(\$language\_key) [line 395]

**Function Parameters:**

- *string* **\$language\_key** language of which to find all parents

**calculate a list of possible languages and parent-languages to try for translations**

This constructs an array with all ancestors (=parent languages) of \$language\_key and English if that language was not yet added.



*string* function Language::get\_phrase(\$phrase\_key, [\$full\_domain = "], [\$replace = "], [\$location\_hint = "], [\$language\_key = "]) [*line 317*]

**Function Parameters:**

- *string* **\$phrase\_key** indicates the phrase that needs to be translated
- *string* **\$full\_domain** (optional) indicates the text domain (perhaps with a prefix)
- *array* **\$replace** (optional) an assoc array with key-value-pairs to insert into the translation
- *string* **\$location\_hint** (optional) hints at a directory location of language files
- *string* **\$language\_key** (optional) target language

### translation of phrases via a phrase key

This routine looks up the text associated with the phrase key. If no domain is specified, the domain 'was' is tried. If no valid language is specified, the current language is used. If a location hint is specified, we trust the caller knows best where to look and we try locating a translations file in that directory location first.

Note that phrases in a particular language which are found later in the search overwrite the phrases found earlier. These additional phrases (dubbed 'dialect' or 'userdefined translations') can be used to overwrite or correct existing standard ('official') translations. These dialect phrases can be stored in a file in the languages subdirectory of the data directory (writable for the web server but hopefully outside the document root) and/or in the table 'phrases' in the database.

Whether these dialect phrases are actually fetched from disk or database depends on the configuration of the language, via the boolean fields 'dialect\_in\_database' and 'dialect\_in\_file'; if the corresponding switch is not TRUE, we don't even bother to go and look, which saves time.

Finally, if a particular phrase is not found in the requested language, we recursively try the parent language(s) of the requested language until there are no more parents. After that, we go for the 'en' translation. If that fails too, we return the phrase\_key itself, sandwiched between the strings '(lang) ' and ' (/lang)', where 'lang' is the requested language code. Of course this should not happen if all translations are correct. (Famous last words...)

If a translation is found, we replace all occurrences of the keys in the array 'replace' in the translation with the corresponding values. This is done via a simple search and replace rather than a printf()-like way or (shudder) with complicated regex'es.

Note that we store search results in the array \$this->phrases so we can re-use those phrases in a next call. We cache the results on a per-domain basis, based on the assumption that after the first phrase in a particular domain is requested, it is likely that more phrases in the same domain will be requested.

Note that the resulting phrases are cached using the original language as the key (in \$this->

>phrases). This means that if a phrase in say 'de' or 'fr' was not found and 'en' was used instead, the English phrases are cached in the 'de' or 'fr' branch of the static array. This saves us time on the next call because we then use the phrases in the substitute language right away instead of going to look everywhere everytime.

Translations are fetched in such a way that the user-defined translations ('dialect') prevail over the system-defined ('official') translations. However, attempts to look for a phrase in a parent language (or 'en') only add the missing translations, preserving the translations in this full\_domain that were already found. Quick illustration with Dutch (nl) and English (en): search order is: \$nl\_database, \$nl\_userfile, \$nl\_system, \$en\_database, \$en\_userfile, \$en\_system. The 'en' translations are only used if no corresponding Dutch translation is found. However, the English 'dialect' prevails over the English 'system' translation.

Examples of typical use of this routine:

```
echo $LANGUAGE->get_phrase('username');  
display the phrase from 'was.php' in the current language
```

```
echo $LANGUAGE->get_phrase('username','login');  
display the phrase from 'login.php' in the current language
```

```
echo $LANGUAGE->get_phrase('welcome','',array('{USERNAME}' => $USER->username));  
display the phrase from was.php in the default language, substituting the variable '{USERNAME}'.
```

- **TODO** should we return an error for an invalid specific language?
- **Uses** \$LANGUAGES

array function Language::get\_phrases\_from\_database(\$full\_domain, \$language\_key) [line 216]

**Function Parameters:**

- *string* **\$full\_domain** text domain to look for
- *string* **\$language\_key** the language to look for

## retrieve phrases from the database for specified domain and language

array function Language::get\_phrases\_from\_file(\$filename) [line 201]

**Function Parameters:**

- *string* **\$filename** which language file to include

### return the \$string array after including a file

This includes the specified language file **\$filename** (if it exists) and returns the array **\$string**. This assumes that filename actually consists of lines like this:

```
...
$string['key_of_a_phrase'] = 'content of this phrase';
$string['key_with_variable'] = 'Hello, {USERNAME}.';
...
```

Because the file is included within the context of this function, the contents are added to the local array **\$string** rather than some global array. This is a feature.

Note that the included file **MUST** name the array '**\$string**' because otherwise this function will return an empty array. This means that any 'old' Site@School language files must be manipulated before they can be re-used. I'd consider this a feature too.

*void* function Language::reset\_cache([\$language\_key = "], [\$full\_domain = "]) [*line 500*]

#### **Function Parameters:**

- *string* **\$language\_key** the language
- *string* **\$full\_domain** the language domain

### remove selected entries (per language+domain, per language, or all) from cache

*array* function Language::retrieve\_languages([\$force\_reread = FALSE]) [*line 69*]

#### **Function Parameters:**

- *bool* **\$force\_reread** if TRUE we always go to the database, else we try the cached version first

### retrieve an array with all active languages from the database

This reads all languages from the database. If there's nothing there, we still return an array with a single element for the English language 'en', because 'en' is the native language of this program. If the language 'en' was not found, we still add it to the array. The resulting array is usually sorted by language name.

# Class Module

[line 33]

## Methods to access properties of a module

- **Package** wascore

### Module::\$module\_record

*mixed* = NULL [line 35]

### Module::\$node\_id

*mixed* = NULL [line 38]

Constructor *void* function Module::Module([\$module\_record = NULL], [\$node\_id = NULL]) [line 45]

#### **Function Parameters:**

- *array|null* **\$module\_record** cached from modules table in database
- *int|null* **\$node\_id** #node\_id the node linked to this module

*array* function Module::get\_breadcrumb\_anchors(\$node\_id) [line 64]

#### **Function Parameters:**

- *int* **\$node\_id** identifies the node

## get additional breadcrumb trail

*string* function Module::get\_content(\$node\_id) [line 55]

#### **Function Parameters:**

- *int* **\$node\_id** identifies the node

get the actual content for node \$node\_id

## Class Node

[line 30]

/program/lib/node.class.php - taking care of nodes

This file defines a class for dealing with nodes.

- **Package** wascore
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: node.class.php,v 1.2 2011-02-03 14:04:04 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **TODO** we probably need to get rid of this file because it is not used (2010-12-07/PF)
- **License** [GNU AGPLv3+Additional Terms](#)

**Node::\$node\_exists**

*mixed* = FALSE [line 32]

**Node::\$node\_path**

*mixed* = array() [line 34]

Constructor *void* function Node::Node([\$requested\_node = NULL], [\$requested\_area = NULL]) [line 36]

**Function Parameters:**

- **\$requested\_node**
- **\$requested\_area**

*bool/array* function Node::calculate\_node(\$node, \$area, &\$node\_path) [line 111]

**Function Parameters:**

- *integer|null* **\$node** the requested node number or null if none specified
- *integer|null* **\$area** the requested area number or null if none specified
- *array* **&\$node\_path** this referenced variable receives the (valid) path to the node to show

### **determine which node should be displayed based on user's request**

In total there are 4 cases for node n and area a:

1. n defined, a defined  
return n if it is visible and it matches with a and a is visible, otherwise FALSE
2. n defined, a undefined      return n if n is visible and the corresponding a is visible, otherwise FALSE
3. n undefined, a defined      return the default n in the specified a if a is active or FALSE if not found
4. n undefined, a undefined      return the default n in the default a or FALSE if no active default area exists

Cases 1 and 2 might lead to a node that is not available (ie expired or under embargo). In order to not 'give away' information about the possible existence of the requested node, we simply return FALSE, indicating that the node was not found.

There is a potential problem with a request for a node that is of type 'section' (i.e. not a page that eventually yields actual content). The problem is that in that case we should look for a valid page-type node in that section-type node. The question is whether we should look for a default page in a (default) subsection or not (nested default). Currently the strategy is to look for the first suitable page if available, and otherwise descend into the first suitable subsection and try again repeatedly until we find a page or we reach the end of the tree.

Note: As a side effect of this function, the path from the area root to the final page is calculated. This navigation path is returned in the variable reference \$node\_path.

Calculation of this navigation path is necessary in order to determine the visibility of a node; if a section-type node higher in the tree is not available, all underlying nodes should also not be available. IOW: not only do we have to check the actual node, we need to check all parent nodes too.

The array returned in \$node\_path is keyed with the node\_id, i.e. the array element \$node\_path[\$node\_id] yields the database record for node \$node\_id.

Note that we check the node embargo date and the expiry date in two separate expressions rather than using the 'BETWEEN low AND high' because you never can be sure if it is inclusive low/high or not and the database might assume the low is always smaller than high.

- **TODO** refactor into two different functions: one for specified node, other for unspecified node

*void function Node::exists() [line 46]*  
*void function Node::get\_area\_id() [line 54]*  
*void function Node::get\_node\_path() [line 50]*

## Class PageManager

*[line 79]*

### Page Manager

This class implements the Page Manager.

All the work is directed from the constructor, so it is enough to simply instantiate a new object and let the constructor do the work. The only thing needed is an output object (see [AdminOutput](#)).

- **Package** wascore

### PageManager::\$areas

*null|array = NULL [line 84]*

- **Var** \$areas holds all area records (for future reference) or NULL if not yet set

### PageManager::\$area\_id

*null|int = NULL [line 90]*

- **Var** \$area\_id indicates which tree is stored in \$this->tree, or NULL if none yet

#### **PageManager::\$output**

*object|null = NULL [line 81]*

- **Var** \$output collects the html output

#### **PageManager::\$tree**

*null|array = NULL [line 87]*

- **Var** \$tree holds the complete tree for area \$this->area\_id or NULL if not yet set

Constructor *void* function PageManager::PageManager(&\$output) [line 111]

#### **Function Parameters:**

- *object* **&\$output** collects the html output

#### **construct a PageManager object (called from /program/main\_admin.php)**

This initialises the PageManager, checks user permissions and finally dispatches the tasks. If the specified task is not recognised, the default task TASK\_TREEVIEW is executed.

Note that almost all commands act on the area contained in the SESSION-variable `current_area_id`. Also, we almost always need the tree of nodes in that area, so we read it once, `_before_` dispatching the task at hand. This means that the current tree in the current area is ALWAYS available. This means that none of the other routines should have to worry about which area or reading the tree; this information is already available in `$this->area_id` and `$this->tree`.

*void* function PageManager::build\_cached\_tree(\$area\_id, [\$force = FALSE]) [line 4004]

#### **Function Parameters:**

- *int* **\$area\_id** indicates which area to buffer if not already buffered



- **bool \$force** re-read of the tree for area \$area\_id

### **construct \$this->tree for future reference**

this constructs the tree of the area \$area\_id so all other routines can simply use that tree instead of passing it around again and again via function arguments.

*int function PageManager::calculate\_new\_sort\_order(&\$tree, \$area\_id, \$parent\_id, [\$at\_end = FALSE]) [line 3821]*

#### **Function Parameters:**

- **array &\$tree** reference to the tree in area \$area\_id
- **int \$area\_id** the area to look at
- **int \$parent\_id** the section where we need to make room (where a node is added/inserted)
- **bool \$at\_end** if TRUE a new node is added at the end, otherwise it is inserted at the beginning

### **calculate a new sort order and at the same time make room for a node**

this is used to calculate a new sort order number for a node that will be added to section \$parent\_id in area \$area\_id. Note that this could be another area than the current working area. The reference to the tree is necessary; we can't simply use \$this->tree and \$this->area\_id.

Depending on the flag \$at\_end the node is added at the end of the section or at the beginning. In the latter case, the new sort order number is always 10 and all the existing nodes are renumbered in such a way that the second node in the section (originally the first one) gets sort order 20. By not using consecutive numbers it is possible to 'insert' nodes without touching anything. This is not used but it does no harm to have a sort order in steps of 10 instead of 1. (I think the database doesn't care much when executing/interpreting the ORDER BY clause).

Note that this routine not only calculates a sort order but it also manipulates the database and moves other nodes in the section around in order to make room.

Note that the feature \$at\_end is currently not used at all.

- **Uses \$DB**

*int* function PageManager::calculate\_updated\_sort\_order(\$node\_id, \$after\_id) [*line 3909*]

**Function Parameters:**

- *int* **\$after\_id** the node AFTER which \$node\_id should be sorted (0 means: first in the section)
- **\$node\_id**

**calculate an updated sort order and also make space in the section for moving the node around**

this calculates a new sort order for node node\_id; the effect should be that node\_id will sort AFTER node after\_id. If after\_id is 0 then node\_id should become the first in the section.

Note that this routine not only calculates a sort order but it also manipulates the database and moves other nodes in the section around in order to make room.

There are several different cases possible: a. \$after\_id == 0 b. sort\_order(\$after\_id) < sort\_order(\$node\_id) c. sort\_order(\$node\_id) < sort\_order(\$after\_id) d. \$after\_id is the last node in this section e. \$node\_id == \$after\_id

Case e. should not happen but if it did it would yield a no-op. Case d is very similar to case c, so much even that both cases can be combined to just one.

Strategy for case a. \$old\_sort\_order = sort\_order(\$node\_id); \$new\_sort\_order = sort\_order(first\_child(parent\_section(\$node\_id))) \$delta = \$old\_sort\_order - sort\_order(prev(\$node\_id)) SET \$sort\_order += \$delta WHERE \$new\_sort\_order <= sort\_order(node) <= \$old\_sort\_order

In other words: node\_id gets the sort\_order value from the first node in the section, all nodes from the first upto position where node\_id was originally move 'up' in such a way that the last in that range will end up with the sort order that node\_id had originally.

Strategy for case b. \$old\_sort\_order = sort\_order(\$node\_id) \$new\_sort\_order = sort\_order(next(\$after\_id)) \$delta = \$old\_sort\_order - sort\_order(prev(\$node\_id)) SET \$sort\_order += \$delta WHERE \$new\_sort\_order <= sort\_order(node) <= \$old\_sort\_order

Note that a and b are also quite similar.

Strategy for case c. (and d.) \$old\_sort\_order = sort\_order(\$node\_id) \$new\_sort\_order = sort\_order(\$after\_id) \$delta = \$old\_sort\_order - sort\_order(next(\$node\_id)) (note that this is a negative value) SET \$sort\_order += \$delta WHERE \$old\_sort\_order <= sort\_order(node) <= \$new\_sort\_order

By mass-updating the other nodes, we hopefully don't disturb the other nodes, even while they might be locked. So there, the lock on the node is not absolute, we will change the record behind the back of another user holding a lock. On the other hand: messing up the sort

order is less messy than messing with the actual content of a node. I'll take the risk. Worst case is that two processes will both update the sort order, perhaps yielding two nodes with the same sort\_order value. Oh well, so be it. (There is this law by Pareto, something about 80 - 20. Mmmm...)

- **Uses \$DB**

*void function PageManager::calc\_home\_id(\$node\_id, 1) [line 3981]*

**Function Parameters:**

- *int \$node\_id* the node of interest
- *bool/int 1* FALSE if no default node found, the default node\_id otherwise

**calculate the current default node on this level**

this tries to find a sibling of the node \$node\_id that has the flag 'is\_default' set to TRUE

*bool function PageManager::delete\_node(\$node\_id) [line 1775]*

**Function Parameters:**

- *int \$node\_id* the page or the section to delete

**workhorse routine for deleting a node, including children**

This deletes the children (but not grandchildren) of a section and the section itself OR simply the node itself. See function for more on this design decision.

This routine actually deletes nodes from the database, but only if these nodes do not have children AND if the nodes are not readonly. Furthermore, just before the child nodes are deleted, a lock on that node is obtained. This makes sure that a node that is currently being edited by another user is not deleted under her nose. Also, we do not delete nodes that have children because that would yield orphan nodes.

Any problems with deleting children are reported in messages via \$this->output. If all children are deleted successfully, then \$node\_id is deleted. Success of the whole operation is indicated by returning TRUE, otherwise FALSE.

array function PageManager::get\_dialogdef\_add\_node(\$is\_page) [line 2646]

**Function Parameters:**

- **bool \$is\_page** TRUE if the dialog is for a new page, FALSE is for a new section

**construct a dialog definition for adding a node (page or section)**

the dialog for pages and sections are different in just a single field: the page has an extra module field.

Note that we set two default values: one for visibility and one for the default module id. For now we set the initial visibility to 2 (hidden). The default module is 1, under the assumption that the first module in the system is the one used most: a plain page. I didn't consider it worthy enough to make this defaults configurable. However, the sort order in the get\_options\_modules() doesn't guarantee that the plain page module is the first in the list, so there.

- **TODO** should we make the defaults in this routine configurable? (I'm not convinced they should)

array function PageManager::get\_dialogdef\_edit\_advanced\_node(\$node\_id, \$is\_page, [\$viewonly = FALSE], \$area\_id) [line 2825]

**Function Parameters:**

- **int \$area\_id** the area in which the node lives
- **int \$node\_id** the node that is to be edited
- **bool \$is\_page** TRUE if the dialog is for a page, FALSE is for a section
- **bool \$viewonly** if TRUE, most fields are 'dimmed' (uneditable)

**construct a dialog definition for editing advanced properties of a node (page or section)**

this constructs a dialog to edit the advanced properties of a node. There is a slight difference between pages and sections: a section can have neither the 'target' property nor the 'href' property; that only makes sense for a page, so these input fields are not displayed for a section.

The readonly-property is a special case. Even if the parameter \$viewonly is TRUE, the

readonly-field is displayed as 'editable'. This is because this particular field is used to toggle the viewonly mode: if a node is readonly, it cannot be edited, except the removal of the readonly attribute.

*array function PageManager::get\_dialogdef\_edit\_node(\$node\_id, \$is\_page, [\$viewonly = FALSE]) [line 2739]*

**Function Parameters:**

- *int* **\$node\_id** the node that is to be edited
- *bool* **\$is\_page** TRUE if the dialog is for a page, FALSE is for a section
- *bool* **\$viewonly** if TRUE, all fields are 'dimmed' (uneditable) and there is no [Save] button

**construct a dialog definition for editing basic properties of an existing node (page or section)**

the dialog for pages and sections is different in just a single field: the page has an extra module field.

Note that we return a keyed array using the name of the dialog field as a key. This makes it easier to reference an incoming field in the save routine.

*void function PageManager::get\_dialog\_data\_node(&\$dialogdef, \$node\_id) [line 2958]*

**Function Parameters:**

- *array* **&\$dialogdef** the dialog definition
- *int* **\$node\_id** the node that needs to be edited

**fill the node dialog with data from the database**

this fills a node dialog with data from the database. The routine takes care of some data conversions, e.g. manipulating a boolean TRUE/FALSE so it fits in a checkbox type of widget, etc.

Note that the data is NOT specifically validated. This means that a dialog *\_could\_* contain invalid values even when the user doesn't change anything. Or, to put it a different way: if the database contains garbage, the garbage is simply presented to the user. If the user subsequently tries to save the "garbage" the validation will catch her.

This routine is able to fill the values for both the 'basic' and the 'advanced' dialogs.

*void function PageManager::get\_icon\_delete(\$node\_id) [line 2354]*

**Function Parameters:**

- *int* **\$node\_id** the node to delete

**construct a clickable icon to delete this node (and underlying nodes too)**

- **TODO** should we display trash can icons for sections with non-empty subsections? there really is no point, because we eventually will not accept deletion of sections with grandchildren in task\_node\_delete. Hmmmmmm..... For now I just added the condition that access is denied when a section has grandchildren. Need to refine this, later. Also, how about readonly nodes? Surely those cannot be deleted... should it not show in the icon?
- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$CFG

*void function PageManager::get\_icon\_edit(\$node\_id) [line 2389]*

**Function Parameters:**

- *int* **\$node\_id** the node to edit

**construct a clickable icon to edit this node**

- **TODO** move permission check to a separate function permission\_edit\_node()
- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$CFG

*void function PageManager::get\_icon\_home(\$node\_id) [line 2300]*

### ***Function Parameters:***

- *int* **\$node\_id** the node of interest

### **construct a clickable icon to set the home page/section on this tree level**

this constructs a clickable icon to change the default node on this level. it requires PERMISSION\_NODE\_EDIT\_PAGE or PERMISSION\_NODE\_EDIT\_SECTION for both the target default node AND the current default node (if any)

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$CFG

*void* function PageManager::get\_icon\_invisibility(\$node\_id) [*line 2431*]

### ***Function Parameters:***

- *int* **\$node\_id** the node to edit

### **construct a clickable icon to edit the advanced properties of this node**

This icon has another purpose besides creating a link to the advanced properties: it also indicates wheter a node is 'invisible' or not. In this context 'invisible' means either

- the node is under embargo until some time in the future, OR
- the node is already expired some time in the past, OR
- the node is hidden (ie. page is not visible in navigation but otherwise available).

Depending on the visibility a different icon is displayed.

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$CFG

*void function PageManager::get\_icon\_page\_preview(\$node\_id) [line 2497]*

**Function Parameters:**

- *int* **\$node\_id** the node to preview

**construct a clickable icon to preview this node**

this constructs an icon to preview the page. the user should have edit permissions OR edit content permissions, because you can see the page when you can edit it, so there's no point in preventing the preview in that case. See [task\\_page\\_preview\(\)](#) for more information.

The preview is displayed in a separate window, either generated via a small routing in javascript or (if javascript disabled) via a target="\_blank".

- **TODO** if this is a public area, the user can see every page, except the expired/embargo'ed ones should we take that into account too? I'd say that is way over the top. How about pages in an intranet where the user has view privilege? Complicated. KISS: only show preview to those that can edit or edit content.
- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$CFG

*void function PageManager::get\_icon\_section(\$node\_id) [line 2545]*

**Function Parameters:**

- *int* **\$node\_id** the section to open/close

**construct a clickable icon to open/close this node**

This is a toggle: if the node is closed the closed icon is shown, but the action in the A-tag is to open the icon (and vice versa).



- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$CFG

*void* function PageManager::get\_link\_node\_edit(\$node\_id) [*line 2589*]

**Function Parameters:**

- *int* **\$node\_id** the node for which to make the link

**construct a clickable link to edit this node showing the page's title or link-text**

this generates an A tag which leads to editing the properties (node == section) or content (node == page). Additional information displayed via the title attribute includes the node\_id.

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$CFG

*array|bool* function PageManager::get\_module\_records() [*line 3699*]

**retrieve a list of all available module records**

this returns a list of active module-records or FALSE if none are available The list is cached via a static variable so we don't have to go to the database more than once for this. Note that the returned array is keyed with module\_id.

*array* function PageManager::get\_node\_id\_and\_ancestors(\$node\_id) [*line 3752*]

**Function Parameters:**

- *int* **\$node\_id** start at the youngest in the family

**get an array with all ids of ancestors of node\_id and node\_id itself**

note that the order of nodes is from top to bottom

array function PageManager::get\_options\_area(\$node\_id, \$is\_page) [line 3186]

**Function Parameters:**

- *int* **\$node\_id** the node for which we are building this picklist
- *bool* **\$is\_page** TRUE if this concerns a page, FALSE for a section

**generate a list of areas for use in a dropdown list (for moving a node to another area)**

this creates an array containing a list of areas to which the user is allowed to move a node. Permissions for moving a node is a combination of permissions for deleting a node from the current area, and adding a node to the target area. The current area `$this->area_id` is always in the list, because even if the user isn't allowed to move a node to somewhere else, she is at least allowed to leave the node in the area it currently is in. Therefore the option for the current area **MUST** be possible.

We sepcifically check for these permissions: `PERMISSION_AREA_ADD_PAGE` or `PERMISSION_AREA_ADD_SECTION` and not `PERMISSION_NODE_ADD_PAGE` or `PERMISSION_NODE_ADD_SECTION` because the target of the move is always the top level, and not some (sub)section.

array function PageManager::get\_options\_modules() [line 3221]

**fetch a list of available modules for inclusion on a page**

this retrieves a list of modules that can be used as a list of options in a listbox or radiobuttons. Only the active modules are considered. The names of the modules that are displayed in the list are translated (retrieved from the modules language files). The list is ordered by that translated module name.

array function PageManager::get\_options\_parents(\$is\_page, [\$forbidden\_id = NULL]) [line 3036]

**Function Parameters:**

- *bool* **\$is\_page** if TRUE check page permissions, else check section permissions
- *mixed* **\$forbidden\_id** identifies the subtree to EXclude from the results or NULL for all sections

**construct an options list of possible parent sections**

this constructs an array suitable for a radio field or a listbox. If the user has the privilege, an option 'add to toplevel' is added too.

If `$forbidden_id` is not NULL, it identifies the subtree that should be excluded from the result.

If it were not excluded, the user might choose a child section as the parent for a section, which would introduce endless loops or circular references. Excluding the 'own' subtree prevents that.

Note that the list is constructed using recursion: the actual work is done in the routine [get\\_options\\_parents\\_walk\(\)](#).

Also note that if \$forbidden\_id is not NULL, we interpret this as a request to generate a picklist of parents for that node. We make sure that we always add the current parent node to the list. This way the only option for a parent might be to keep the current one, which obviously should be one of the options.

- Uses [PageManager::get\\_options\\_parents\\_walk\(\)](#)

*void function PageManager::get\_options\_parents\_walk(&\$options, \$is\_page, \$node\_id, \$forbidden\_id) [line 3082]*

**Function Parameters:**

- **array &\$options** resulting array, output of this routine
- **bool \$is\_page** distinction between page (TRUE) or section (FALSE)
- **int \$node\_id** the subtree where we should start
- **int|null \$forbidden\_id** if not NULL the subtree to skip

### **workhorse for construction an options list of possible parent sections**

This routine is called recursively in order to construct a list of possible parent sections in the same order as the main tree display (see [show\\_tree\(\)](#)), but excluding the subtree starting at \$forbidden\_id.

The list of parents is collected in \$options. This variable is passed by reference to save memory and also to keep the parents in the correct order.

Note that the options in the output array all have a parameter 'class' which can be used to detect how deep the nesting is. This can be visualised via wellchosen CSS-parameters, eg.

```
option.level0 { margin-left: 0px; }
option.level1 { margin-left: 20px; }
option.level2 { margin-left: 40px; }
...
```

which provides the illusion of a tree-like structure, even in a listbox.

The current parent of node \$forbidden\_id is always included in the list of allowable parents because a node should be able to keep the current parent, always.

- Usedby [PageManager::get\\_options\\_parents\\_walk\(\)](#)
- Usedby [PageManager::get\\_options\\_parents\(\)](#)
- Uses [PageManager::get\\_options\\_parents\\_walk\(\)](#)

array function PageManager::get\_options\_sort\_order(\$node\_id) [line 3133]

**Function Parameters:**

- *int* **\$node\_id** the node for which the list of siblings must be constructed

**generate a list of siblings in a particular (sub)section used to select/change sort order via a list box**

this constructs an (ordered) list of siblings of \$node\_id, but excluding \$node\_id itself. Also, an option 'sort at the top of the list' is included. This allows for selecting a sibling AFTER which \$node\_id should appear in the section. The special value for 'before all others' or 'at the top of the list' is 0, because that value cannot be used by a real node.

- **Uses** \$USER
- **Uses** \$CFG

bool function PageManager::lock\_records\_subtree(\$node\_id, \$new\_area\_id) [line 3402]

**Function Parameters:**

- *int* **\$node\_id** the node which we are going to move to \$new\_area\_id
- *int* **\$new\_area\_id** the area to which we want to move the subtree \$node\_id

**attempt to lock all node records in a subtree**

this recursively walks the subtree starting at \$node\_id and attempts to

- lock every node in the subtree, AND

- write the new `area_id` in an auxiliary field of every node in the subtree

With at least two trips to the database (at least one for the lock and another one for writing the auxiliary field) per node, this is an expensive routine. Maybe it is possible to combine locking and writing the auxiliary field. However, in order to keep things readable I decided against that.

This routine returns `FALSE` if any of the nodes in the subtree could NOT be locked. If each and every node in the subtree is successfully locked, `TRUE` is returned.

Note that all these locks are reset/released the moment the actual move is done, by resetting both the `locked_by` field and the `area_id` field. That may hurt readability too, but less than combining lock + setting auxiliary field. See [save\\_node\\_new\\_area\\_mass\\_move\(\)](#) for more information.

- **Usedby** [PageManager::lock\\_records\\_subtree\(\)](#)
- **Usedby** [PageManager::save\\_node\\_new\\_area\\_mass\\_move\(\)](#)
- **Uses** [PageManager::lock\\_records\\_subtree\(\)](#)

*string* function PageManager::message\_from\_lockinfo(\$lockinfo, \$node\_id, \$is\_page) [line 3783]

**Function Parameters:**

- *array* **\$lockinfo** contains information about another user that has obtained a record lock
- *int* **\$node\_id** the node that is locked
- **\$is\_page**

**construct a readable message from the lockinfo array**

if an attempt to lock a record fails (see [lock\\_record\\_node\(\)](#)), the array `$lockinfo` is filled with information about the user that has locked the record. The following information is available:

- 'user\_id': the numerical `user_id` of the user holding the lock
- 'username': the `userid` of that user
- 'full\_name': the full name of that user
- 'user\_information': the IP-address from where that user is calling
- 'ctime': the date/time that user logged in (c=create)
- 'atime': the date/time that user last accessed the system (a=access)
- 'ltime': the date/time that user actually locked the record (l=lock)

This routine tries to construct a more or less readable message which informs this user here about that other user holding the lock.

*bool function PageManager::module\_connect(\$area\_id, \$node\_id, \$module\_id) [line 4076]*

**Function Parameters:**

- *int \$area\_id* the area where \$node\_id resides
- *int \$node\_id* the node to which the module will be connected
- *int \$module\_id* the module that will be connected to node \$node\_id

**inform module \$module\_id that from now on it will be linked to page \$node\_id**

this routine tells module \$module\_id that from now on it is associated with node \$node\_id in area \$area\_id.

This is done by a. loading the module's administrative interface (the admin-script file), and b. calling the function <modulename>\_connect()

If something goes wrong (e.g. no module found, non-existing admin-script, undefined function <modulename>\_connect()) FALSE is returned, otherwise the return value of function <modulename>\_connect() is returned.

- **TODO** should we pass the area\_id at all? What happens when a node is moved to another area without informing the module? Questions, questions, questions...

*bool function PageManager::module\_disconnect(\$area\_id, \$node\_id, \$module\_id) [line 4038]*

**Function Parameters:**

- *int \$area\_id* the area where \$node\_id resides
- *int \$node\_id* the node from which the module is disconnected
- *int \$module\_id* the module that will be disconnected from node \$node\_id

**inform module \$module\_id that it is no longer linked to page \$node\_id**

this routine tells module \$module\_id that it is no longer associated with node \$node\_id in

area \$area\_id.

This is done by a. loading the module's administrative interface (the admin-script file), and b. calling the function <modulename>\_disconnect()

If something goes wrong (e.g. no permissions, no module found, non-existing admin-script, undefined function <modulename>\_disconnect()) FALSE is returned, otherwise the return value of function <modulename>\_disconnect() is returned.

- **TODO** should we pass the area\_id at all? What happens when a node is moved to another area without informing the module? Questions, questions, questions...

*bool/array function PageManager::module\_load\_admin(\$module\_id) [line 4189]*

**Function Parameters:**

- *int* **\$module\_id** indicates which module to load

**load the admin interface of a module in core**

this includes the 'admin'-part of a module via 'require\_once()'. This routine first figures out if the admin-script file actually exists before the file is included. Also, we look at a very specific location, namely:  
/program/modules/<modulename>/<module\_admin\_script> where  
<modulename> is retrieved from the modules table in the database.

Note that if modulename would somehow be something like  
"..../..../..../etc/passwd\x00", we could be in trouble...

- **TODO** should we sanitise the modulename here? It is not user input, but it comes from the modules table in the database. However, if a module name would contain sequences of  
"../" we might be in trouble

*bool function PageManager::module\_save(\$node\_id, \$module\_id, \$viewonly, &\$edit\_again) [line 4154]*

**Function Parameters:**

- *int* **\$node\_id** the node to which the module is connected
- *int* **\$module\_id** the module that is connected to node \$node\_id
- *bool* **\$viewonly** if TRUE, editing and thus saving is not allowed
- *bool* **&\$edit\_again** returns TRUE if more editing is required, FALSE otherwise

**(maybe) save the modified content of module \$module\_id connected to page \$node\_id**  
this saves the module data belonging to node \$node\_id.

If something goes wrong (e.g. no module found, non-existing admin-script, undefined function <modulename>\_save()) FALSE is returned, otherwise the return value of function <modulename>\_save() is returned.

*bool* function PageManager::module\_show\_edit(\$node\_id, \$module\_id, \$viewonly, \$edit\_again) [*line 4120*]  
**Function Parameters:**

- *int* **\$node\_id** the node to which the module is connected
- *int* **\$module\_id** the module that is connected to node \$node\_id
- *bool* **\$viewonly** if TRUE, editing is not allowed (but simply showing the content is allowed)
- *bool* **\$edit\_again** if TRUE, start with data from \$\_POST, otherwise read from database

**show a dialog for editing the content of module \$module\_id linked to page \$node\_id**  
this loads the code for module \$module\_id and calls the appropriate routine for displaying a dialog

The parameter \$viewonly can be used to indicate readonly access to the content. It is upto the called function to adhere to this flag, e.g. by just showing the content instead of letting the user modify it.

If the flag \$edit\_again is TRUE, this is not the first call to this routine, i.e. we have been here before but probably something went wrong when saving the data (e.g. an invalid date like 2008-02-31 was entered). This makes it possible to re-edit the content without starting from scratch again. If the flag is FALSE, the called routine is supposed to start with the data as it is currently stored in the database. Otherwise the current data is POST'ed by the user.

If something goes wrong (e.g. no module found, non-existing admin-script, undefined function <modulename>\_show\_edit()) FALSE is returned, otherwise the return value of function <modulename>\_show\_edit() is returned.



- Used by [PageManager::task\\_node\\_edit\\_content\(\)](#)

*string* function PageManager::node\_full\_name(\$node\_id) [*line 3717*]

**Function Parameters:**

- *int* **\$node\_id** get the full name of this node

### **shorthand for constructing a readable page/section name with id, name and title**

*bool* function PageManager::node\_has\_grandchildren(\$node\_id) [*line 3729*]

**Function Parameters:**

- *int* **\$node\_id** the section to check for grandchildren

### **shorthand to determine whether the number of levels below section \$node\_id is greater than one**

*bool* function PageManager::permission\_add\_any\_node(\$is\_page) [*line 3464*]

**Function Parameters:**

- *bool* **\$is\_page** selects either page or section permissions

### **does the user have the privilege to add a node, any node to an area?**

this routine returns TRUE if the current user has permission to add at least one node to the current area. This information is used to show or suppress the 'add a page' and 'add a section' links.

Note that pages and sections are treated separately; if a user is allowed to add a page it doesn't necessarily mean that she is allowed to add a section too.

Strategy: we first check the area-level (and implicit site-level) permissions to add a node, anywhere in an area including at the toplevel. If that doesn't work, we check for permissions to add a node to an existing section at the node level (and implicit at the area and site level too). If that doesn't work, we return FALSE.

Note that it is enough to stop the search at the first hit: we need only 1 hit for 'any', not all of them.

- **Uses \$USER**

*bool function PageManager::permission\_add\_node(\$section\_id, \$is\_page) [line 3496]*

**Function Parameters:**

- *int* **\$section\_id** is the section to examine or 0 for the area top level
- *bool* **\$is\_page** selects either page or section permissions

**does the user have the privilege to add a node the area or a section?**

this checks for permission to add a page or a section to the area at the toplevel or to the section \$node\_id. If access is denied initially, the upper sections are tested for the requested permission. I dubbed this cascading permissions (if a section allows for adding a page, any subsections inherit that permission). This routine is protected from endless loops by recursing at most MAXIMUM\_ITERATIONS levels.

- **Uses \$USER**

*bool function PageManager::permission\_delete\_node(\$node\_id, \$is\_page) [line 3635]*

**Function Parameters:**

- *int* **\$node\_id** is the node to delete
- **\$is\_page**

**does the user have the privilege to delete a node from the area?**

- **TODO** we should also take the readonly flag into account (or should we?) when determining delete permissions
- **Uses \$USER**

*bool* function PageManager::permission\_edit\_node(\$node\_id, \$is\_page, [\$check\_content = FALSE]) [*line 3561*]

**Function Parameters:**

- *int* **\$node\_id** is the node to examine
- *bool* **\$is\_page** TRUE means we look at page permissions, not section
- *bool* **\$check\_content** TRUE means check edit content, else edit plain

**does the user have the privilege to edit node properties?**

this checks the edit permissions for the specified node. If none are found initially, we check out the permissions of the parent section. If the user allowed to add a page/section in the parent section, we assume or imply that the user also has edit permissions if she also has edit permissions for the parent. even though the exact permission bits are not set for this particular new node. IOW: if a user is able to add a page/section it would be illogical not to be able to edit the new page/section. However, if the edit-permissions are not area-wide, there is no way you can add permissions to a particular node before it exists. (Can't do that in the account manager).

Note that a node can also have the readonly attribute set. This is more or less a tool to prevent accidental changes to a node's properties: a user can easy reset the readonly flag and change the node anyway. However, it requires two steps and hence at least *\_some\_* thinking. Bottom line: we only look at the 'real' permissions here, and not the readonly flag. (Even better: edit privilege is required to reset the readonly flag so using that flag as extra permission would yield pages completely uneditable).

This routine is also used to check for content edit permissions. This is only possible for pages (not sections). By default this routine checks the regular permissions (edit properties/ edit advanced properties).

- **Uses \$USER**

*bool* function PageManager::permission\_edit\_node\_content(\$node\_id) [*line 3599*]

**Function Parameters:**

- *int* **\$node\_id** is the node to examine

**does the user have the privilege to edit node content?**

this is a wrapper around routine [permission\\_edit\\_node\(\)](#). We force `is_page` and `check_content` to `TRUE`.

*bool* function PageManager::permission\_set\_default(\$node\_id) [*line 3614*]

**Function Parameters:**

- *bool* **\$node\_id** is the tentative new default

**does the user have the privilege to make node \$node\_id the default?**

if a user has edit permission for the new default node and also in the existing default node (if any), the user is allowed to set the default to node `$node_id`. Note that once again we use cascading permissions. (See also [permission\\_edit\\_node\(\)](#)).

*void* function PageManager::queue\_area\_node\_alert(\$areas, \$nodes, \$alert\_message, [\$username = "], \$message) [*line 3309*]

**Function Parameters:**

- *mixed* **\$areas** an array or a single int identifying the area(s) of interest
- *mixed* **\$nodes** an array or a single int identifying the node(s) of interest
- *string* **\$message** the message to add to the buffer of qualifying alert accounts
- *string* **\$username** (optional) the name of the user that initiated the action
- **\$alert\_message**

**add a message to message queue of 0 or more alerts**

this adds `$alert_message` to the message buffers of 0 or more alert accounts. The alerts that qualify to receive this addition via the `alerts_areas_nodes` table. The logic in that table is as follows:

- the `area_id` must match the `area_id(s)` (specified in `$areas`) OR it must be 0 which acts as a wildcard for ALL areas

- the node\_id must match the node\_id(s) specified in \$nodes) OR it must be 0 which acts as a wildcard for ALL nodes

Also the account must be active and the flag for the area/node-combination must be TRUE.

As a rule this routine is called with a single area\_id in \$areas and a collection of node\_id's in \$nodes. The nodes follow the path up through the tree, in order to alert accounts that are only watching a section at a higher level.

Example: If user 'webmaster' adds new page, say 34, to subsection 8 in section 4 in area 1, you get something like this:

```
queue_area_node_alert(1,array(8,4,34),'node 34 added','webmaster');
```

The effect will be that all accounts with the following combinations of area A and node N have the message added to their buffers: A=0, N=1 - qualifies for all nodes in all areas A=1, N=0 - qualifies for all nodes in area 1 A=1, N=4 - qualifies for node 4 in area 1 A=1, N=8 - qualifies for node 8 in area 1

It is very well possible that no message is added at all if there is no alert account watching the specified area and node (using wildcards or otherwise).

Near the end of this routine, we check the queue with pending messages, and perhaps send out a few alerts. The number of messages that can be sent from here is limited; we don't want to steal too much time from an unsuspecting user. It is the task of cron.php to take care of eventually sending the queued messages. However, sending only a few messages won't be noticed. I hope.

Note that this routine adds a timestamp to the message and, if it is specified, the name of the user.

Also note that the messages are added to the buffer with the last message at the top, it means that the receiver will travel back in time reading the collection of messages. This is based on the assumption that the latest messages sometimes override a previous message and therefore should be read first.

- **Uses \$DB;**

*void function PageManager::save\_node(\$node\_id) [line 1900]*

**Function Parameters:**

- *int \$node\_id* the node we have to change

## workhorse routing for saving modified node data to the database

this is the 'meat' in saving the modified node data. There are a lot of complicated things we need to take care of, including dealing with the readonly property (if a node is currently readonly, nothing should be changed whatsoever, except removing the readonly attribute) and with moving a non-empty section to another area. Especially the latter is not trivial to do, therefore it is being done in a separate routine (see [save\\_node\\_new\\_area\\_mass\\_move\(\)](#)).

Note that we need to return the user to the edit dialog if the data entered is somehow incorrect. If everything is OK, we simply display the treeview and the area menu, as usual.

Another complication is dealing with a changed module. If the user decides to change the module, we need to inform the old module that it is no longer connected to this page and is effectively 'deleted'. Subsequently we have to tell the new module that it is in fact now added to this node. It is up to the module's code to deal with these removals and additions (for some modules it could boil down to a no-op).

Finally there is a complication with parent nodes and sort order. The sort order is specified by the user via selecting the node AFTER which this node should be positioned. However, this list of nodes is created based on the OLD parent of the node. If the node is moved to elsewhere in the tree, sorting after a node in another branch no longer makes sense. Therefore, if both the parent and the sort order are changed, the parent prevails (and the sort order information is discarded).

- **TODO** this routine could be improved by refactoring it; it is too long!
- **TODO** there is something wrong with embargo: should we check starting at parent or at node? this is not clear: it depends on basic/advanced and whether the embargo field changed. mmmm... safe choice: start at node\_id for the time being

*bool* function PageManager::save\_node\_new\_area\_mass\_move(\$node\_id, \$new\_area\_id, \$embargo) [*line 2190*]

### **Function Parameters:**

- *int* **\$node\_id** the node which we are going to move to \$new\_area\_id
- *int* **\$new\_area\_id** the area to which we want to move the subtree \$node\_id
- *bool* **\$embargo** if TRUE, we cannot send alerts because the original tree is under embargo

### **workhorse routine for moving a complete subtree to another area**

this routine moves a subtree starting at section \$node\_id from area \$this->area\_id to area \$new\_area\_id. This is a complicated operation because

- the subtree may be (very) large
- nodes in the subtree may be locked by other users
- we MUST take an all or nothing approach because either ALL of the nodes or NONE of the nodes

in the subtree must change the area\_id. If area\_id's are only changed partly, we will end up

with orphan nodes because areas differ between a parent and corresponding offspring.

Here is my train of thoughts leading to my implementation.

The best solution I can think of is to:

- lock all individual nodes in the subtree, and if successful,
- update all these records with the appropriate area\_id and at the same time unlocking these records by writing a NULL to the lock field.

This way we postpone the actual move to the new area until we are certain that we have all nodes involved in our hands. If we don't succeed in obtaining all the necessary locks, we have to abandon the operation, accept defeat, release all locks and return FALSE to our caller. If we do succeed, well, we indicate success by returning TRUE.

Mmmm....

Note that the user might have two browser windows open in the same session. This shouldn't happen, but there is no easy way to prevent the user to open more windows in the same session. This may lead to an undesirable result: if the user is editing another node in the same session in another window (totally unrelated to the move of the current subtree), that node might also be moved to the new area, introducing an orphan in the new area. Mmmmm. The best way to handle that problem is to use a special helper field, say auxiliary\_id, in the nodes table. That field could be used as follows (pseudo-code):

```
set auxiliary_id of $node_id to $new_area_id for all descendants of section $node_id do
obtain lock on descendant    set auxiliary_id to $new_area_id update nodes set area_id =
new_area_id, auxiliary_id = NULL, locked_by = NULL where auxiliary_id = new_area_id AND
locked_by = our_session_id Then we once again concentrate the actual work in a single
UPDATE-statement.
```

It is a costly operation: at least 2 trips to the database per descendant.

Mmmmm...

Perhaps we can save (a lot) of trips to the database if we build on the assumption that usually there are more children in every section AND that usually the children are NOT locked. In that case the pseudo-code becomes:

```
for all descendants of section $node_id do    if is_section($descendant) then        SET
auxiliary_id = $new_area_id, locked_by = $our_session_id WHERE        locked_by IS
NULL AND parent_id = $descendant;    endif endfor SET area_id = new_area_id, auxiliary_id
= NULL, locked_by = NULL    WHERE auxiliary_id = new_area_id AND locked_by =
```

`$our_session_id`

However, we might miss a descendant or two if it happens to be locked (by us, or by another session). That's no good.

Mmmmm...

I'm sure there's a better way, but for the time being I'll simply use brute force and my way through the subtree. If this really becomes a huge problem, we may want to refactor this routine.

- Uses [PageManager::lock\\_records\\_subtree\(\)](#)

*bool* function PageManager::section\_is\_open(\$section\_id) [*line 3675*]

**Function Parameters:**

- *int* **\$section\_id** the section of interest

### **shorthand for determining whether a section is opened or closed**

*void* function PageManager::show\_area\_menu([\$current\_area\_id = NULL]) [*line 1311*]

**Function Parameters:**

- *int|null* **\$current\_area\_id** the current area

### **construct a clickable list of available areas for the current user**

this iterates through all available areas in the areas table, and constructs a list of areas (as LI's in a UL) for which the current user has either administrative or view permissions. The latter shows in 'dimmed' form, because it is not allowed to view this area in pagemanager, but the area does exist and is available to the user (as a visitor rather than an administrator) so it should not be suppressed. If a user has neither view or admin permission, the area is suppressed. Note that every user has at least view permissions for a public area.

The current area is determined by parameter `$current_area_id`. This area gets the attribute `'class="current"'` which makes it possible to emphasise the current working area in the menu (via CSS).



`void function PageManager::show_dialog_delete_node_confirm($node_id) [line 1715]`

**Function Parameters:**

- `int $node_id` the page or the section to delete

**display a list of 1 or more nodes to delete and ask user for confirmation of delete**

this displays a confirmation question with a list of nodes that will be deleted. This list is either a single page or a single (empty) section OR a section with children (but not grandchildren). See function [task\\_node\\_delete\(\)](#) for more on this design decision. If the user presses Delete button, the nodes will be deleted, if the user presses Cancel then nothing is deleted.

`void function PageManager::show_edit_menu($node_id, [$is_page = FALSE], [$current_option = NULL]) [line 1366]`

**Function Parameters:**

- `int $node_id` the current node (the node being edited)
- `bool $is_page` if TRUE display the link to edit content too (this is for pages only)
- `int $current_option` the currently selected edit mode (basic, advanced or content)

**construct a clickable list of edit variants (basic, advanced and maybe content)**

this constructs a menu from where the user can navigate to edit basic properties of a node, advanced properties or even the content (for pages).

- **Uses** `$WAS_SCRIPT_NAME`
- **Uses** `$USER`
- **Uses** `$CFG`

`void function PageManager::show_tree() [line 1442]`

**create a tree-like list of nodes in the content area of \$this->output**

this constructs a tree-like view of the current area, with

- a title

- 0, 1 or 2 links to add a node
  - 0, 1 or 2 links to select a different tree view
  - all nodes that are currently show-able (depending on tree view mode)
- If the tree is empty, only the links to add a node are displayed (if the user has permission to add). The individual nodes are displayed using recursion with [show\\_tree\\_walk\(\)](#).

Note that the tree is constructed via nested UL's with LI's, all in name of 'graceful degradation': this interface still works if this program has no stylesheet whatsoever).

- **Uses** [PageManager::show\\_tree\\_walk\(\)](#)
- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$CFG

*void function PageManager::show\_treeview\_buttons() [line 1632]*

### **show one or two clickable links to change the view of the tree**

There are three different tree views:

- minimal: all sections are closed, only the top level nodes are shown
- custom: 1 or more sections are closed and 1 or more sections are opened
- maximal: all sections are opened, all nodes are shown

There is a fourth option:

- none: there are no sections at all

The view can be set to either TREE\_VIEW\_MINIMAL, TREE\_VIEW\_CUSTOM or TREE\_VIEW\_MAXIMAL. The current setting is remembered in session variable 'tree\_mode'. A list of customised nodes is kept in session variable expanded\_nodes[], an array keyed with the node number and a value of either TRUE (section is 'open') or FALSE (section is 'closed'). An empty array implies all nodes are closed (ie. default value is FALSE).

In some cases TREE\_VIEW\_CUSTOM is equivalent to one of the other two, e.g. when the user closes the last section, the effect looks exactly like TREE\_VIEW\_MINIMAL. If the user manually opens all sections, the effect is the same as TREE\_VIEW\_MAXIMAL.

In this routine we want to show 0, 1 or 2 buttons that allow the user to switch to another viewmode, but only if the new mode(s) are different from the current one.

The equivalency between modes can be determined by counting the number of open and closed sections. Here is a truth table.

N	open	closed	description
+---+	-----	+-----	-----

0	0	0	no sections at all, show 0 buttons (all modes are equivalent)
1	0	>=1	all sections are closed, 'custom' is equivalent with 'minimal'
2	>=1	0	all sections are opened, 'custom' is equivalent with 'maximal'
3	>=1	>=1	some open, some closed, 'custom' is distinct from the other two modes

Case N=0 In this case there are no sections at all, so there is no point to show any button at all because all views are equivalent: all available pages (if any) live at the top level and they are always visible.

Case N=1 In this case 'minimal' and 'custom' are equivalent. That means that if the current view is either 'minimal' or 'custom', the only viable option would be to set the view to 'maximal'. If the current mode is 'maximal', the only viable option is 'minimal'. Only 1 toggle-like button needs to be displayed.

Case N=2 In this case 'custom' and 'maximal' are equivalent. That means that if the current view is either 'custom' or 'maximal', the only viable option would be to set the view to 'minimal'. If the current mode is 'minimal', the only viable option is 'maximal'. Only 1 toggle-like button needs to be displayed.

Case N=3 In this case 'custom' is a distinct mode somewhere between 'minimal' and 'maximal'. This means that there are always two other options to choose from: if current mode is 'minimal' the choices are 'custom' and 'maximal', if current mode is 'custom' the choices are 'maximal' and 'minimal', if current mode is 'maximal' the choices are 'minimal' and 'custom'. This means that two buttons need to be displayed.

Strategy: First we step through the tree and we count the 'open' and 'closed' sections. After that we determine whether N is 0,1,2 or 3 (see truthtable). After that we calculate which of the three buttons need to be displayed, depending on the current mode (obtained via the session variable 'tree\_mode'). Subsequently the buttons are output to the 'content' area via \$this->output.

- **Uses \$WAS\_SCRIPT\_NAME**

*void function PageManager::show\_tree\_walk(\$node\_id, [\$m = "]) [line 1517]*

**Function Parameters:**

- *int \$node\_id* the first node of this tree level to show
- *string \$m* left margin for increased readability

### **display the specified node, optionally all subtrees, and subsequently all siblings**

this routine displays the specified node, including clickable icons for setting the default, editing the node etc. from the current tree. After that, any subtrees of this node are displayed using recursion (but only if the section is 'opened'). This continues for all siblings of the specified node until there are no more (indicated by a sibling\_id equal to zero).

- **Usedby** [PageManager::show\\_tree\(\)](#)
- **Usedby** [PageManager::show\\_tree\\_walk\(\)](#)
- **Uses** [PageManager::show\\_tree\\_walk\(\)](#)
- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$CFG

*void function PageManager::task\_node\_add(\$task) [line 516]*

#### ***Function Parameters:***

- *string* **\$task** identifies whether a page or a section should be added

### **display a dialog to add a new page or section to the current area**

this displays a dialog where the user can add a node to the current area. If the user has no permissions to add a node at all, the result is an error message and the tree view

The value of \$task (which can be either TASK\_ADD\_PAGE or TASK\_ADD\_SECTION) determines which dialog to show.

Both dialogs are very similar (a page can have a module, a section cannot). The actual dialog is constructed based on a dialogdef, see the function [get\\_dialogdef\\_add\\_node\(\)](#).

- **Uses** \$USER

*void function PageManager::task\_node\_delete() [line 592]*

### **delete one or more nodes from an area after user confirmation**

this deals with deleting nodes from an area. There are two stages. Stage 1 is presenting the user with a list of selected nodes and offering the user the choice to confirm the delete or cancel the operation. Stage 2 is actually deleting the selected nodes (after the user confirmed the delete in stage 1), including the disconnection of pages and modules.

An important design decision was to limit the delete process to at most 1 tree level. This means the following. If a user attempts to delete a page, it is easy: after confirmation a single node is deleted from the database. If a user attempts to delete a section, it can be different. If the section is empty, i.e. there are no children, it is the same as deleting a page: only a single node record has to be deleted.

It becomes more dangerous if a section is filled, ie. has children. If all children are pages (or empty subsections), it is still relatively innocent because the worst case is that all pages in a section are deleted. If, however, the section contains subsections which in turn contain subsubsections, etc. the delete operation may become a little too powerful. If it would work that way (deleting a section implies *\_all\_* nodes in the subtree), it is possible to delete a complete area in only a few keystrokes, no matter how many levels.

In order to prevent this mass deletion, we decided to limit the delete operation to at most a single level. In other words: the user can delete

- a single page
- a single empty section
- a section with children but no grandchildren

If a user attempts to delete a section with children and grandchildren, an error message is displayed and nothing is deleted.

This forces the user to delete a complete tree a section at the time, hopefully preventing a 'oh no! what have I done' user experience.

We *\_always\_* want the user to confirm the deletion of a node, even if it is just a single page.

Note that a page that is readonly will not be deleted.

- **TODO** should we display trash can icons for sections with non-empty subsections in treeview? there really is no point, because we eventually will not accept deletion of sections with grandchildren. Hmmmmm.....
- **Uses** \$USER

*void function PageManager::task\_node\_edit(\$task) [line 677]*

### **Function Parameters:**

- *string* **\$task** identifies whether the basic or advanced properties should be edited

### **display a dialog where the user can edit basic or advanced properties of a node**

this constructs a dialog and a menu where the user can edit the properties of a node. We check the user's permissions and if that works out we try to obtain a lock on the record. If that succeeds, we show the dialog (in funnel mode). If we don't get the lock, we inform the user about the other user who holds the lock. In case of error (e.g. no permissions or no lock) we fall back on displaying the area menu and the treeview.

Note: the lock is released once the user saves the node OR cancels the edit operation.

- **Uses** \$USER

*void function* PageManager::task\_node\_edit\_content() [*line 753*]

### **display a dialog where the user can edit the contents of a node via a module**

this effectively loads the module code associated with the specified node and subsequently calls the corresponding code in the module to display an edit dialog.

Just like the other edit routine (see [task\\_node\\_edit\(\)](#)) the node is locked first. Also the user permissions are checked. If we don't get the lock, we inform the user about the other user who holds the lock. In case of error (e.g. no permissions or no lock or an error loading the module) we fall back on displaying the area menu and the treeview. In that process the lock may be released.

- **Uses** [PageManager::module\\_show\\_edit\(\)](#)
- **Uses** \$USER

*void function* PageManager::task\_page\_preview() [*line 882*]

### **preview a page that is maybe still under embargo/already expired**

if the user has permissions to preview the specified page, she is redirected to the regular site with a special one-time permission to view a page, even if that page is under embargo or already expired (which normally would prevent any user from viewing that page).

There are several ways to implement such a one-off permit, e.g. by setting a quasi-random string in the session and specifying that string as a parameter to index.php. If (in index.php) the string provided matches this string in the session, the user is granted access. However, this leaves room for the user to manually change the node id to `_any_` number, even a node that that user is not supposed to see.

Another solution might have been to simply include index.php. I decided against that; I don't want to have to deal with a mix of admin.php and index.php-code in the same run.

I took a slightly different approach, as follows. First I generate a quasi-random string of  $N$  ( $N=32$ ) characters. (The length of 32 is an arbitrary choice.) This string is stored in the session variable. Then I store the requested node in the session variable, too. After that I calculate the md5sum of the combination of the random string and the node id. This yields a hash. This hash is passed on to index.php as the sole parameter.

Note that the quasi-random key never leaves the server: it is only stored in the session variables. Also, the node id is not one of the parameters of index.php, this too is only stored in the session variables.

Once index.php is processed, the specified md5sum is retrieved and a check is performed on the node id and the quasi-random string in the session variables in order to see if the hashes match. If this is the case, index.php can proceed to show the page preview. Note that there is no way for the user to manipulate the node id, because that number never travels to the user's browser in plain text.

Making a bookmark for the preview will use the hash, but the hash depends on a quasi-random string stored in the session. It means that when the session is terminated, the bookmarked page will no longer be visible, which is good. Also, whenever another page preview is requested, a new quasi-random string is generated, which also invalidates the bookmarked page.

The only thing that CAN happen is that the user saves the preview in a place where it can be seen by others. Also, the page will probably be cached in the user's browser.

With respect to permissions: I consider the preview privilege equivalent with edit permission: if the user is able to edit the node she can see the content of the node anyway. However, maybe we should look at different permissions. Put it on the todo-list.

- **TODO** the check on permissions can be improved (is `PERMISSION_XXXX_EDIT_NODE` enough?)
- **TODO** there is an issue with redirecting to another site: officially the url should be fully qualified (ie. `$CFG->www`). I use the shorthand, possibly without scheme and hostname (`$CFG->www_short`). This might pose a problem with picky browsers. See [calculate uri shortcuts](#) for more information.

- **Uses \$USER**
- **Uses \$CFG**

*void function PageManager::task\_save\_content() [line 1200]*  
*void function PageManager::task\_save\_newnode(\$task) [line 986]*

**Function Parameters:**

- *string* **\$task** distinguishes between saving a page or a section

### **save a newly added node to the database**

this validate and save the (minimal) data for a new node (section or page). First we check which button press brought us here; Cancel means we're done, else we need to validate the user input. This is done by setting up the same dialog structure as we did when presenting the user with a dialog in the first place. This ensures that WE determine which fields we need to look for in the `_POST` data. (If we simply were to look for fieldnames in the `_POST` array, we might be tricked in accepting random fieldnames. By starting from the dialog structure we make sure that we only look at fields that are part of the dialog; any other fields are ignored, minimising the risks of the user trying to trick us.)

The dialog structure is filled with the data POST'ed by the user and subsequently the data is validated against the rules in the dialog structure (eg. min length, min/max numerical values, etc). If one or more fields fail the tests, we redo the dialog, using the data from `_POST` as a new starting point. This makes that the user doesn't lose all other field contents if she makes a minor mistake in entering data for one field.

If all data from the dialog appears to be valid, it is copied to an array that will be used to actually insert a new record into the nodes table. This array also holds various other fields (not part of the dialog) with sensible default values. Interesting 'special' fields are 'sort\_order' and 'is\_hidden' and 'embargo'.

'sort\_order' is calculated automatically from other sort orders in the same parent section. There are two ways to do it: always add a node at the end or the exact opposite: always add a node at the beginning. The jury is still out on which of the two is the best choice (see comments in the code below).

'is\_hidden' and 'embargo' are calculated from the dialog field 'node\_visibility'. The latter gives the user three options: 'visible', 'hidden' and 'embargo'. This translates to the following values for 'is\_hidden' and 'embargo' (note that \$now is the current time in the form 'yyyy-mm-dd hh:mm:ss'):

visible: is\_hidden = FALSE, 'embargo' = \$now  
 hidden: is\_hidden = TRUE, 'embargo' = \$now  
 embargo: is\_hidden = TRUE, 'embargo' = '9999-12-31 23:59:59'



This makes sure that IF the user wants to create a 'secret' node, ie. under embargo until some time in the future, the new node is never visible until the user edits the node to make it visible. However, there is no need to manually add a date/time: we simply plug in the maximum value for a date/time, which effectively means 'forever'.

Finally, if the new node is saved, a message about this event is recorded in the logfile (even for new nodes under embargo). Also, if the node is NOT under embargo, an alert message is queued. Note that we do NOT send alerts on a page that is created under embargo. (There is a slight problem with this: once a user edits the node and sets the embargo to a more realistic value, e.g. next week, there is no practical way to inform the 'alert-watchers' about that fact: we cannot send an alert at the time that the embargo date is changed to 'next week' because the node is still under embargo. We don't have a handy opportunity to send alerts because the embargo date will eventually come around and the node will become visible automatically, without anyone being alerted to the fact. Mmmm....

- **TODO** about 'sort\_order': do we insert nodes at the end or the beginning of a parent section?
- **TODO** how do we alert users that an embargo date has come around? Do we schedule alerts via cron?

*void function PageManager::task\_save\_node() [line 1111]*

*void function PageManager::task\_set\_default() [line 420]*

#### **make the selected node the default for this level**

this sets a default node. First we make sure we have a valid environment and a node that belongs to the current area Then we check permissions and if the user is allowed to

- set the default bit on the target node, AND
- reset the default bit on the current default node  
we actually
- reset the default bit from the current default (if there is one), AND
- set the default bit for the selected node.

Note: if the user sets the default node on the current default node, the default is reset and subsequently set again (two trips to the database), This also updates the mtime of the record.

- **Uses \$USER**

*void function PageManager::task\_subtree\_collapse() [line 368]*

#### **close the selected section and perhaps change the view mode**

this closes the selected node, i.e. fold in the subtree starting at the selected node. This should only happen when the view mode is either maximal (all sections closed) or custom (some sections opened and some sections closed). It should never happen when mode is minimal.

The status of a node (opened or closed) is remembered in session variable 'expanded\_nodes': an array keyed with node\_id. If the corresponding value is TRUE, the section is considered open, all other values (FALSE or element is non-existing) equate to closed. See also [task\\_subtree\\_expand\(\)](#).

If the current mode is 'maximal', all sections are showed 'open'. When one of the sections is closed (via this routine), we change the mode to 'custom'. However, because the previous state was 'all sections are opened', we need to remember all the sections in the session variable 'expanded\_nodes' and set them all to TRUE except the section that needs to be closed. We do this by constructing the complete tree of the area and adding an entry for every section and setting the value to TRUE, except the node that needs to be closed.

- **Uses \$USER**

*void function PageManager::task\_subtree\_expand() [line 317]*

#### **open the selected section and perhaps change the view mode**

this opens the selected node, i.e. unfold 1 level of the subtree starting at the selected node. This should only happen when the view mode is either minimal (all sections closed) or custom (some sections opened and some sections closed). It should never happen when mode is maximal.

The status of a node (opened or closed) is remembered in session variable 'expanded\_nodes': an array keyed with node\_id. If the corresponding value is TRUE, the section is considered open, all other values (FALSE or element is non-existing) equate to closed. See also [task\\_subtree\\_collapse\(\)](#).

- **Uses \$USER**

*void function PageManager::task\_treeview() [line 247]*

#### **maybe change the current area and then show the tree and the menu for the current area**

this routine switches to a new area if one is specified and subsequently displays the tree of the new area or the existing current area.

*void function PageManager::task\_treeview\_set() [line 283]*

#### **this sets the tree view to the specified mode**

this is a simple routine to set the current view to one of the three possible views. The problem that sometimes 'custom' yields a view identical with 'maximal' or 'minimal' is dealt with when constructing the links to this routine `task_treeview_set()`. See [show treeview buttons\(\)](#) for more information.

## Class Theme

*[line 34]*

### Methods to access properties of a theme

- **Package** wascore

#### **Theme::\$area\_id**

*int = NULL [line 42]*

- **Var** \$area\_id the area to display

#### **Theme::\$area\_record**

*a = NULL [line 45]*

- **Var** copy of the area record from the areas table

### Theme::\$breadcrumb\_addendum

*array = array() [line 93]*

- **Var** \$breadcrumb\_addendum holds an array with additional anchors that can be set by the page's module

### Theme::\$config

*array = [line 57]*

- **Var** \$config all properties from themes\_areas\_properties for this combination of theme and area

### Theme::\$content

*array = array() [line 72]*

- **Var** collection of items/lines that are part of the content area

### Theme::\$domain

*string = [line 96]*

- **Var** \$domain the language domain where we get our translations from, usually 't\_<themenam>'

### Theme::\$dtd

*string = <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"  
"http://www.w3.org/TR/html4/loose.dtd"> [line 60]*

- **Var** the standard doctype (default: HTML 4.01 Transitional)

#### **Theme::\$friendly\_url**

*bool = TRUE [line 90]*

- **Var** \$friendly\_url if TRUE, links via index.php/nnn/book\_mark\_friendly\_text otherwise index.php?node=nnn

#### **Theme::\$high\_visibility**

*bool = FALSE [line 84]*

- **Var** this switches the navigation between image-based and text-based

#### **Theme::\$html\_head**

*array = array() [line 69]*

- **Var** collection of items/lines that will be output as part of the HTML-head section

#### **Theme::\$http\_headers**

*array = array() [line 66]*

- **Var** collection of individual http-headers that are to be sent before any HTML is sent

#### **Theme::\$messages\_bottom**

*array = array() [line 81]*

- **Var** collection of messages that are to be displayed via a javascript alert() at END of page

#### Theme::\$messages\_inline

*array = array() [line 78]*

- **Var** collection of messages that are to be displayed inline, contained within the HTML body

#### Theme::\$messages\_top

*array = array() [line 75]*

- **Var** collection of messages that are to be displayed via a javascript alert() at START of page

#### Theme::\$node\_id

*int = NULL [line 48]*

- **Var** \$node\_id the node (page) to display

#### Theme::\$node\_record

*a = NULL [line 51]*

- **Var** convenient copy of the node record copied from the area tree

#### Theme::\$preview\_mode

*bool = FALSE [line 87]*

- **Var** \$preview\_mode if TRUE, we are previewing a page (from pagemanager)

#### **Theme::\$theme\_id**

*int = NULL [line 39]*

- **Var** \$theme\_id primary key of the theme

#### **Theme::\$theme\_record**

*a = NULL [line 36]*

- **Var** copy of the corresponding record from the themes table

#### **Theme::\$title**

*string = [line 63]*

- **Var** the title to display in both the title tag and in the page itself (usually the areaname)

#### **Theme::\$tree**

*array = FALSE [line 54]*

- **Var** \$tree all nodes in area \$area\_id, keyed by \$node\_id (see [build\\_tree\(\)](#)).

Constructor *void* function Theme::Theme(\$theme\_record, \$area\_id, \$node\_id) *[line 110]*

#### **Function Parameters:**

- *array* **\$theme\_record** the record straight from the database
- *int* **\$area\_id** the area of interest
- *int* **\$node\_id** the node that will be displayed

### construct a Theme object

this stores the information about this theme from the database. Also, we construct/read the tree of nodes for this area `$area_id`. This information will be used later on when constructing the navigation. The node to display is `$node_id`.

*void function* Theme::add\_content(\$content) [*line 890*]

#### **Function Parameters:**

- *string/array* **\$content** the line(s) of text to add

### add a line or array of lines to the content part of the document

*void function* Theme::add\_html\_header(\$headerline) [*line 804*]

#### **Function Parameters:**

- *string* **\$headerline** headerline to add

### add a header to the HTML head part of the document

*void function* Theme::add\_http\_header(\$headerline) [*line 795*]

#### **Function Parameters:**

- *string* **\$headerline** headerline to add

### add an HTTP-header

*void function* Theme::add\_message(\$message) [*line 842*]

#### **Function Parameters:**



- *string/array* **\$message** message(s) to add inline

**add a message to the list of inline messages, part of the BODY of the document**

*void function Theme::add\_meta(\$meta) [line 867]*

**Function Parameters:**

- *array* **\$meta** an array with name-value-pairs that should be added to the HTML head part

**add a line with meta-information to the HTML head part of the document**

*void function Theme::add\_meta\_http\_equiv(\$meta) [line 879]*

**Function Parameters:**

- *array* **\$meta** an array with name-value-pairs that should be added to the HTML head part

**add a line with http-equiv meta-information to the HTML head part of the document**

*void function Theme::add\_popup\_bottom(\$message) [line 828]*

**Function Parameters:**

- *string/array* **\$message** message(s) to add

**add a message to the list of popup-messages at the BOTTOM of the document**

*void function Theme::add\_popup\_top(\$message) [line 814]*

**Function Parameters:**

- *string/array* **\$message** message(s) to add

**add a message to the list of popup-messages at the TOP of the document**

*void function Theme::add\_stylesheet(\$url) [line 856]*

#### **Function Parameters:**

- *string* **\$url** url of the stylesheet

### **add a link to a stylesheet to the HTML head part of the document**

*array* function Theme::calc\_breadcrumb\_trail(\$node\_id) [*line 1048*]

#### **Function Parameters:**

- *int* **\$node\_id** the node for which to calculate/set the path to the root node

### **set breadcrumbs in tree AND construct list of clickable anchors**

Note: the anchors are created with the current setting of the preview mode, so if that changes after we construct a list of anchors we're in trouble. I prefer late binding, so the real list to use should be created in the phase where the HTML-code is constructed. Mmmmm...

- **TODO** split into two separate routines, one to set the tree, another to construct the list of anchors

*void* function Theme::calc\_tree\_visibility(\$node\_id, &\$tree, [\$force\_invisibility = FALSE]) [*line 1000*]

#### **Function Parameters:**

- **\$node\_id**
- **&\$tree**
- **\$force\_invisibility**

### **calculate the visibility of the nodes in the tree**

- **TODO** how about making all nodes under embargo visible when previewing a page or at least the path from the node to display?

*void function Theme::construct\_tree(\$area\_id) [line 955]*

**Function Parameters:**

- **\$area\_id**

*void function Theme::dump\_subtree(\$node\_id, &\$tree) [line 966]*

**Function Parameters:**

- **\$node\_id**
- **&\$tree**

*string function Theme::friendly\_bookmark(\$title) [line 1142]*

**Function Parameters:**

- *string* **\$title** input text

**construct an alphanumeric string from a node title (for a readable bookmark)**

this strips everything from \$title except alphanumerics and spaces. The spaces are translated to an underscore. Length of result is limited to an arbitrary length of 50 characters.

*string function Theme::get\_address([\$m = ""]) [line 773]*

**Function Parameters:**

- *string* **\$m** left margin for increased readability

**return the reconstructed URL in a single (indented) line**

This constructs the exact URL (including the GET-parameters) of the current script. This URL is returned as HTML so it can be displayed. It is NOT meant to be a clickable link, but as a documentation of the actual URL that was used. Note that this URL can be suppressed by an appropriate 'display:none' in the stylesheet, making it an item that only appears on a hardcopy (media="print") and not on screen.

- **TODO** should we add additional text to the address, e.g. prefix 'URL: ' or something? now it is just a plain old URL without any comments whatsoever.

*string* function Theme::get\_bottomline([\$m = ""]) [line 747]

**Function Parameters:**

- *string* **\$m** left margin for increased readability

### show 'powered by' and (maybe) report basic performance indicators

This calculates the execution time of the script and the number of queries. Note a special trick: we retrieve the translated string in a dummy variable before calculating the number of queries because otherwise we might miss one or more query from the language/translation subsystem.

Note: for the time being the performance report commented out (2010-12-08).

*string* function Theme::get\_content([\$m = ""]) [line 354]

**Function Parameters:**

- *string* **\$m** left margin for increased readability

### get all lines in the content DIV in a single properly indented string

*void* function Theme::get\_div\_breadcrumbs([\$m = ""]) [line 447]

**Function Parameters:**

- **\$m**

### construct breadcrumb trail

- **TODO** how about adding a title to the items? or do we do that already?

*string* function Theme::get\_div\_messages([\$m = ""]) [*line 393*]

**Function Parameters:**

- *string* **\$m** left margin for increased readability

**get a perhaps bulleted list of messages in a DIV**

This constructs an unordered list with messages, if there are any. If there is no message at all, an empty string is returned (without DIV). If there is a single message, no bullet is added to the message. If there are two or more messages, bullets are added.

Note that this routine is an exception with respect to the DIV-tags: this helper routine DOES generate its own DIVs whenever there is at least 1 message. This means that there is no DIV at all when there are no messages.

*string* function Theme::get\_html() [*line 222*]

**construct an output page in HTML**

This constructs a full HTML-page, starting at the DTD and ending with the html closing tag.

The page is constructed using nested DIVs, the layout is taken care of in a separate style sheet. All knowledge about the structure of the page is contained in this routine.

The performance of the script (# of queries, execution time) is calculated as late as possible, to catch as much as we can. Therefore the construction is done in two parts and performance is calculated last.

The contents of the various DIVs is constructed in various helper routines in order to make this routine easy to read (by humans that is). The various helper routines all are called with a string of space characters; this should improve the readability of the page that is generated eventually.

Note that the routine `$this->get_div_messages()` does in fact generate its own DIV tags. This is done in order to completely get rid of the message DIV, we do not even want to see an empty DIV if there are no message.

The same logic applies to the breadcrumb trail.

*string* function Theme::get\_html\_head([\$m = ""]) [*line 293*]

**Function Parameters:**

- *string* **\$m** left margin for increased readability

## get all lines in the HTML head section in a single properly indented string

- **TODO** also deal with Bazaar Style Style Sheets at node level in this routine

*string* function Theme::get\_jumpmenu([\$m = ""]) [*line 689*]

### **Function Parameters:**

- *string* **\$m** add readability to output

## construct a simple jumplist to navigate to other areas

this constructs a listbox with areas to which the current user has access. The user can pick an area from the list and press the [Go] button to navigate to that area. Only the active areas are displayed. Private areas are only displayed when the user actually has access to those areas.

*string* function Theme::get\_lines(\$a, [\$m = ""]) [*line 367*]

### **Function Parameters:**

- *string* **\$m** left margin for increased readability
- **\$a**

## get lines from an array in a single properly indented string

This is a workhorse to convert an array of lines to a properly indented block of text.

*string* function Theme::get\_logo([\$m = ""]) [*line 486*]

### **Function Parameters:**

- *string* **\$m** left margin for increased readability

## construct an image tag with the area logo

This constructs HTML-code that displays the logo.

- **TODO** should we take path\_info into account here too???? how about /area/aaa/node/nnn instead of /aaa/nnn???

*void function Theme::get\_menu([\$m = ""]) [line 627]*

### **Function Parameters:**

- **\$m**

*void function Theme::get\_navigation([\$m = "], [\$textonly = FALSE]) [line 607]*

### **Function Parameters:**

- **\$m**
- **\$textonly**

*string function Theme::get\_popups(\$messages, [\$m = "]) [line 428]*

### **Function Parameters:**

- *string* **\$m** left margin for increased readability
- *array* **\$messages** @messages a collection of message to display via alert()

## construct javascript alerts for messages

This constructs a piece of HTML that yields 0 or more calles to the javascript alert() function, once per message. If no messages need to be displayed an empty string is returned.

*bool|array function Theme::get\_properties(\$theme\_id, \$area\_id) [line 946]*

### **Function Parameters:**

- *int* **\$theme\_id**

- `int $area_id`

retrieve configuration parameters for this combination of theme and area

- Usedby [Theme::get\\_properties\(\)](#)
- Uses [Theme::get\\_properties\(\)](#)

*string* function Theme::get\_quickbottom([*\$m* = ""]) [*line 539*]

**Function Parameters:**

- *string* **\$m** left margin for increased readability

**construct a list of quicklinks for bottom of page (if any)**  
(see also [get\\_quicktop\(\)](#)).

- Uses [Theme::get\\_quicklinks\(\)](#)

*string* function Theme::get\_quicklinks(*\$m*, *\$quick\_section\_id*) [*line 563*]

**Function Parameters:**

- *string* **\$m** left margin for increased readability
- *string* **\$quick\_section\_id** the name of the property that holds the section containing these quicklinks

### **workhorse for constructing list of quicklinks**

This creates HTML-code for links that can be displayed at the top of the page. These links are the pages (but not subsections) defined in the `quicktop_section_id` in `$this->config`.

Note that this array may or may not exist and also that the section may or may not exist and



that the section may or may not contain any visible pages. Mmm, that's a lot of may/maynot's...

Also note that these links are always displayed as text, even if a graphics image is defined in the corresponding node. The contents of the section can be found in `$this->tree`.

- **TODO** should we take Apache's PATH\_INFO feature into account to create friendly links?
- **Usedby** [Theme::get\\_quickbottom\(\)](#)
- **Usedby** [Theme::get\\_quicktop\(\)](#)

*string* function Theme::get\_quicktop([\$m = ""]) [*line 526*]

**Function Parameters:**

- *string* **\$m** left margin for increased readability

**construct a list of quicklinks for top of page (if any)**  
(see also [get\\_quickbottom\(\)](#)).

- **Uses** [Theme::get\\_quicklinks\(\)](#)

*string* function Theme::node2anchor(\$node\_record, [\$attributes = NULL], [\$textonly = FALSE]) [*line 1092*]

**Function Parameters:**

- *array* **\$node\_record** the node record to convert
- *array* **\$attributes** optional attributes to add to the HTML A-tag
- *bool* **\$textonly** if TRUE, no clickable images will be returned

**construct an anchor from a node record**

This constructs an array with key-value-pairs that can be used to construct an HTML anchor tag. At least the following keys are created in the resulting array: 'href', 'title' and 'anchor'. The latter is either the text or a referent to an image that is supposed to go between the opening tag and closing tag. Furthermore an optional key is created: target. The contents of the input array \$attributes is merged into the result.

If the parameter \$textonly is TRUE the key 'anchor' is always text. If \$textonly is NOT TRUE, the 'anchor' may refer to an image.

Note that the link text is always non-empty. If the node record has an empty link\_text, the word 'node' followed by the node\_id is returned. (Otherwise it will be hard to make an actual clickable link).

*void function Theme::send\_headers() [line 162]*

**send collected HTTP-headers to user's browser**

This sends the headers that still need to be sent. These are collected in the array \$this->http\_headers. If headers are already sent, this fact is logged (and the collected headers are not sent).

*void function Theme::send\_output() [line 188]*

**send collected output to user's browser**

This first sends any pending HTTP-headers and subsequently outputs the page that is constructed by \$this->get\_html()

*void function Theme::set\_preview\_mode(\$is\_preview\_mode) [line 910]*

**Function Parameters:**

- **\$is\_preview\_mode**

*void function Theme::show\_tree\_walk([\$m = ""], \$subtree\_id) [line 647]*

**Function Parameters:**

- **\$m**
- **\$subtree\_id**

# Class TranslateTool

[line 56]

## Methods to access properties of a language and modify translations

This class is used to manage languages and translations. The following functions are supplied

- add a new language
- edit the properties of an existing language (including active flag)
- add/edit translations of texts

The default action is to show a list of existing languages. From there the user can navigate to adding/editing language properties or manipulating translations in a particular language.

- **Package** wascore

### TranslateTool::\$domains

*array = array()* [line 67]

- **Var** list of all language domains grouped by program, modules, themes and install

### TranslateTool::\$languages

*array = array()* [line 64]

- **Var** list of all language records (including inactive ones), keyed with language\_key

### TranslateTool::\$output

*object|null = NULL* [line 58]

- **Var** collects the html output

#### TranslateTool::\$show\_parent\_menu

*bool* = FALSE [line 61]

- **Var** if TRUE the calling routing is allowed to use the menu area (e.g. show config mgr menu)

Constructor *void* function TranslateTool::TranslateTool(&\$output) [line 77]

#### **Function Parameters:**

- *object* **&\$output** collects the html output

#### **construct a TranslateTool object**

This initialises the TranslateTool and also dispatches the chore to do.

- **Uses** \$LANGUAGE
- **Uses** \$CFG

*array* function TranslateTool::a\_param(\$chore, [\$language\_key = NULL], [\$domain = NULL]) [line 966]

#### **Function Parameters:**

- *string* **\$chore** the next chore that could be done
- *string|null* **\$language\_key** the language of interest or NULL if none
- *string|null* **\$domain** the full domain of interest or NULL if none

#### **shorthand for the anchor parameters that lead to the translate tool**

*string* function TranslateTool::code\_highlight(&\$source, [\$highlight\_on = '<span

class="translatetool\_code">'], [\$highlight\_off = '</span>']) [line 1102]

**Function Parameters:**

- *string* **&\$source** the string that needs code highlighting
- *string* **\$highlight\_on** is inserted before the code element that is highlighted
- *string* **\$highlight\_off** is inserted after the code element that is highlighted

## highlight code constructs in texts that are to be translated

this routine highlights the following code constructs:

- HTML-tags such as '<strong>' and '<em>'
- Variables such as '{USERNAME}' and '{FILE}'
- Tildes in hotkeys such as '~Yes' and '~No'

All of these code elements are sandwiched between \$highlight\_on and \$highlight\_off. The HTML-tags are escaped using htmlspecialchars making it possible to actually display them as text (otherwise they might be rendered as actual code in the browser). The HTML-codes '

' and '<p>' receive special treatment: they are rendered as visible text and also as a newline.

Note: This assumes that all '{' are eventually followed by a '}'. As long as this is true, we can easily use a str\_replace() to sandwich {VARIABLE} between highlights. If there is only a single '{' or '}' the highlights won't match. It could be a problem and if it is, the relevant code should iterate / chomp chomp through the string with something like ereg('{{[a-zA-Z0-9\_]+}}',\$string,\$regs)

As an added bonus, sequences of two consecutive spaces are replaced with non-breakable spaces. This is handy for phrases that use spaces to indent text, e.g. in simple text-only email messages.

By using a reference we prevent the endless coping of (long) strings to the stack; this should save time & space.

- **TODO** should we turn to ereg() instead of a simple str\_replace() for {VARIABLE} highlighting?

bool function TranslateTool::diff\_to\_text(\$language\_key, \$full\_domain, &\$diff, &\$text) [line 1324]

**Function Parameters:**

- *string* **\$language\_key** identifies the language
- *string* **\$full\_domain** indicates the language domain
- *array* **&\$diff** contains all key-value-pairs for the modified translation
- *string* **&\$text** receives the complete sourcefile created from \$diff

## convert an array with key-value-pairs to a php source file that can be included as a user translation

All key-value-pairs are converted to something like this:

```
...
$string['key'] = 'value';
...
```

We specifically use single quotes in order to prevent any variable expansion within the strings. We do escape embedded single quotes, naturally. Furthermore, some metadata is added to the top of the resulting file, including information about the creation time, the program version that was used, the version of the (English) source file on which this translation is based and finally information about the file version of the system strings which was used to diff against.

Note: If the file with these system strings do not exist (because the language is all new, indicated by a version 'v0', `_all_strings` are stored in the diff and thus in the user file. That file could be used as a new starting point for the new language in a next version of the program.

Note: we try very hard to defeat tricks with the contents of the metadata (i.e. we don't trust `_full_name` and `_email` to not contain tricks like `'*' followed by '/'` (which would prematurely end the comment in the header) etc.

*array* function `TranslateTool::get_dialogdef_language([ $language_key = '' ])` [line 703]

### **Function Parameters:**

- *string* **\$language\_key** identifies the language to edit (empty string for add new language)

## construct the language dialog (used for both add and edit)

this constructs a language dialog definition, maybe filled with data The main difference between dialogs for add and edit is that an existing language code (`$language_key`) cannot be changed; the corresponding field is shown in 'viewonly' mode. Another small difference is that an existing language cannot have itself as a parent language.

Note that we populate the 'edit' dialog with existing data from `$this->languages`.

*array* function `TranslateTool::get_dialogdef_language_domain([ $language_key = '' ], [ $full_domain = '' ])` [line 782]

### **Function Parameters:**

- *string* **\$language\_key** identifies the language to edit
- *string* **\$full\_domain** identifies the language domain

### **construct the translation dialog for selected language and domain**

this constructs a translation dialog definition, filled with translations for language `$language_key` and domain `$full_domain`. The labels for the fields are derived from the English texts in `$full_domain`, in the order specified by the English file. If the English file contains comments, these are added to the item too (to be displayed as additional information for the translator). The current translation of the `$full_domain` is retrieved the usual way, via function `t()` (shorthand for `$LANGUAGE->get_phrase()`) but without translating any variables (e.g. `{VALUE}`). Note that if a translation of a phrase does not exist in the target language, the `get_phrase()` routine will eventually yield the English translation (after trying the language parents first). Also note that the translated phrases could be retrieved from a user file (ie. a file from `$CFG->datadir/languages/$language_key/$full_domain`).

- **TODO** try to figure this out: when the delimiter in `$name` was a dot '.' `$_POST` contained a '\_' instead. WTF? (it seems that a colon works... for now)
- **Uses** `$USER`
- **Uses** `$CFG`

*array* function `TranslateTool::get_domains()` [*line 994*]

#### **return an ordered list of translation domains**

this constructs a list of language domains, grouped by 'program','modules','themes' or 'install'. This array is the basis for validating full domains (in `$_POST`'ed data) and also to construct a menu.

Note that we use the translations from the files themselves in the current language to construct this list. Every translatefile should have at least the string 'translatetool\_title' and 'translatetool\_description'. Currently the sort order is based on the (internal) name of the modules. This should do the trick for translators: the order of files to translate in the menu does not depend on the translation of the module- or theme-title. (In the page manager and elsewhere it may be different).

*string* function `TranslateTool::get_icon_edit($language_key)` [*line 939*]

#### **Function Parameters:**

- *string* **\$language\_key**

**construct a clickable icon to edit the properties of this language**

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$CFG

*array* function TranslateTool::get\_options\_languages([*\$skip\_language\_key* = ""]) [*line 877*]

**Function Parameters:**

- *string* **\$skip\_language\_key** suppress this language in list (language cannot be its own parent)

**fetch a list of languages available as parent language**

this constructs a list of languages that can be used as a list of parent language options in a listbox or radiobuttons.

*void* function TranslateTool::get\_strings\_system(*\$language\_key*, *\$full\_domain*, &*\$string*, &*\$comment*, *\$languagekey*, *\$full\_domein*) [*line 1150*]

**Function Parameters:**

- *string* **\$languagekey** the two or three letter ISO 639 language code
- *string* **\$full\_domein** the language domain of interest
- *array* &**\$string** receives the translations (this parameter must be called 'string')
- *array* &**\$comment** receives the comments (this parameter must be called 'comment')
- **\$language\_key**
- **\$full\_domain**

**retrieve strings (translations) and comments from an official (system) translation file**

This routine reads the system translations for *\$language\_key* and *\$full\_domain* from a



file. For the translations of the main program we look for a single file in \$CFG->progdire/translations/\$language\_key/. For modules, themes and addons we try two different locations: one within the module/theme/addon directory tree and subsequently in the generic directory \$CFG->progdire/translations/\$language\_key/.

The names of modules/themes/addons are derived by stripping the 2-character prefix (m\_, t\_ or a\_) from the full domain.

Translations for the installer are searched for in the /program/install/translations tree.

*int* function TranslateTool::guess\_row\_count(&\$text, [\$maximum = 15]) [*line 1055*]

**Function Parameters:**

- *string* **&\$text** the string to analyse
- *int* **\$maximum** the maximum value this routine returns

**try to calculate a reasonable number of textarea rows based on the contents of \$text**

By using a reference we prevent the endless coping of (long) strings to the stack; this should save time & space.

*void* function TranslateTool::languages\_overview() [*line 175*]

**display list of languages with edit icons and an option to add a language**

this constructs the languages overview: a link to add a language, followed by a list of languages based on the languages in the database. Every language has an icon through which the properties of the language can be modified, including setting/resetting the active flag. (Only active languages can be used on the website and in the CMS). Note that we use `_all_` languages here, including inactive ones.

Note that the calling routine (the tools manager) is allowed to display a menu because we set the parameter `show_parent_menu` to `TRUE` here.

The constructed list looks something like this:

```
    Add a language
[E] Deutsch (de) (inactive)
[E] English (en)
[E] Nederlands (nl)
...
```

The clickable icons [E] lead to the Edit language properties. The clickable titles lead to the actual translations The clickable link 'Add an area' leads to the add new language dialog.

- **TODO** should we add a paging function to the (perhaps loooooong) list of languages?
- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$CFG
- **Uses** \$USER

*void function TranslateTool::language\_add() [line 232]*

**present the language dialog where the user can enter properties for a new language**

this displays a dialog where the user can enter the properties of a new language. These properties are:

- name (expressed in the language itself)
- key (2- or 3-letter code, presumably based on ISO 639-1 or ISO 639-2)
- parent\_key (this language is based on which existing language)
- active flag

The new language is saved via performing the 'chore' TRANSLATETOOL\_CHORE\_LANGUAGE\_SAVE\_NEW.

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER

*void function TranslateTool::language\_edit() [line 253]*

**show the language edit dialog**

display a dialog where the user can modify language properties. we re-use the routine that created the add language dialog.

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER

*void function TranslateTool::language\_save() [line 418]*

**validate and save modified data to database**

this saves data from the edit language dialog if data validates. If the data does NOT validate, the edit screen is displayed again otherwise the languages overview is displayed again.

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$LANGUAGE
- **Uses** \$CFG

*void function TranslateTool::language\_savenew() [line 301]*

**save the newly added language to the database**

This saves the essential information of a new language to the database, using sensible defaults for the other fields. Also, a data directory is created in \$CFG->datadir

If something goes wrong, the user can redo the dialog, otherwise we return to the languages overview, with the newly added language in the list, too.

Apart from the standard checks the following checks are done:

- the language key should be an acceptable directory name
- the language key should be lowercase
- the language key should not exist already (in \$this->languages)
- the directory should not yet exist
- the directory must be created here and now

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$LANGUAGE
- **Uses** \$CFG

*bool* function TranslateTool::put\_strings\_userfile(\$language\_key, \$full\_domain, &\$diff) [line 1258]

**Function Parameters:**

- *string* **\$language\_key** identifies the language to save
- *string* **\$full\_domain** indicates which language domain needs to be saved
- *array* **&\$diff** contains all key-value-pairs for the modified translation

**save new or changed translations to a file under CFG->datadir/languages**

*array* function TranslateTool::render\_translation\_dialog(\$href, &\$dialogdef, [\$method = 'post'], [\$attributes = '']) [line 1203]

**Function Parameters:**

- *string* **\$href** the target of the HTML form
- *array* **&\$dialogdef** the array which describes the complete dialog
- *string* **\$method** method to submit data to the server, either 'post' or 'get'
- *string|array* **\$attributes** holds the attributes to add to the form tag

**render a translation dialog based on a dialog definition**

This routine looks a bit like the generic [dialog\\_quickform\(\)](#). The differences are:

- we show a comment (if any) in a box before label and input
  - the labels don't have hotkeys based on tildes at all (except the submit buttons)
  - comments and labels are wrapped in separate div's especially for the occasion
- We do take any errors into account: fields with errors are displayed using the additional error class (which shows a label completely in red to indicate the error).

- Uses [html\\_form\(\)](#)

*void* function TranslateTool::show\_domain\_menu(\$language\_key, [\$current\_domain = '']) [line 904]

**Function Parameters:**

- *string* **\$language\_key** the language currently being edited

- *string* **\$current\_domain** the currently selected language domain (used to emphasize the option in the menu)

### display the domain menu via \$this->output

This displays a clickable menu on in the menu area on the left of the screen.

*bool* function TranslateTool::show\_parent\_menu() [*line 132*]

#### **allow the caller to use the menu area (or not)**

this routine tells the caller if it is OK to use the menu area (TRUE returned) or not (FALSE returned).

*bool* function TranslateTool::submit\_diff\_to\_project(\$language\_key, \$full\_domain, &\$diff) [*line 1383*]

#### **Function Parameters:**

- *string* **\$language\_key** identifies the language to submit
- *string* **\$full\_domain** indicates which language domain needs to be submitted
- *array* **&\$diff** contains all key-value-pairs for the modified translation

### send new or changed translations back to the project

This sends an e-mail back to the project with the translation. We do so in the form of an attachment, but with a 'safe' extension (.bin rather than .php). This means that we will be able to traverse any firewalls and spamfilters and malware detectors.

The `_notes` are used as the body of the message, the file is attached.

Note that we send a copy of the message to the site itself (either the from-address or the reply-to-address).

*void* function TranslateTool::translation\_edit() [*line 489*]

#### **show an edit dialog with phrases from \$full\_domain in \$language\_key**

After some sanity checking this routine shows al dialog where the user can edit translations for the selected language and domain. Note that this could be a huge dialog, depending on the size of the language domein ('admin' is notoriously large). Sending this routine to the browser can take some time.

*void* function TranslateTool::translation\_save() [*line 550*]

### **save the modified translations in a file in the tree CFG->datadir/languages/**

this routine validates the dialog data and attempts to save the changes in the file \$full\_domain in the directory CFG->datadir/languages/\$language\_key/. Also, we may need to send a message to the Website@School project with our changes (depending on the flag \_submit).

## **Class Useraccount**

*[line 251]*

### **Methods to access properties of the account of the logged in user**

This deals mainly with retrieving information about the user that is currently logged in. There is one exception: a user that is NOT logged in can still have a \$USER object, but there are no privileges in that case. The special user\_id in that case is 0.

The constructor reads the important data from the database. This includes things like the full name of the user and the email address. This information is stored in the object and can be used, e.g. \$USER->email. This information is basically copied from the table 'users'.

Furthermore, any properties for this user are retrieved from the table 'users\_properties'. All properties are stored in an array. These can be used directly via \$USER->properties['foobar'].

### **Access Control**

Finally we deal with access control. This has become quite complex but still manageable (I hope). There are six tables dealing with acl's:

- acls: site-wide permissions for jobs, intranet, modules and nodes
- acls\_areas: permissions for intranet, modules and nodes at the area level
- acls\_nodes: permissions for modules and nodes at the node level
- acls\_modules: permissions for modules at the site level
- acls\_modules\_areas: permissions for modules at the area level
- acls\_modules\_nodes: permissions for modules at the node level

The user has at least one associated ACL: the acl\_id field in the user record. Additional ACLs are associated with the user via group memberships. All ACLs are integer bitmasks where a '1' grants a permission for something and a '0' denies permission.

All bits '0' is a special case: this is the default (nothing allowed) and hence does not have to be stored: the mere non-existence of permissions implies no permissions.

All bits '1' is also a special case, dubbed 'ROLE\_GURU'. If an ACL has this value, it means that all current (and future) permissions are granted. A user with ROLE\_GURU can do anything.

Of the six tables, only the first one (acls) is read immediately in the constructor. The others are read on demand. This is done by initially setting the corresponding cache variable to NULL. If the table has been read, the variable will always be of type 'array', even though that array may be empty (indicating no permissions).

The permissions from the ACLs are combined between the user's acl and the optional group-acls. Only the combination of user and group permissions is cached in order to save space. This is done by OR'ing the permission bits. Note that the condition all bits '0' is not stored, also to save space.

There are some functions to test for individual permissions:

- has\_site\_permissions()
- has\_area\_permissions()
- has\_node\_permissions()
- has\_job\_permissions()
- has\_intranet\_permissions()
- has\_module\_site\_permissions()
- has\_module\_area\_permissions()
- has\_module\_node\_permissions()

Example: in order to determine whether a user has access to the intranet in area #2, the following could be used:

```
$area_id = 2;
if ($USER->has_intranet_permissions(ACL_ROLE_INTRANET_ACCESS,$area_id)) {
    ....
}
```

The effect of this call is as follows. First the routine checks the (already cached) intranet-permissions at the site level. If access is granted at the site level, there is no need to look any further because obviously this user has access to this intranet (private area) and all other current and future intranets. If not, the routine looks at intranet permissions at the area level. The first time this will trigger reading and caching the table for area-level permissions. In this case (intranet-access), the area-level permissions provide the definitive go/nogo for this user (there is no point in having intranet-access-permissions at the node level).

Note that the 'lower' ACL is only checked if the 'higher' does not provide answers. This saves unnecessary trips to the database.

Note that this works much the same for the other has\_XXX\_permissions(): first the site-level is tried, then the area-level and finally the node-level (when applicable).

#### ACLs for modules

Access to the CMS itself is fairly fine-grained. The permissions are stored in the fields 'permissions\_nodes' in the tables 'acls' (site-level), acls\_areas (area-level) and acls\_nodes (node-level). These permissions basically deal with the page manager (the piece de resistance of the whole system).

However, there are modules that can be linked to nodes, e.g. a chat or a forum or an agenda which also require authorised users and permissions. These permissions are stored in three tables: acls\_modules (site-level), acls\_modules\_areas (area-level) and acls\_modules\_nodes (node-level). This works pretty much the same as the permissions for the CMS itself, be it that there is an extra parameter, namely the module\_id.

Once again, the permissions are only read when necessary. I.e., if the site-level already grants a permission, the area and node level are not read from the database. This saves time and space.

## Roles and permissions

Permissions are individual flags that allow or disallow a certain feature, e.g. 'adding a page to a section'. In order to keep these permissions manageable groups of permissions are combined yielding a limited number of 'roles'. A 'role' is a combination of 1 or more permission bits. Assigning permissions (in the user account manager) is done by assigning these 'roles' to a user, either sitewide, areawide or per node. These roles are dubbed sitemaster, areamaster, sectionmaster, pagemaster and contentmaster. The 'higher' roles incorporate the 'lower' roles: permissions of a sectionmaster include those of a pagemaster and a contentmaster.

- **Package** wascore

### Useraccount::\$acIs

```
array = array('permissions_jobs' => ACL_ROLE_NONE,  
              'permissions_intranet' => ACL_ROLE_NONE,  
              'permissions_modules' => ACL_ROLE_NONE,  
              'permissions_nodes' => ACL_ROLE_NONE) [line 277]
```

- **Var** \$acIs contains the highest-level (site level) permissions, cached from table acIs

### Useraccount::\$acIs\_areas

```
null|array = NULL [line 283]
```

- **Var** \$acIs\_areas holds area-level permissions, cached from acIs\_areas

### Useraccount::\$acIs\_modules

```
null|array = NULL [line 289]
```

- **Var** \$acIs\_modules holds site-level permissions for modules, cached from acIs\_modules



#### **Useraccount::\$scls\_modules\_areas**

*null|array = NULL [line 292]*

- **Var** \$scls\_modules\_areas holds area-level permissions for modules, cached from acs\_modules\_areas

#### **Useraccount::\$scls\_modules\_nodes**

*null|array = NULL [line 295]*

- **Var** \$scls\_modules\_nodes holds node-level permissions for modules, cached from acs\_modules\_nodes

#### **Useraccount::\$scls\_nodes**

*null|array = NULL [line 286]*

- **Var** \$scls\_nodes holds node-level permissions, cached from acs\_nodes

#### **Useraccount::\$acl\_id**

*int = 0 [line 271]*

- **Var** \$acl\_id identifies the main acl for this user

#### **Useraccount::\$area\_permissions\_from\_nodes**

*array|null = NULL [line 310]*

- **Var** cache for admin permissions based on node permissions

#### **Useraccount::\$editor**

*string = [line 304]*

- **Var** \$editor the preferred editor for this user (empty implies system default from \$CFG->editor)

#### **Useraccount::\$email**

*string = [line 262]*

- **Var** \$email

#### **Useraccount::\$full\_name**

*string = [line 259]*

- **Var** \$full\_name

#### **Useraccount::\$high\_visibility**

*bool = FALSE [line 301]*

- **Var** \$high\_visibility

#### **Useraccount::\$is\_logged\_in**

*bool = FALSE [line 307]*

- **Var** \$is\_logged\_in TRUE if user is logged in, FALSE otherwise

#### **Useraccount::\$language\_key**

*string = [line 265]*

- **Var** \$language\_key

#### **Useraccount::\$path**

*string = [line 268]*

- **Var** \$path directory that holds the personal data files relative to "{\$CFG->datadir}/users/"

#### **Useraccount::\$properties**

*array = array() [line 298]*

- **Var** \$properties

#### **Useraccount::\$related\_acls**

*array = array() [line 274]*

- **Var** \$related\_acls holds acl\_id -> groupname/capacity pairs related to this user

#### **Useraccount::\$username**

*string = [line 256]*

- **Var** \$username

**Useraccount::\$user\_id**

*int* = 0 [line 253]

- **Var** \$user\_id

Constructor *void* function Useraccount::Useraccount([\$user\_id = 0]) [line 318]

**Function Parameters:**

- *int* **\$user\_id** identifies data from which user to load, 0 means no user/a passerby

## get pertinent user information in core

*array* function Useraccount::fetch\_acls\_from\_table(\$table, \$where) [line 567]

**Function Parameters:**

- *string* **\$table** name of the table which holds the acls
- *string* **\$where** a ready-to-use whereclause that selects the relevant acls based on acl\_id

## retrieve acl-data from table into a sparse array

*bool* function Useraccount::has\_area\_permissions(\$mask, \$area\_id, [\$field = 'permissions\_nodes']) [line 407]

**Function Parameters:**

- *int* **\$mask** bitmap of OR'ed permissions to test for
- *int* **\$area\_id** which area to test
- *string* **\$field** name of permissions to check (default 'permissions\_nodes')

### **determine user's permissions for an area**

this looks at the area-level permissions for manipulating nodes and areas. However, we first look at the site-level permissions. If those already satisfy the request, we return immediately. If not, the permissions are fetched from the table `acls_areas` of from the cached data. We only fetch the data if it is really necessary.

*bool function Useraccount::has\_intranet\_permissions(\$mask, \$area\_id) [line 475]*

#### **Function Parameters:**

- *int* **\$mask** bitmap of OR'ed permissions to test for
- *int* **\$area\_id** which area to test

### **determine user's permissions for an intranet area**

this looks at the area-level permissions for intranet areas.

*bool function Useraccount::has\_job\_permissions(\$mask) [line 459]*

#### **Function Parameters:**

- *int* **\$mask** bitmap of OR'ed permissions to test for

### **determine user's permissions for a job**

*bool function Useraccount::has\_node\_permissions(\$mask, \$area\_id, \$node\_id, [\$field = 'permissions\_nodes']) [line 435]*

#### **Function Parameters:**

- *int* **\$mask** bitmap of OR'ed permissions to test for
- *int* **\$area\_id** which area to test
- *int* **\$node\_id** which node to test
- *string* **\$field** name of permissions to check (default 'permissions\_nodes')

### **determine user's permissions for a node within an area**

*bool* function Useraccount::has\_site\_permissions(\$mask, [\$field = 'permissions\_nodes']) *[line 382]*

**Function Parameters:**

- *int* **\$mask** bitmap of OR'ed permissions to test for
- *string* **\$field** name of permissions to check (default 'permissions\_nodes')

**determine user's permissions for the site-level**

this looks at the site-level permissions for manipulating nodes and areas etc. The permissions are cached from the table acls.

*bool* function Useraccount::is\_admin() *[line 492]*

**determine whether the user has administrator privilege**

If this user has access to the admin startcenter, she is considered an administrator. Further access depends on the other bits in the job permissions, but at least she is allowed to enter the system via admin.php.

*bool* function Useraccount::is\_admin\_pagemanager(\$area\_id) *[line 516]*

**Function Parameters:**

- *int* **\$area\_id** the area to examine

**determine whether the user has administrator privilege for pagemanager**

This routine determines whether a user has any privileges at all for the page manager. This is true in the following cases:

- the user has sitewide permissions that belong to one of the roles contentmaster, pagemaster, sectionmaster or areamaster, OR
- the user has areawide permissions for one of those roles, OR
- the user has permissions for one of those roles in at least one node in the requested area.

The calculations in the third case are cached for all areas.

*string* function Useraccount::where\_acl\_id([\$field = 'acl\_id']) *[line 615]*

**Function Parameters:**

- *string* **\$field** identifies the fieldname to check

### a convenient routine to construct a selection of acls

this constructs a where clause of the form '(acl\_id = 1) OR (acl\_id = 2) OR (acl\_id = 3)'

## Class UserManager

[line 40]

### User management

- **Package** wascore
- **TODO** Perhaps this class should be merged with the GroupManager class because there is a lot of overlap. Mmmmm.... maybe in a future refactoring operation.

### UserManager::\$output

*object|null* = NULL [line 42]

- **Var** collects the html output

### UserManager::\$show\_parent\_menu

*bool* = FALSE [line 45]

- **Var** if TRUE the calling routing is allowed to use the menu area (e.g. show account mgr menu)

Constructor *void* function UserManager::UserManager(&\$output) [line 54]

#### **Function Parameters:**

- *object* **&\$output** collects the html output

### construct a UserManager object

This initialises the UserManager and also dispatches the task to do. This also loads the loginlib: we need that in order to manipulate the user password.

*array|bool* function UserManager::areas\_expand\_collapse(\$areas\_open, \$area\_id) [*line 2173*]

#### **Function Parameters:**

- *array|bool* **\$areas\_open** current state of indicator(s) for 'open' and 'closed' areas
- *int|null* **\$area\_id** the area to expand/collapse or NULL if nothing needs to be done

### manipulate the current state if indicator(s) for 'open' and 'closed' areas

this manipulates the current state of 'open' and 'closed' areas in \$areas\_open. If \$area\_id is NULL, we don't have to do anything but simply return the current state. If \$area\_id is 0 (zero), we need to toggle all areas at once (area\_id = 0 implies the site level toggle) If \$area\_id is an integer, it is assumed to be a valid area\_id and that area should be toggled.

*array* function UserManager::a\_params([\$task = NULL], [\$user\_id = NULL], [\$module\_id = NULL]) [*line 1665*]

#### **Function Parameters:**

- *string|null* **\$task** the next task to do or NULL if none
- *int|null* **\$user\_id** the user of interest or NULL if none
- *int|null* **\$module\_id** the module of interest or NULL if none

### shorthand for the anchor parameters that lead to the user manager

*void* function UserManager::calc\_acl\_id(\$user\_id) [*line 2138*]

#### **Function Parameters:**

- **\$user\_id**

*bool* function UserManager::delete\_user\_acl(\$user\_id) [*line 1361*]

#### **Function Parameters:**



- *int* **\$user\_id** the key to the user account to delete

### **remove all records relating to a single acl\_id from various acl-tables**

this bluntly removes all records from the various acls\* tables for the acl\_id of this user and subsequently other records associated with this user. Whenever there's an error deleting records, the routine bails out immediately and returns FALSE. If all goes well, TRUE is returned. Any errors are logged, success is logged to DEBUG-log.

*array* function UserManager::get\_dialogdef\_add\_user() [*line 1859*]

### **construct the add userdialog**

*array* function UserManager::get\_dialogdef\_add\_usergroup(\$user\_id) [*line 1273*]

#### **Function Parameters:**

- *int* **\$user\_id** limit the options to groups this user is NOT already a member of

### **construct a dialogdef for selecting a group/capacity**

*bool/array* function UserManager::get\_dialogdef\_edit\_user(\$user\_id) [*line 1944*]

#### **Function Parameters:**

- *int* **\$user\_id** indicates which user to edit

### **construct the edit user dialog**

- **Uses \$LANGUAGE**

*array* function UserManager::get\_editor\_names() [*line 2103*]

### **prepare a list of available editors**

- **TODO** this list here is hardcoded: we do not expect to be adding or removing editors to/from the CMS soon. However, it might be cleaner to do this elsewhere.

*string* function UserManager::get\_fname(\$item) [*line 2156*]

**Function Parameters:**

- *array* **\$item** contains definition of a single field in a dialog

### **shorthand for the first readable name in a dialogdef item**

*string* function UserManager::get\_icon\_delete(\$user\_id) [*line 1779*]

**Function Parameters:**

- *int* **\$user\_id** the user to delete

### **construct a clickable icon to delete this user**

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$CFG

*string* function UserManager::get\_icon\_edit(\$user\_id) [*line 1806*]

**Function Parameters:**

- *int* **\$user\_id** the user to edit

### **construct a clickable icon to edit the properties of this user**

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$CFG

*string* function UserManager::get\_icon\_groupdelete(\$user\_id, \$group\_id) [line 1835]

**Function Parameters:**

- *int* **\$user\_id** the group to delete
- **\$group\_id**

**construct a clickable icon to delete a membership from this user**

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$USER
- **Uses** \$CFG

*int* function UserManager::get\_num\_user\_records(\$group\_id) [line 1742]

**Function Parameters:**

- *int* **\$group\_id** which group needs to be counted

**calculate the total number of users in a specific group**

this calculates the total number of users in group \$group\_id. If \$group\_id equates to GROUP\_SELECT\_ALL\_USERS, the grand total is returned, if it equates to GROUP\_SELECT\_NO\_GROUP the number of users without a group is calculated.

- **Uses** \$DB

array function UserManager::get\_options\_available\_groups\_capacities(\$user\_id) [line 1318]

**Function Parameters:**

- *int* **\$user\_id** the user to which this list of available groups applies

**construct a list of groups still available for this user**

this constructs an array with available groups/capacities for the user \$user\_id. If the user is already a member of all available groups or there are no groups at all, the list consists of a single option 'No groups available'.

The values in this list are constructed from the primary key values of the underlying groups\_capacities table. These two numbers (group\_id and capacity\_code) are separated with a colon ':' to make it easier to parse once we are to save the values (in the table users\_groups\_capacities).

The SQL-statement looks quite complex. What it does is using the table groups\_capacities as a starting point for `_all_` valid (ie `capacity_id != CAPACITY_NONE`) combinations of group and capacity. By left-joining the table users\_groups\_capacities with a very specific ON-clause, and leaving out the column capacity\_code, the resulting list consists of all combinations of group and capacity but without any entries that have a group of which the user is already a member, no matter what capacity. In other words: if a user is already a member of a group with capacity A, this user cannot be member of the same group with capacity B. Finally, the table groups is used to retrieve the group information such as the groupname and the active-flag.

The resulting list is ordered by groupname and subsequently by the sort\_order of the capacity\_code. However, inactive groups are sorted after the active groups so they appear near the bottom of the list.

array function UserManager::get\_user\_names(\$user\_id) [line 2090]

**Function Parameters:**

- *int* **\$user\_id** identifies the user of interest

**shortcut to retrieve the username and full name of the selected user**

array|bool function UserManager::get\_user\_records(\$group\_id, \$limit, \$offset) [line 1697]

**Function Parameters:**

- *int* **\$group\_id** selection for users
- *int* **\$limit** maximum number of records to retrieve
- *int* **\$offset** number of records to skip in result set

### **retrieve (a selection of) all user records from the database**

this retrieves a subset of all existing user accounts from the database. The selection depends on the value of \$group\_id:

- \$group\_id == GROUP\_SELECT\_ALL\_USERS (-1): all users ordered by active, username
  - \$group\_id == GROUP\_SELECT\_NO\_GROUP (0): all users without a group, ordered by active, username
  - otherwise: users in group \$group\_id, ordered by active, username
- Note that in the first two cases there is no capacity, in the third case every user has capacity relating to the specified group.

*bool* function UserManager::has\_job\_permission(\$user\_id, \$job) [*line 2127*]

#### **Function Parameters:**

- *int* **\$user\_id** group to check
- *int* **\$job** job a bitmask indicating a particular job

### **determine whether a user has permissions for a particular job**

this determines whether this user has permissions to access the specified job, e.g. do they have access to the page manager. If so, we can display the menu option, otherwise we can suppress it and keep the menu clean(er).

*void* function UserManager::show\_breadcrumbs\_adduser() [*line 1648*]

### **display breadcrumb trail that leads to the add new user dialog**

- **Uses** [UserManager::show\\_breadcrumbs\\_overview\(\)](#)
- **Uses** \$WAS\_SCRIPT\_NAME;

*void* function UserManager::show\_breadcrumbs\_overview() [*line 1604*]

## display breadcrumb trail that leads to users overview screen

- Usedby [UserManager::show\\_breadcrumbs\\_adduser\(\)](#)
- Usedby [UserManager::show\\_breadcrumbs\\_user\(\)](#)
- Uses \$WAS\_SCRIPT\_NAME;

*void function UserManager::show\_breadcrumbs\_user(\$user\_id) [line 1631]*

### **Function Parameters:**

- *int* **\$user\_id** the user of interest

## display breadcrumb trail that leads to the edit user dialog

- Uses [UserManager::show\\_breadcrumbs\\_overview\(\)](#)
- Uses \$WAS\_SCRIPT\_NAME;

*void function UserManager::show\_menu\_overview(\$group\_id) [line 1524]*

### **Function Parameters:**

- *int|null* **\$group\_id** identifies the current selection

## display a menu showing groups of users (if any) + corresponding breadcrumb trail

this constructs a list of links allowing for a quick selection of a subset of users This looks a little like this:

All users (66)  
No group (5)  
faculty (14)  
grade12 (7)  
...  
webmasters (2)

The indication of the current selection in the menu is based on \$group\_id. Most of the time this is a genuine group\_id. However, 'All users' and 'No group' are special cases:

- The value GROUP\_SELECT\_ALL\_USERS (-1) cannot be a genuine group\_id because these are always > 0.
- The value GROUP\_SELECT\_NO\_GROUP (0) cannot be a genuine group\_id because these are always > 0.

- **Uses** \$DB;
- **Uses** #AS\_SCRIPT\_NAME

*void function UserManager::show\_menu\_user(\$user\_id, [\$current\_task = NULL], [\$current\_module\_id = NULL])*  
[line 1419]

**Function Parameters:**

- *int* **\$user\_id** identifies the user
- *string* **\$current\_task** the task to show highlighted
- *int* **\$current\_module\_id** the current module to show highlighted

**show the user menu with current option highlighted**

this constructs the user menu. Only the relevant options are displayed (eg. if the user is not an admin, no pagemanager option is displayed).

*void function UserManager::show\_parent\_menu()* [line 134]

*void function UserManager::users\_overview()* [line 184]

**display a list of existing users and an option to add a user**

This constructs the heart of the user manager: a link to add a user, followed by a list of links for deleting an modifying selected (see below) users. The list of users is ordered as follows. First the active users are displayed, an after that the inactive users are displayed. The sort order is based on the short name of the user.

Note that a selection is made of all user accounts, based on a choice the user makes from the menu (see [show\\_menu\\_overview\(\)](#)). This list to show is selected as follows:

- if the parameter 'group' is NOT set in \$\_GET[] and this is the 1st time, all users are listed (equivalent with GROUP\_SELECT\_ALL\_USERS). If we are returning, the \$\_SESSION may contain another default group selection
- if the parameter 'group' is set to GROUP\_SELECT\_ALL\_USERS (-1), all users are listed
- if the parameter 'group' is set to GROUP\_SELECT\_NO\_GROUP (zero), all users without a group are listed
- if the parameter 'group' has another value, the users of that group are listed

The list of existing users is paginated, ie. if there are more than a screenfull, an additional paginator is displayed at the end of the list. The screen always starts with an add a user link though.

Note that the list of existing users shows the full name and the username in parenthese. If a 'real' group is selected (ie. not the collection of users without a group or all users), the capacity of that user in that group is also displayed.

Example: Amelia Cackle, a 'Principal' in the 'faculty' group, is displayed like this in the faculty group: Amelia Cackle (acackl) (Principal)

*void function UserManager::user\_add() [line 313]*

**present 'add user' dialog where the user can enter minimal properties for a new user**

this displays a dialog where the user can enter the minimal necessary properties of a new user. These properties are:

- name (e.g. 'hparkh')
- full name (e.g. 'Helen Parkhurst')
- a password
- an e-mail address
- the active flag

Other properties will be set to default values and can be edited later on by editing the user account.

The new user is saved via performing the task TASK\_USER\_SAVE\_NEW

- **Uses** \$WAS\_SCRIPT\_NAME

*void function UserManager::user\_admin() [line 1156]*



## show a dialog for modifying admin permissions for a user

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$CFG

*void function UserManager::user\_delete() [line 770]*

### **delete a user after confirmation**

this either presents a confirmation dialog to the user OR deletes a user with associated acls.

Note that this routine could have been split into two routines, with the first one displaying the confirmation dialog and the second one 'saving the changes'. However, I think it is counter-intuitive to perform a deletion of data under the name of 'saving'. So, I decided to use the same routine for both displaying the dialog and acting on the dialog.

- **TODO** should we also require the user to delete any files associated with the user before we even consider deleting it? Or is it OK to leave the files and still delete the user. Food for thought.
- **TODO** since multiple tables are involved, shouldn't we use transaction/rollback/commit? Q: How well is MySQL suited for transactions? A: Mmmmm.... Which version? Which storage engine?

*void function UserManager::user\_edit() [line 505]*

### **present an 'edit user' dialog filled with existing data**

- **TODO** maybe it is better to call this routine with \$user\_id as a parameter? that allows for moving from adduser() -> saveuser() -> edituser(\$user\_id). Mmmm, food for thought

*void function UserManager::user\_groupadd() [line 940]*

### **present 'add membership' dialog**

this displays a simple dialog where the user can add a membership to a user account, one at a time. Basically we show a picklist with all available group/capacity-combinations. Here "available" means:

- only groups of which the user is currently NOT a member
- only non-0 group/capacity-combinations that occur in the groups\_capacities\_table (capacity 0 implies: no capacity)

An additional feature is that the user can become member of inactive groups. However, these groups are sorted at the end of the picklist.

*void function UserManager::user\_groupdelete() [line 1068]*

**end the group membership for the selected user**

- Uses \$DB

*void function UserManager::user\_groups() [line 865]*

**present an overview of group memberships for the specified user**

this constructs a link to add a membership to the user account and a list of existing memberships, if any, including a delete button per membership.

The SQL-query retrieves the list of existing memberships from the database, ordered by the short groupname. The data is validated by joining to the table groups\_capacities. If for some reason there exists an invalid combination of group\_id and capacity\_code in users\_groups\_capacities table, it will not show up in the list here.

Note that it is currently not possible to change a users' group membership, i.e. you cannot promote a user from 'Member' to 'Chair' for a group: you have to delete the group membership first, and subsequently add it again with the correct capacity.

*void function UserManager::user\_groupsave() [line 976]*

**save the new group/capacity for the selected user**

this adds a record to the users\_groups\_capacities table, indicating the group membership and the corresponding capacity for the user.

- Uses \$WAS\_SCRIPT\_NAME

*void function UserManager::user\_intranet() [line 1114]*

## show a dialog for modifying intranet permissions for a user

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$CFG

*void function UserManager::user\_pagemanager() [line 1197]*

## show a dialog for modifying page manager permissions for a user

- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$CFG

*void function UserManager::user\_save() [line 532]*

## save edited user data to the database

*data function UserManager::user\_savenew() [line 337]*

## save a new user to the database

this saves a new user to the database. This involves at least two tables: a record in the users table with basic information and also a record with access control in the acls table.

- **TODO** shouldn't we end with the edit-user dialog rather than the users overview? that might make more sense...
- **TODO** maybe we should find a more elegant way to check a field for uniqueness
- **Uses** \$WAS\_SCRIPT\_NAME
- **Uses** \$CFG

*void function UserManager::user\_save\_basic(\$user\_id) [line 648]*

## Function Parameters:

- `int $user_id` the account to save (pkey in users table)

## save basic properties of user account

- **Uses** `$WAS_SCRIPT_NAME`

# Class Zip

[line 139]

## Create simple and compatible ZIP-archives

With this class it is possible to create ZIP-archives that are compatible with the original PKZip 2.04g. This class does not provide a way to read ZIP-archives.

There are three possible options for the output:

- write the ZIP-archive directly to a file (`OpenZipfile()`)
- output ('stream') directly to the user's browser, including appropriate headers (`OpenZipstream()`)
- collect the output in a buffer in memory (`OpenZipbuffer()`).  
There are two different ways to add to the ZIP-archive:
  - add a file from the filesystem (`AddFile()`)
  - add data from memory as if it was a file (`AddData()`)
 The ZIP-archive needs to be closed before it is useable (`CloseZip()`).

Special features:

- it is not necessary to manually add a directory to the ZIP-archive because all directories that lead to a file will be added automatically
  - both `AddFile()` and `AddData()` allow for on-the-fly (re)naming; i.e. the name of the file in the ZIP-archive can be different from the name of the file in the filesystem
  - it is possible to add a comment to an individual file
  - it is possible to add a comment to the ZIP-archive
- Limitations

This class might use a lot of memory when creating ZIP-archives, especially the

ZIP\_TYPE\_BUFFER variant which eventually requires the size of the resulting ZIP-archive plus (worst case) the size of the largest file plus the size of the largest compressed file. This might be a problem with large files or many, many smaller files. A workaround could be to either stream the ZIP-archive directly (ZIP\_TYPE\_STREAM) or write to a file (ZIP\_TYPE\_FILE) because those variants only require the size of the largest file, the largest compressed file and the size of the central directory.

This class is not able to read ZIP-archives.

This class either stores a file as-is using the PKZIP 'Store' method or compresses the file using the 'Deflate' method. There is no support for other (more advanced) compression algorithms and no encryption is used.

## References

I implemented this class using the following references.

- [1] The ultimate definition of the ZIP-archive format as published by PKWare, Inc. See: <http://www.pkware.com/appnote.txt> or <http://www.pkware.com/support/zip-application-note>. I used version 6.3.2 which was published on 28 September 2007.
- [2] RFC1950 - ZLIB Compressed Data Format Specification version 3.3, P. Deutsch, J-L. Gailly (May 1996), <http://www.faqs.org/rfcs/rfc1950>
- [3] RFC1951 - DEFLATE Compressed Data Format Specification version 1.3, P. Deutsch (May 1996), <http://www.faqs.org/rfcs/rfc1951>
- [4] Disk Operating System Technical Reference, IBM Corporation 1985, Chapter 5 (DOS Disk Directory).
- [5] Official registration of the application/zip MIME-type: <http://www.iana.org/assignments/media-types/application/zip>

## Examples

Typical usage of this class is as follows.

```
Example 1 - store 3 existing files in a ZIP-archive $zip = new Zip;
$zip->OpenFile("/tmp/test.zip");
$zip->AddFile("/tmp/foo.txt");
$zip->AddFile("/tmp/bar.txt");
$zip->AddFile("/tmp/baz.txt");
$zip->CloseZip();
```

```
Example 2 - store a chunk of data in a ZIP-archive in memory $zip_archive = "";
$data = "This is example-data that ends up in file QUUX.TXT";
$zip = new Zip;
$zip->OpenBuffer($zip_archive);
$zip->AddData($data,'QUUX.TXT');
```

```
$zip->CloseZip();
```

Example 3 - directly stream a file in a ZIP-archive and rename on the fly \$zip = new Zip;

```
$zip->OpenStream('htdocs.zip');  
$zip->AddFile("/var/www/index.html", 'INDEX.HTM');  
$zip->CloseZip();
```

All methods return TRUE on success or FALSE on failure. If the method failed, an (English) error message can be found in \$zip->Error.

- **Package** wascore

#### Zip::\$central\_directory

```
array = array() [line 145]
```

- **Var** \$central\_directory buffer for the central directory entries

This array is keyed by relative filename (both files and directories), no leading '/' though directories have a trailing '/'.

#### Zip::\$Error

```
string = [line 157]
```

- **Var** \$Error collects error messages if things go wrong

#### Zip::\$no\_name\_files

```
int = 0 [line 169]
```

- **Var** \$no\_name\_files is used to construct names for otherwise unnamed files

#### **Zip::\$offset**

*int* = 0 [*line 148*]

- **Var** \$offset always points to the next local file header in the ZIP-archive

#### **Zip::\$zip\_buffer**

*string* = [*line 166*]

- **Var** \$zip\_buffer reference to output buffer if \$zip\_type is ZIP\_TYPE\_BUFFER

#### **Zip::\$zip\_comment**

*string* = [*line 154*]

- **Var** \$zip\_comment a file wide comment

#### **Zip::\$zip\_filehandle**

*null|resource* = NULL [*line 163*]

- **Var** \$zip\_filehandle handle on the zipfile output if \$zip\_type is ZIP\_TYPE\_FILE

#### **Zip::\$zip\_path**

*string* = [*line 160*]

- **Var** \$zip\_path name of the zipfile if \$zip\_type is ZIP\_TYPE\_FILE

## Zip::\$zip\_type

*string* = ZIP\_TYPE\_NONE *[line 151]*

- **Var** \$zip\_type ZIP-archive destination: file, stream or buffer

Constructor *void* function Zip::Zip() *[line 172]*

**constructor initialises all variables**

*bool* function Zip::AddData(\$data, [\$filename = "], [\$comment = "], [\$timestamp = 0]) *[line 317]*

**Function Parameters:**

- *string* **\$data** the data to add to the ZIP-archive
- *string* **\$filename** the preferred name of the file in the ZIP-archive
- *string* **\$comment** an optional comment for this specific file
- *int* **\$timestamp** the unix timestamp to associate with the file

## add data to the current ZIP-archive

This adds the data to the current ZIP-archive.

*bool* function Zip::AddFile(\$path, [\$filename = "], [\$comment = "]) *[line 276]*

**Function Parameters:**

- *string* **\$path** the full (absolute) name of the file to add to the ZIP-archive
- *string* **\$filename** the preferred name of the file in the ZIP-archive (default is \$path)
- *string* **\$comment** an optional comment for this specific file

## add the contents of an existing file to the current ZIP-archive

this reads the file \$path into a buffer, and subsequently adds the data to the ZIP-archive.



*bool* function Zip::CloseZip() [*line 344*]

**finish the ZIP-archive by outputting the central directory and closing output**

this finishes the ZIP-archive by constructing and outputting the Central Directory and subsequently closing the output file (in case of ZIP\_TYPE\_FILE). The call to CloseZip() is necessary to create a complete ZIP-archive, including the Central Directory.

*string* function Zip::dos\_time\_date(\$timestamp) [*line 675*]

**Function Parameters:**

- *int* **\$timestamp** unix timestamp (seconds since 1970-01-01 00:00:00)

**construct an MS-DOS time and date based on unix timestamp**

this routine constructs a string of 2 x 2 bytes with the time and the date in the following format.

15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0  
h h h h h m m m m m m x x x x x

hhhhh = hour, from 0 - 23 (5 bits)  
mmmmm = minute, from 0 to 59 (6 bits)  
xxxxx = duoseconds, from 0 to 29 (5 bits)

15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0  
y y y y y y y m m m m d d d d d

yyyyyyy = year offset from 1980, from 0 - 119 (7 bits)  
mmmm = month, from 1 to 12 (4 bits)  
dddd = day, from 1 to 31 (5 bits)

Note that the time resolution is 2 seconds whereas the unix timestamp has a 1 second resolution. This means that the seconds are rounded down. Also note that the specification [4] indicates that the maximum value for year offset is 119 which corresponds with 2099 rather than the maximum of 127 which would yield the year 2107.

*string* function Zip::make\_suitable\_filename(\$filename) [*line 622*]

**Function Parameters:**

- *string* **\$filename** name to analyse/massage

### construct a suitable filename for use in ZIP-archive

this analyses and edits the string \$filename in such a way that a suitable name for use in a ZIP-archive remains. This means that:

- MS-DOS driverletters are removed from the path
- backslashes are replaced with slashes
- leading './' if any is removed
- a leading slash is removed

*bool function Zip::OpenZipbuffer(&\$buffer, [\$comment = "]) [line 252]*

#### **Function Parameters:**

- *string &\$buffer* a pointer to the buffer where we can write the ZIP-archive
- *string \$comment* an optional comment to include in the ZIP-archive

### prepare the user supplied buffer for subsequent ZIP-archive data

*bool function Zip::OpenZipfile(\$path, [\$comment = "]) [line 195]*

#### **Function Parameters:**

- *string \$path* the (absolute) pathname of the destination file
- *string \$comment* an optional comment to include in the ZIP-archive

### open a file for subsequent output of ZIP-archive

this opens the file \$path for writing and also sets the zip\_type to ZIP\_TYPE\_FILE. The optional \$comment is stored for future reference. The file must be closed afterwards via [CloseZip\(\)](#).

*bool function Zip::OpenZipstream(\$name, [\$comment = "]) [line 223]*

#### **Function Parameters:**

- *string \$name* the name of the ZIP-archive that is suggested to the browser
- *string \$comment* an optional comment to include in the ZIP-archive

### start with a stream (direct output) indicating an application/zip type of content

this starts the output of the ZIP-archive directly to the browser. The Content-Type and the Content-Disposition are set by sending headers. The stream must be closed afterwards via [CloseZip\(\)](#).

*bool function Zip::zip\_add\_data(&\$data, \$filename, \$comment, \$timestamp) [line 415]*

#### **Function Parameters:**

- *string* **&\$data** a pointer to a buffer with data to add to the ZIP-archive
- *string* **\$filename** the preferred name of the file in the ZIP-archive
- *string* **\$comment** an optional comment for this specific file (could be "")
- *int* **\$timestamp** the unix timestamp to associate with the file

### workhorse function to add data to the current ZIP-archive

This actually adds the data to the current ZIP-archive.

Note that we try to make a wise decision about compressed data: the compressed data should be smaller than the uncompressed data. If not, we don't bother and simply store the data as-is.

We also try to keep the number of copies of the data down to a minimum by not copying the \$data but selecting between \$data and \$zdata only when we are really ready to write output the data.

- **TODO** should we handle the possibility of an additional 4 bytes for DICTID (RFC1950, reference [2])?
- **TODO** should we handle the option of a better compression level (eg. level 9) in gzcompress()? we could check to see if CMF equals 0x78 and FLG is either 0x01, 0x5E, 0x9C or 0xDA the latter 4 values might have an effect on general purpose bit flag bits 2 and 3. for now we'll just keep it simple, but there might be a little something to improve here.

*bool function Zip::zip\_add\_directories(\$pathname, \$timestamp) [line 519]*

#### **Function Parameters:**

- *string* **\$pathname** contains 0, 1 or more directories that lead to the file that needs to be added
- *int* **\$timestamp** unix timestamp to associate with the directory

### **workhorse function to add 0, 1 or more directories to the current ZIP-archive**

this routine works from top to bottom through the specified path, adding directories to the archive. If a particular directory was already added before, it is not added again. This information is based on the existence of the corresponding key in the `central_directory` array.

*void* function Zip::zip\_error(\$function, \$message) [*line 600*]

#### **Function Parameters:**

- *string* **\$function** name of the function/method where the error occurred
- *string* **\$message** the error message to add

### **add an error message to the list of error messages**



# Package default Procedural Elements

## spellchecker.php

- **Package** default

*void function error\_handler(\$err) [line 63]*

***Function Parameters:***

- **\$err**

*void function escape\_quote(\$str) [line 57]*

***Function Parameters:***

- **\$str**

*void function print\_checker\_results() [line 69]*

*void function print\_suggs\_elem(\$suggs, \$index, \$text\_input\_idx) [line 43]*

***Function Parameters:***

- **\$suggs**
- **\$index**
- **\$text\_input\_idx**

*void function print\_textindex\_decl(\$text\_input\_idx) [line 31]*

***Function Parameters:***

- **\$text\_input\_idx**

*void* function print\_textinputs\_var() [*line 22*]

*void* function print\_words\_elem(\$word, \$index, \$text\_input\_idx) [*line 37*]

***Function Parameters:***

- **\$word**
- **\$index**
- **\$text\_input\_idx**

# fckeditor.php

- **Package** default

include\_once ["fckeditor\\_php4.php"](#)*[line 29]*

include\_once ["fckeditor\\_php5.php"](#)*[line 31]*



# fckeditor\_php4.php

- **Package** default

*boolean* function FCKeditor\_IsCompatibleBrowser() [*line 34*]

**Check if browser is compatible with FCKeditor. Return true if is compatible.**

# Package default Classes

## Class FCKEditor *[line 74]*

- **Package** default

### **FCKEditor::\$BasePath**

*string = [line 88]*

**Path to FCKEditor relative to the document root.**

### **FCKEditor::\$Config**

*array = [line 122]*

**This is where additional configuration can be passed.**

Example: `$oFCKEditor->Config['EnterMode'] = 'br';`

### **FCKEditor::\$Height**

*mixed = [line 102]*

**Height of the FCKEditor. Examples: 400, 50%**

### **FCKEditor::\$InstanceName**

*string = [line 82]*

**Name of the FCKEditor instance.**

- **Access** protected

#### **FCKEditor::\$ToolbarSet**

*string = [line 108]*

**Name of the toolbar to load.**

#### **FCKEditor::\$Value**

*string = [line 114]*

**Initial value.**

#### **FCKEditor::\$Width**

*mixed = [line 95]*

**Width of the FCKEditor. Examples: 100%, 600**

Constructor *void* function FCKEditor::FCKEditor(\$instanceName) *[line 130]*

#### **Function Parameters:**

- *string* **\$instanceName**

**Main Constructor. Refer to the `_samples/php` directory for examples.**

*void* function FCKEditor::Create() *[line 146]*

**Display FCKEditor.**

*string* function FCKEditor::CreateHtml() *[line 156]*

**Return the HTML code required to run FCKEditor.**

*string* function FCKEditor::EncodeConfig(\$valueToEncode) *[line 253]*

#### **Function Parameters:**

- *string* **\$valueToEncode**

**Encode characters that may break the configuration string generated by GetConfigFieldString().**

- **Access** protected

*string* function FCKeditor::GetConfigFieldString() [*line 222*]

**Get settings from Config array as a single string.**

- **Access** protected

*boolean* function FCKeditor::IsCompatible() [*line 211*]

**Returns true if browser is compatible with FCKeditor.**



# Package wasinstall Procedural Elements

## install.php

### **/program/install.php - the main entrypoint for website installation**

This is one of the main entry points for Website@School. Other main entry points are /admin.php, /cron.php, /file.php and /index.php. There is also /program/manual.php. Main entry points all define the constant WASENTRY. This is used in various include()ed files to detect break-in attempts.

- **Package** wasinstall
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: install.php,v 1.5 2011-05-06 16:12:54 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **TODO** how prevent third party-access to install.php after initial install? .htaccess? !exists(..../config.php)?
- **TODO** we should make sure that autosession is disabled in php.ini, otherwise was won't work
- **TODO** we should make sure that we can actually set cookies (necessary when logging in).
- **TODO** we should make sure that register globals is off
- **License** [GNU AGPLv3+Additional Terms](#)

```
INSTALL_DIALOG_CANCELLED = 11 [line 52]
INSTALL_DIALOG_CMS = 4 [line 45]
INSTALL_DIALOG_COMPATIBILITY = 6 [line 47]
INSTALL_DIALOG_CONFIRM = 7 [line 48]
INSTALL_DIALOG_DATABASE = 3 [line 44]
INSTALL_DIALOG_DONE = 9 [line 50]
INSTALL_DIALOG_DOWNLOAD = 10 [line 51]
INSTALL_DIALOG_FINISH = 8 [line 49]
INSTALL_DIALOG_INSTALLTYPE = 1 [line 42]
INSTALL_DIALOG_LANGUAGE = 0 [line 41]
INSTALL_DIALOG_LICENSE = 2 [line 43]
```

INSTALL\_DIALOG\_USER = 5 *[line 46]*  
PROJECT\_SITE = websiteatschool.eu *[line 53]*  
WASENTRY = \_\_FILE\_\_ *[line 37]*

**Valid entry points define WASENTRY; prevents direct access to include()'s.**

include\_once **dirname(\_\_FILE\_\_)."lib/utf8lib.php"** *[line 60]*

include\_once **dirname(\_\_FILE\_\_)."version.php"** *[line 59]*

# demodata.php

## /program/install/demodata.php - code to install the main demodata

this file, included from /program/install.php, contains a single routine which installs the main demodata. This is done only once during a fresh install of a site.

- **Package** wasinstall
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: demodata.php,v 1.3 2011-05-06 16:15:41 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

*bool function demodata(&\$messages, &\$config) [line 63]*

### **Function Parameters:**

- *array* **&\$messages** used to return (error) messages to caller
- *array* **&\$config** pertinent information about the site and also returns the area\_id's used for the demo

## **insert basic demonstration data; the foundation for the module/theme demonstration data**

this routine inserts all sorts of demonstration data as a foundation for the demonstration of various modules and themes.

The array &\$messages is used to pass (error) messages back to the caller. The overall result returned is TRUE on success, or FALSE on failure.

The parameter &\$config is used to communicate essential information about the site that is being installed, such as the main URL and the various directories. Also the information about the first user account is passed; this can be used to setup alerts etc. Finally, this array is used to return the three numbers of the three demonstration areas created.

The first demonstration area is a public area. This would be the area to show off all bells and whistles of the CMS. The second demonstration area is a private area. This area could be used to show off an intranet-type of application, maybe accessible only to members of the team. The third area is an in-active area, just for the heck of it.



Note that the demonstration data is to be translated. All translations can be found in /program/install/languages/LL/demodata.php where LL indicates the language code. The language to use is specified in the parameter \$config['language\_key'].

This routine is completely self-contained, even the translations are handled manually here.

*bool function demodata\_alerts(&\$messages, &\$config, &\$tr) [line 912]*

**Function Parameters:**

- *array &\$messages* used to return (error) messages to caller
- *array &\$config* pertinent information about the site
- *array &\$tr* translations of demodata texts

### **create a few alerts**

*bool function demodata\_areas(&\$messages, &\$config, &\$tr) [line 108]*

**Function Parameters:**

- *array &\$messages* used to return (error) messages to caller
- *array &\$config* pertinent information about the site
- *array &\$tr* translations of demodata texts

### **create three areas + themes**

*bool function demodata\_sections\_pages(&\$messages, &\$config, &\$tr) [line 552]*

**Function Parameters:**

- *array &\$messages* used to return (error) messages to caller
- *array &\$config* pertinent information about the site
- *array &\$tr* translations of demodata texts

### **create a few sections and pages**

*bool function demodata\_users\_groups(&\$messages, &\$config, &\$tr) [line 258]*

**Function Parameters:**

- *array* **&\$messages** used to return (error) messages to caller
- *array* **&\$config** pertinent information about the site
- *array* **&\$tr** translations of demodata texts

**create a handful of users/groups/capacities/acls**

This routine creates the following 4 groups:

- faculty (principals and teachers)
- team (principals and teachers and all other employees)
- seniors (pupils in grades 5 to 8)
- juniors (pupils in grades 1 to 4)

The following 7 group/capacities are also created

- faculty/principal (3)
- faculty/member (4)
- team/member (4)
- seniors/pupil (1)
- seniors/teacher (2)
- juniors/pupil (1)
- juniors/teacher (2)

The following 8 users are also created

- Amelia Cackle (acackl): Faculty/Principal, Team/Member
- Maria Montessori (mmonte): Faculty/Member, Team/Member, Seniors/Teacher
- Helen Parkhurst (hparkh): Faculty/Member, Team/Member, Juniors/Teacher
- Freddie Frinton (ffrint): Team/Member
- Andrew Reese (andrew): Seniors/Pupil
- Catherine Hayes (catherine): Seniors/Pupil
- Herbert Spencer (herberd): Juniors/Pupil
- Georgina King (georgina): Juniors/Pupil

Every user and every group/capacity gets their own acl

- faculty/principal: access to all private areas
- faculty/member: access to intranet in \$config['private\_area\_id']
- others get no special privileges

- **TODO** get rid of the \$wizard kludge!
- **TODO** should we append an underscore to the userpaths to make sure we don't clash with the first user account?



# index.php

## **/program/install/index.php - redirector for website installation**

The sole purpose of this file is to redirect users from /program/install to /program/install.php. The latter is the main entry point for website installation.

- **Package** wasinstall
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl)>
- **Version** \$Id: index.php,v 1.2 2011-02-03 14:04:03 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

## demodata.php

**/program/install/languages/en/demodata.php - translated messages for  
/program/install/demodata.php (English)**

This file holds the English texts that are used in the part of the installer that inserts the demonstration data. It is the basis for all other language files.

- **Package** wasinstall
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: demodata.php,v 1.3 2011-05-04 13:53:43 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

## install.php

**/program/install/languages/en/install.php - translated messages for  
/program/install.php (English)**

This file holds the English texts that are used in the installer. It is the basis for all other language files.

- **Package** wasinstall
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl)>
- **Version** \$Id: install.php,v 1.4 2011-05-04 13:53:43 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

## demodata.php

**/program/install/languages/nl/demodata.php** - translated messages for  
**/program/install/demodata.php (Dutch)**

This file holds the Dutch texts that are used in the part of the installer that inserts the demonstration data.

- **Package** wasinstall
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: demodata.php,v 1.2 2011-02-03 14:04:03 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

# install.php

**/program/install/languages/nl/install.php - translated messages for /program/install.php (Dutch)**

This file holds the Dutch translations that are used in the installer.

- **Package** wasinstall
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: install.php,v 1.3 2011-05-02 16:21:19 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)



## tabledata.php

### /program/install/tabledata.php defines core data in a generic way

This file contains the essential data for a new installation, i.e. the items in the configuration table that should exist, etc. This is all done in a generic (database-independent) way. This file defines an array called '\$tabledata' which contains one or more arrays with a tablename and yet another array with fieldname/fieldvalue pairs. This construction with nested arrays is converted to an actual SQL-statement in a function. That function also takes care of the table prefix, so we can simple refer to the bare tablenames here.

The reason to use this nested array construction is that it is easier to see which field gets which value compared to a (possibly very long) SQL-statement. Furthermore you don't need to worry about prefixing the table name and it is almost impossible to mismatch the number of fields and the number of values because they are combined in a \$key => \$value pair. Finally, all strings are automagically escaped with \$DB->escape() in the function that constructs the actual SQL-statement.

This definition file uses the PHP variable types, i.e. if you want to insert a number, you can specify a number (without quotes) and for a boolean you can use the PHP-values TRUE or FALSE. Here's an example. \$tabledata = array();

```
$tabledata[] = array('table' => 'tablename_without_prefix',  
    'fields' => array(  
        'string_field' => 'This is a string, even with unescaped "quotes"',  
        'boolean_field' => TRUE,  
        'integer_field' => 123,  
        'date_field' => '2008-02-01 23:34:45',  
        'double_field' => 1.234567,  
        'field_with_null_value' => NULL  
    )  
);
```

Note that a date field is handled like a string field.

- **Package** wasinstall
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: tabledata.php,v 1.2 2011-02-03 14:04:03 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

## tabledefs.php

**/program/install/tabledefs.php defines all core tables in a generic way**

This is the main data definition for Website@School. This file is used by the installation script [install.php](#) to create all main tables.

Here is a reminder for the allowed parameters for field- and key definitions. FIELDS | name | type | len | dec | unsigned\* | notnull | default | enum\_values | comment |

-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+										
serial*	req	req	-	-	-	-	-	-	-	opt
bool	req	req	-	-	-	opt	opt	-	-	opt
short	req	req	opt	-	opt	opt	opt	-	-	opt
int	req	req	opt	-	opt	opt	opt	-	-	opt
long	req	req	opt	-	opt	opt	opt	-	-	opt
float	req	req	opt	opt	opt	opt	opt	-	-	opt
double	req	req	opt	opt	opt	opt	opt	-	-	opt
decimal	req	req	opt	opt	opt	opt	opt	-	-	opt
number	req	req	opt	opt	opt	opt	opt	-	-	opt
varchar	req	req	opt	-	-	opt	opt	-	-	opt
enum	req	req	opt	-	-	opt	opt	req	-	opt
char	req	req	opt	-	-	opt	opt	-	-	opt
text	req	req	-	-	-	opt	-	-	-	opt
longtext	req	req	-	-	-	opt	-	-	-	opt
blob	req	req	-	-	-	opt	-	-	-	opt
longblob	req	req	-	-	-	opt	-	-	-	opt
date	req	req	-	-	-	opt	opt	-	-	opt
time	req	req	-	-	-	opt	opt	-	-	opt
datetime	req	req	-	-	-	opt	opt	-	-	opt
timestamp	req	req	-	-	-	opt	opt	-	-	opt

INDICES | name | type | unique | fields | reftable | reffields | comment |

-----+-----+-----+-----+-----+-----+-----+						
primary	-	req	-	req	-	opt
index	opt	req	opt	req	-	opt
foreign	opt	req	-	req	req	opt

req = required, opt = optional, - = not allowed

- **Package** wasinstall
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: tabledefs.php,v 1.2 2011-02-03 14:04:03 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker

- **TODO** automatically create appropriate sequence name for serial fields??? or add seqdefs too?
- **License** [GNU AGPLv3+Additional Terms](#)

# Package wasinstall Classes

## Class InstallWizard

[line 112]

**class for performing installation tasks**

Overview

Dialog screens

The installer basically consists of some six dialog screens where the user is supposed to enter some data (e.g. language, install type, etc.). Each of those screens has a [Next] button and most screens have a [Previous] button. Also, every screen has a [Cancel] button. The [Cancel] button always immediately leads to the Cancel screen and the whole process is stopped (by resetting the collected information in `$_SESSION['INSTALL']`). The [Next] button always validates/processes the data the user entered. If the results are good, we go to the next step. If the processing fails, we stay where we are (ie. the current dialog is re-displayed). The [Previous] button backs up one step, without saving or storing the user entered data; the user **MUST** press [Next] to save the data entered.

The Finish-dialog

The FINISH-dialog has no [Previous] button, because all the real work is done when the user presses [Next] in the CONFIRM-dialog. This is a one-time action (creating tables, filling with demodata, etc.) so it makes no sense to backup at that point.

The stage variable and backing up via the menu

The variable 'stage' moves along with the highest dialog the user has successfully reached. This variable is responsible for greying out/disabling the menu options. The menu can be used to jump back a few steps in the procedure. However, once the transition from CONFIRM to FINISH is made, it is no longer possible to return to previous steps (it makes no sense to do so because at that point the real work is already done). The jump to a particular step/dialog is done via the GET-parameter 'step'. The buttons all work via the POST'ed parameter dialog.

Special cases

There are a few special cases:

- download: this yields an immediate download of the constructed config.php and no further dialog is displayed
- done: this is a pseudo-dialog. In effect it is a redirect to the newly created site (either admin.php or index.php or perhaps manual.php).

- **Package** wasinstall

#### **InstallWizard::\$license**

*string* = [line 120]

- **Var** \$license ready-to-use HTML-code with the text of the license from /program/license.html

#### **InstallWizard::\$messages**

*string* = array() [line 114]

- **Var** \$messages collects error messages if any

#### **InstallWizard::\$results**

*array* = array() [line 117]

- **Var** \$results collects outcome of various compatibility results in human readable form

Constructor *void* function InstallWizard::InstallWizard() [line 128]

#### **constructor**

this constructs the install wizard and also makes sure that the INSTALL-array (kept in the \$\_SESSION array) is initialised with default values if it did not already exist.

*string* function InstallWizard::appropriate\_legal\_notices(\$high\_visibility, [\$m = ""]) [*line 2456*]

**Function Parameters:**

- *bool* **\$high\_visibility** if TRUE we return a text-only link, otherwise a clickable image
- *string* **\$m** margin to improve readability of generated code

**construct a link to appropriate legal notices as per AGPLv3 section 5**

This routine constructs ready-to-use HTML-code for a link to the Appropriate Legal Notices, which are to be found in /program/about.html. Depending on the highvisibility flag we either generate a text-based link or a clickabel image.

The actual text / image to use depends on the global constant WAS\_ORIGINAL. This constant is defined in /program/version.php and it should be TRUE for the original version of Website@School and FALSE for modified versions.

In the former case the anchor looks like 'Powered by Website@School', in the latter case it will look like 'Based on Website@School', which is in line with the requirements from the license agreement for Website@School, see /program/license.html.

**IMPORTANT NOTE**

Please respect the license agreement and change the definition of WAS\_ORIGINAL to FALSE if you modify this program (see /program/version.php). You also should change the file '/program/about.html' and add a 'prominent notice' of your modifications.

Note: a comparable routine can be found in [waslib.php](#).

*string* function InstallWizard::button(\$button) [*line 2725*]

**Function Parameters:**

- *string* **\$button** indicates which button to create, e.g. 'next', 'previous', 'cancel', 'finish', 'ok'.

**shorthand for creating a submit button in the correct style**

*bool* function InstallWizard::check\_compatibility() [*line 1273*]

**check certain compatibility issues and optionally return test results**

this routine performs a few tests and returns an overall go/nogo signal Human readable test results are stored in \$this->results. Return TRUE on passing all tests, FALSE otherwise + errors in \$this->messages

- **TODO** add more tests, e.g. for gd, safe\_mode, memory limit, etc.

*bool* function InstallWizard::check\_for\_nameclash(\$demodata, \$label, \$username) [*line 3133*]

**Function Parameters:**

- *bool* **\$demodata** is installation of demodata requested?
- *string* **\$label** name of the username field in dialog
- *string* **\$username** the proposed username for the webmaster account

**check for name clash of new user (webmaster) and user accounts from demodata**

This routine checks to see if the name the webmaster supplied is not one of the demodata accounts. If so, we flag the error in the messages.

Note: The list of accounts must be updated whenever the demodata is updated. This is a kludge but I'll leave it this way for the time being. See also the main file [demodata.php](#).

*bool* function InstallWizard::check\_license() [*line 479*]

**check if the user accepts the licences**

This is the companion routine for [show\\_dialog\\_license\(\)](#). It checks whether the user dutifully typed 'I agree'. Note that we check caseInsensitive, so 'i agree' is acceptable, as is 'I aGrEe'. Also note that we accept non-ascii UTF-8, say "J'accept'ee" or "J'ACCEPT'EE" which has an e-acute. Case folding to lowercase accepts all those variants.

*bool* function InstallWizard::check\_validation() [*line 1520*]

**shorthand to check the validation status of the relevant dialogs**

this checks the various validation flags. If a flag is false, the corresponding error message is added to \$this->messages and the function returns FALSE.

*void* function InstallWizard::clamscan\_installed(&\$clamscan\_path, &\$clamscan\_version) [*line 3416*]

**Function Parameters:**

- *string* **&\$clamscan\_path** path to binary program (output)
- *string* **&\$clamscan\_version** version of the program we found (output)

**try to locate clamdscan or clamscan on the server**

This routine checks to see if either clamdscan or clamscan can be found somewhere. This is done via educated guessing. On success we return the path to the binary program file in \$clamscan\_path and the output of the version command in \$clamscan\_version. The function returns TRUE if we did find the clamscan program.

Note that we scan the directories with opendir/readdir/closedir rather than rely on file\_exists() etc. because we would not find binaries with permissions 0711, which would otherwise be perfectly acceptable to execute with exec().

Also note that we suppress PHP-error messages that might be visible when we tread outside the open\_basedir.

*string* function InstallWizard::construct\_config\_php() [*line 2250*]

**prepare a configuration file based on the collected information**

*bool* function InstallWizard::create\_tables(\$filename) [*line 3275*]

**Function Parameters:**

- *string* **\$filename** contains the table definitions

**create tables in database via include()'ing a file with tabledefs**

- **Uses \$DB**

*void* function InstallWizard::end\_session\_and\_redirect() [*line 2077*]

**unset installation data, end session and redirect the user to elsewhere**

this redirects the user to one of the possible destinations as selected in the finish dialog (see [show\\_dialog\\_finish\(\)](#)). Also, the INSTALL-array is unset, effectively erasing the collected



data from the session. Subsequently the session cookie is reset, effectively ending the session. The effect is that the user has to start over if she returns to install.php. (The equivalent of 'logging off').

*void function InstallWizard::errorcount\_bump() [line 2978]*

#### **increment the error counter and perhaps slow things down**

this routine counts the number of errors. It is used to count the number of attempts to guess a valid host/username/passord triplet. If the number of errors reaches 3, a delay is added (the installation program sleeps for a while). On every additional error an extra delay is added (3 seconds at a time) until the total delay reaches 24 seconds. At that point the collected data are reset and effectively the user has to start over.

*void function InstallWizard::errorcount\_reset() [line 2995]*

#### **reset the error counter**

this routine resets the effect of [errorcount\\_bump\(\)](#).

*int function InstallWizard::fetch\_license(&\$license) [line 2783]*

#### **Function Parameters:**

- *string &\$license* receives ready-to-use HTML-code with the text of the license from /program/license.html

### **helper to retrieve the text of the LICENSE AGREEMENT for Website**

*bool function InstallWizard::gd\_supported(&\$details) [line 3486]*

#### **Function Parameters:**

- *string &\$details* returns detailed information about GD version and supported file formats

#### **retrieve information about GD and supported graphics file formats**

this routine determines whether GD is enabled and which graphics file formats are supported (check for GIF, JPG and PNG). If GD is not installed or if none of these three formats are supported, the routine returns FALSE. Details (version number, supported formats) are returned in &\$details.

GIF is a special case due to patent issues: there is a distinction between read support and write support (see the PHP-documentation for details). GD-version >= 2.0.28 provides full support. This routine makes the distinction between fully supported (GIF: Yes), reading but

not writing (GIF: Readonly) and not supported (GIF: No).

*array function InstallWizard::get\_default\_install\_values() [line 2117]*

**return an array with default configuration values**

this routine tries to calculate/guess the best default values for config.php. We do so by looking in the global \$\_SERVER variable. If that doesn't work, we simply make up sensible values. In the end it is up to the user to enter the correct data; the values here are mere defaults.

A first-time install should be possible without changing/editing the default values, i.e. a standard Next-Next-Finish-type of installation.

- **TODO** should we check the program version versus the stored program version here?
- **TODO** there is something wrong with the default for \$cms\_www; FIXME (commented out for now)

*array function InstallWizard::get\_dialogdef\_cms() [line 974]*

**fill an array with necessary information for the cms dialog**

Note that this is a very light-weight implentation of the dialogdef idea used in the main program: we don't do fancy stuff with labels, hotkeys, etc. KISS, because I don't want to rely on all the libraries of the main program with all their interconnections and dependencies; the installer should more or less be a stand-alone application.

Note: the order of 'cms\_demodata' and 'cms\_demodata\_password' is important: the field 'cms\_demodata' must come first. If not, the validation of the password is not skipped if demodata is left unchecked by the user. See also [save\\_cms\(\)](#).

*array function InstallWizard::get\_dialogdef\_database() [line 690]*

**fill an array with necessary information for the database dialog**

Note that this is a very light-weight implentation of the dialogdef idea used in the main program: we don't do fancy stuff with labels, hotkeys, etc. KISS, because I don't want to rely on all the libraries of the main program with all their interconnections and dependencies; the installer should more or less be a stand-alone application.

*array function InstallWizard::get\_dialogdef\_finish() [line 2011]*

**fill an array with necessary information for finish / jump dialog**

Note that this is a very light-weight implentation of the dialogdef idea used in the main

program: we don't do fancy stuff with labels, hotkeys, etc. KISS, because I don't want to rely on all the libraries of the main program with all their interconnections and dependencies; the installer should more or less be a stand-alone application.

*array function InstallWizard::get\_dialogdef\_installtype() [line 390]*

**fill an array with necessary information for installtype dialog**

Note that this is a very light-weight implementation of the dialogdef idea used in the main program: we don't do fancy stuff with labels, hotkeys, etc. KISS, because I don't want to rely on all the libraries of the main program with all their interconnections and dependencies; the installer should more or less be a stand-alone application.

*array function InstallWizard::get\_dialogdef\_language() [line 301]*

**fill an array with necessary information for language dialog**

Note that this is a very light-weight implementation of the dialogdef idea used in the main program: we don't do fancy stuff with labels, hotkeys, etc. KISS, because I don't want to rely on all the libraries of the main program with all their interconnections and dependencies; the installer should more or less be a stand-alone application.

*array function InstallWizard::get\_dialogdef\_user() [line 1168]*

**fill an array with necessary information for the first user dialog**

Note that this is a very light-weight implementation of the dialogdef idea used in the main program: we don't do fancy stuff with labels, hotkeys, etc. KISS, because I don't want to rely on all the libraries of the main program with all their interconnections and dependencies; the installer should more or less be a stand-alone application.

*array function InstallWizard::get\_list\_of\_install\_languages() [line 2749]*

**retrieve a list of available languages by querying the file system for install.php translation files**

this routine constructs a list of language codes and language names (in the languages themselves) based on the language subdirectories available under /program/install/. The resulting array of code-name-pairs is sorted by name.

Note that because the names of the languages are expressed in the languages themselves, this routine has the side-effect of reading `_all_` of the available language files into memory (see [t\(\)](#)).

Also note that the sort order is based on UTF-8 byte sequences, i.e. the order is 7-bit ASCII bytes, followed by 2-byte, 3-byte and 4-byte UTF-8 sequences. No problem for this list of languages IMHO.

array function InstallWizard::get\_manifests(\$path) [line 3248]

**Function Parameters:**

- *string* **\$path** top directory for the search for manifest files

**retrieve an array of manifests for modules, themes or languages**

this examines the file system starting in the directory \$path, looking for manifest files. These manifest files are named after the subdirectory they are in as follows. Example: If \$path is /program/modules, this routine steps through that directory and may find subdirectories 'htmlpage', 'guestbook' and 'forum'. Eventually these manifest files are include()'d:  
/program/modules/htmlpage/htmlpage\_manifest.php,  
/program/modules/guestbook/guestbook\_manifest.php and  
/program/modules/forum/forum\_manifest.php.

Every manifest file must describe the module (or language or theme) via the following construct:

```
$manifests['htmlpage'] = array('name' => 'htmlpage', ..., 'cron_interval' => 0);
```

After processing all the subdirectories of \$path, the resulting array \$manifests is returned. Note that pseudo-directories like '.' and '..' are not considered. Also, subdirectories 'foo' without the file 'foo\_manifest.php' are also ignored.

Note that the name of the manifest file itself is also stored in the array, but excluding the subdirectory name.

string function InstallWizard::get\_menu(\$dialog, \$stage, [\$m = ""]) [line 2515]

**Function Parameters:**

- *int* **\$dialog** indicates the current dialog
- *int* **\$stage** indicates the highest numbered dialog that was already reached
- *string* **\$m** margin for better readability of generated HTML-code

**construct a clickable menu which helps the user to jump back and forth in the funnel**

this constructs a menu that allows the user to jump to a another step in the procedure when appropriate. Two parameters are important: the \$dialog and the the \$stage. The \$dialog indicates the current dialog, i.e. the dialog that is currently displayed in the content area. This item in the menu is emphasised (e.g. the link is underlined via the style sheet). The \$stage indicates how far we are in the procedure. The installation consists of some eight steps, and the used is encouraged to perform all steps in the natural order, by repeatedly pressing the [Next] button in the dialogs. Every time a dialog appears to have valid data, the \$stage is incremented.

All the menu items after the current stage are greyed out and basically inaccessible for the

user. Menu items before the current stage are accessible, so it is possible to jump backwards to dialogs that were already processed but the only way to advance to a new screen is to use the [Next] (and provide valid data, obviously).

The greyed-out menu items have a href property consisting of a simple "#". This is interpreted by the browser as a relative link within the current page. The effect is that the current page stays on the screen, including any unsaved data the user may already have entered. By showing the links in a different colour (grey and not blue), the user can visually see which items are clickable and which are not.

By showing all the menu items and greying-out the inaccessible ones we effectively build a funnel and at the same time indicating which steps will follow in the procedure.

There is a special case when \$stage hits the FINISH-dialog. If the user has not yet reached that stage, all dialogs before the finish-dialog are active and the rest is greyed-out. Once the \$stage reaches the FINISH-dialog, all previous dialogs become instantly unreachable. This is because the step between the confirmation dialog and the finish dialog is the place where the actual installation takes place. That is a one-time operation and the user should not be able to jump backwards and change data after all the actual installation work is already done.

Note that the menu item to download the config.php is displayed before the finish dialog. This is because it appears more logical to me (but YMMV).

*array function InstallWizard::get\_options\_db\_type() [line 2959]*

#### **construct a list of database options**

This constructs an array with key-value-pairs indicating all available databases. Currently (september 2009) there is only one database supported: mysql. However, in the future we may support more databases, such as PostgreSQL.

*string function InstallWizard::get\_page([\$dialog\_title = "], [\$menu = "], [\$content = "], [\$help\_topic = 'install']) [line 2308]*

#### **Function Parameters:**

- *string \$dialog\_title* text to show in the browser's title bar (indicating where we are)
- *string \$menu* ready-to-use HTML-code comprising the menu at the left hand side of the page
- *string \$content* ready-to-user HTML-code holding the actual contents of the page
- *string \$help\_topic* the topic or subtopic in the manual to link to

#### **construct a complete HTML-page that can be sent to the user's browser**

this routine constructs a string containing the complete page to send to the user's browser, starting with the <html> opening tag and ending with the </html> closing

tag. The constructed page is returned as a string.

This routine also peeks into the INSTALL-array, e.g. for the language key and the high\_visibility flag.

If \$this->messages is not empty, the items in that array are displayed between the page header (logo+helpbutton) and the menu/content area. This is the feedback of the previous action to the user (if any).

Note that we hard-code the content type to be "text/html; charset=UTF-8" in a http-equiv right at the top of the <head>. This indicates the correct charset to the browser even if a generated page is stored by the user and later retrieved in which case there will be no http-header. (We cannot be sure that the user's browser correctly identifies the stored document as UTF-8 if that is not the default).

- **TODO** should we promote language and high\_visibility to function parameters instead of using \$\_SESSION directly?

*mixed* function InstallWizard::get\_utf8\_parameter\_string(&\$gpc, \$name, [\$default\_value = "], [\$error\_value = "], [\$maximum\_length = 255]) *[line 2854]*

**Function Parameters:**

- *array* **&\$gpc** a reference to the array to search (usually \$\_POST, \$\_GET or \$\_COOKIE)
- *string* **\$name** the name of the variable to retrieve
- *mixed* **\$default\_value** the value to return if parameter is not in \$gpc
- *mixed* **\$error\_value** the value to return if parameter is not valid UTF-8
- *mixed* **\$maximum\_length**

**return a valid (unquoted) UTF-8 string parameter typically from \$\_POST, or default value if none**

this retrieves a parameter string, typically from \$\_POST, and checks basic properties.

1. the string should not contain more than \$maximum\_length characters
2. the string should be valid UTF-8

If it is not a valid UTF-8 string or the string is too long, \$error\_value (default: empty string) is returned. If no string by the name \$name is present in \$gpc, the default value \$default\_value is returned. If there WAS a valid UTF-8 string, it is automatically UNquoted in

the process.

Note that we check the stringlength in two steps. First we check the worst-case UTF-8 string with 4-byte sequences for a length of  $4 * \$maximum\_length$ . Then, after establishing that the string is valid UTF-8 we make a more precise check of the length expressed in chars rather than bytes.

*array function InstallWizard::guess\_url() [line 2607]*

#### **educated guesses for scheme, host and portname from \$\_SERVER**

this routine tries to guess the various components of the url that was used to reach this script, based on the information in the global array \$\_SERVER. If no information can be guessed at all, the result is something like 'http://localhost'.

Note that the 'authority' is a combination of hostname and portnumber, but only if the portnumber is non-standard. For http and port 80, and https and port 443 the portnumber is suppressed, because these are the default ports for those schemes.

Note that we actually guess the url that should correspond with the document root.

*bool function InstallWizard::insert\_tabledata(\$filename) [line 3307]*

#### **Function Parameters:**

- *string \$filename* contains the table definitions

#### **fill tables in database via include()'ing a file with tabledata**

- **Uses \$DB**

*void function InstallWizard::is\_already\_installed() [line 3153]*

#### **check for previous install**

this routine checks to see if another installation should be allowed. Returns TRUE if the program was already installed or FALSE otherwise.

*string function InstallWizard::magic\_unquote(\$value) [line 2820]*

#### **Function Parameters:**

- *string* **\$value** a string value that is conditionally unescaped

**this circumvents the 'magic' in `magic_quotes_gpc()` by conditionally stripping slashes**  
 This routine borrowed from [waslib.php](http://waslib.php).

*string* function InstallWizard::mysql\_utf8mb3(\$utf8str) [*line 3561*]

**Function Parameters:**

- *string* **\$utf8str** valid UTF-8 encoded string

**massage string to contain only 3-byte UTF8-sequences**

this replaces an otherwise perfectly valid 4-byte UTF-8 sequence in \$utf8str with a 3-byte UTF-8 sequence equivalent with the Unicode replacement character U+FFFD.

The effect is that it leaves a hint that there used to be some character instead of silently discarding 4-byte sequences which MySQL does.

*int|bool* function InstallWizard::mysql\_utf8\_support(\$db\_link) [*line 3531*]

**Function Parameters:**

- *resource* **\$db\_link** the MySQL connection

**determine the level of UTF-8 support based on MySQL-server version**

MySQL support for UTF-8 was non-existent before 4.1.x and limited until 5.5.3. In this context 'limited' means: only the Basic Multilingual Plane (U+0000 ... U+FFFF) is supported, i.e. a maximum of 3-byte sequences per character.

As of 5.5.3 the full UTF-8 specification according to RFC 3629 is implemented. MySQL now has 'invented' yet another proprietary name for this character set: 'utf8mb4' (WTF?), and introduces the alias 'utf8mb3' for the pre 5.5.3 limited support for 'utf8' (WTF??), hinting that the meaning of 'utf8' may change in future versions to indicate 'utf8mb4' (WTF???). IM(NS)HO this is yet another reason to go looking for a decent replacement for MySQL. YMMV.

This routine returns exactly one of the values below (based on the server version).

- 0: there is no UTF-8 support available in this server
- 3: the limited 3-byte sequences are supported



- 4: full support for 4-byte sequences available, but using the stupid ad-hoc name 'utf8mb4' or the value FALSE if version information could not be obtained.

*bool* function InstallWizard::perform\_installation() [*line 1580*]

### **perform the actual initialisation of the cms**

this routine initialises the database: creates tables, inserts essential data (first user account, other defaults) and optional demonstration data.

The strategy is as follows.

- (1) manufacture a database object in the global \$DB
- (2A) create the main tables (from /program/install/tabledefs.php)
- (2B) insert essential data (from /program/install/tabledata.php)
- (2C) store the collected data (website title, etc.),
- (2D) create the first useraccount,
- (3) if necessary, create the data directory
- (4) record the currently available languages in the database

Once the main part is done, install modules and themes based on the relevant information that is stored in the corresponding manifest-file by performing the following steps for each module and theme:

- (5A) insert a record in the appropriate table with active = FALSE
- (5B) create the tables (if any tables are necessary according to the manifest)
- (5C) install the item by including a file and executing function <item>\_install()
- (5D) flip the active flag in the record from step 5A to indicate success  
Subsequently the optional demodata is installed.
- (6A) a foundation is created via the function demodata() from /program/install/demodata.php
- (6B) all modules + themes can add to the demo data via the appropriate subroutines  
If all goes well, this routine ends with an attempt to
- (7) save the config.php file at the correct location.  
(it is not an error if that does not work; it only means that the user has to upload the config.php file manually.

- **TODO** should we save the config.php to the datadir if the main dir fails? Mmmm.... security implications?
- **TODO** this routine badly needs refactoring

*void function InstallWizard::quasi\_random\_string(\$length, [\$candidates = 36]) [line 3345]*

**Function Parameters:**

- *int* **\$length** length of the string to generate
- *int* **\$candidates** number of candidate-characters to choose from

### generate a string with quasi-random characters

This routine borrowed from [waslib.php](#).

Note that this too is an ASCII-centric routine: we only use plain ASCII letters and digits and nothing of the 64000 other UNicode characters in the Basic Multilingual Plane. The reason is simple: 7-bit ASCII characters have the best chance of getting through communication channels unmangled so there.

*string function InstallWizard::render\_dialog(\$dialogdef, \$m) [line 2889]*

**Function Parameters:**

- *array* **\$dialogdef** contains labels, values and other information describing input elements
- *string* **\$m** improves readability of generated code

### quick and dirty dialogdef renderer

This is a small routine to render simple dialogs with strings, lists and checkboxes.

Note that every element in the \$dialogdef is in itself an array. Recognised elements in those arrays are:

- **label** (string): displayed before the actual input element
- **help** (string): additional information for the user, rendered after/under the input element
- **value** (mixed): the current value of the input element
- **show** (bool): if TRUE, the element is displayed/rendered, otherwise it is simply skipped
- **type** (enum): 's'=>string (text), 'p'=>password, 'l'=>list, 'b'=>bool(checkbox)
- **options**(array): array with key-value-pairs with acceptable choices (used in 'l' (list) elements)
- **minlength**(int): minimum length of an input string or password
- **maxlength**(int): maximum length of an input string or password

The names of the input elements are copied from the keys used in \$dialogdef.

*void function InstallWizard::run() [line 143]*

## main dispatcher for the Installation Wizard

This routine termines what needs to be done and does it by calling the corresponding workhorse routines.

*string* function InstallWizard::sanitise\_filename(\$filename) [*line 3369*]

### **Function Parameters:**

- *string* **\$filename** the string to sanitise

## sanitise a string to make it acceptable as a filename/directoryname

This routine borrowed from [waslib.php](#).

Note that this routine too is very ASCII-centric: in the end only ASCII-characters (52 letters, 10 digits and dash, dot and underscore) are allowed in the resulting file/directory name. However, by first mapping UTF-8 to ASCII (getting rid of diacriticals) we can make names more readable.

*bool* function InstallWizard::save\_cms() [*line 808*]

### **validate and store the CMS-data the user supplied**

This is the companion routine for [show\\_dialog\\_cms\(\)](#). It stores the user-supplied data about the website (paths etc.) We always store the data in the global `_SESSION`, even if something goes wrong. This makes that the user will use the latest values when re-doing the dialog.

We try to validate the specified directories: they should at least exist. The datadirectory should also be writable by us. If it not exists we try to create it (and remove it after the test). Note that the PHP `safe_mode` may complicate things here.

- **TODO** also take `safe_mode` into account? Should that be a requirement for succesfull installation?

*bool* function InstallWizard::save\_database() [*line 567*]

### **validate database information**

This is the companion routine for [show\\_dialog\\_database\(\)](#). It stores the user-supplied data about the database. We always store the data in the global `_SESSION`, even if something goes wrong. This makes that the user will use the latest values when re-doing the dialog. However, only when the values are valid, the parameter `db_validated` is set to `TRUE`. This is used lateron (in the confirmation phase).

This routine doubles as a gate keeper. Every time the user makes a mistake, an error counter is incremented and the script pauses for some time (see [errorcount\\_bump\(\)](#)). If there are too many errors, the script resets the data collected so far and the procedure starts from scratch. This is a (probably futile) attempt to make it harder to brute force an entry by repeatedly probing for database credentials. Unfortunately there is no easy way (at least one I can think of) to protect this script from repeated break-in attempts other than by simply removing or renaming this script. Oh well.

The following tests are performed:

- fields should not fail basic tests (min/max stringlength etc.)
- the database is not supposed to be in the list of 'forbidden' databases (e.g. 'test' or 'mysql')
- prefix must only use ASCII-letters A-Z or a-z, digits 0-9 or an underscore
- prefix must start with an ASCII-letter

If the above conditions are not satisfied we bail out immediately, without testing other information. Otherwise, we also perform these tests:

- is it possible to connect to the database server
- is it possible to select the specified database
- are there no tables in the database that start with the prefix

If something needs to be done about the prefix and we are in standard mode, we automatically switch to custom mode, allowing the user to edit the prefix too.

*bool function InstallWizard::save\_installtype() [line 357]*

#### **store the selected install type + high visibility flag**

This is the companion routine for [show\\_dialog\\_installtype\(\)](#). It stores the user-supplied choices for custom install and high visibility. The values in the radio button should be 0 for standard and 1 for custom install. The value we keep is a boolean indicating a custom install yes or no.

*bool function InstallWizard::save\_language() [line 271]*

#### **store the selected language**

This is the companion routine for [show\\_dialog\\_language\(\)](#). It validates and stores the user-supplied language key.

*bool function InstallWizard::save\_user() [line 1116]*

#### **validate and store the data for the first user account**

This is the companion routine for [show\\_dialog\\_user\(\)](#). It stores the information about the first user account. We always store the data in the global `_SESSION`, even if something goes wrong. This makes that the user will use the latest values when re-doing the dialog.

We try to validate at least the password:

- minimum of 8 characters
- minimum 1 upper case, 1 lower case, 1 digit

Also, both username and full name should not be empty

`void function InstallWizard::show_dialog_cancelled([$m = ""]) [line 2043]`

**Function Parameters:**

- *string* **\$m** margin for better readability of generated HTML-code

**show the user that the process has been cancelled**

this shows a screen with the message that the installation procedure has been cancelled. There is a single [OK] button that effectively allows the user to try again. The existing session (and all the data it might contain) is destroyed.

Note that we first construct the page (possibly in another language) in a separate variable before we destroy all data collected so far.

`void function InstallWizard::show_dialog_cms([$m = ""]) [line 769]`

**Function Parameters:**

- *string* **\$m** margin for better readability of generated HTML-code

**construct the dialog for essential cms data (title, paths, e-mail address)**

This dialog contains the following fields:

- website\_title (varchar(255))
- website\_from\_address (varchar(255))
- website\_replyto\_address (varchar(255))
- cms\_dir (varchar(240))
- cms\_www (varchar(240))
- cms\_progdir (varchar(240))
- cms\_progwww (varchar(240))
- cms\_dataroot (varchar(240))
- cms\_demodata (boolean)
- cms\_demodata\_password (varchar(255) (but only a sha1() or md5() hash is stored eventually)

Some fields are suppressed in the dialog if the user selected a Standard installation:

- website\_replyto\_address: copied from website\_from\_address
- cms\_progdir: constructed from cms\_dir
- cms\_progwww: constructed from cms\_www

- **TODO** can we suppress even more fields here in case of a Standard installation?

`void function InstallWizard::show_dialog_compatibility([$m = ""]) [line 1221]`

**Function Parameters:**

- *string* **\$m** margin for better readability of generated HTML-code

### **construct the comptibility overview**

this routine displays a tabular overview of minimal compatibility requirements and the current status/testresults. The table is constructed in a subroutine; we only deal with the display here.

Q: Why here, at the last stop before installation? A: Because we otherwise would leak information about our environment to complete strangers (assuming anyone can execute this script).

- **TODO** more tests to perform here: safe mode, memory limit, processing time limit, register globals

`void function InstallWizard::show_dialog_confirm([$m = ""]) [line 1441]`

**Function Parameters:**

- *string* **\$m** margin for better readability of generated HTML-code

### **construct the overview/confirmation dialog**

This dialog contains an overview of the information entered (excluding the passwords which are visually replaced with asterisks). This is the last chance the user gets to change the data entered. Once the user presses the [Next] button, the actual installation takes off.

`void function InstallWizard::show_dialog_database([$m = ""]) [line 509]`

**Function Parameters:**

- *string* **\$m** margin for better readability of generated HTML-code

### construct the dialog for database (server, host, username, password, etc.)

This dialog contains the following fields:

- db\_type (pick from enumerated list)
- db\_server (varchar(240))
- db\_username (varchar(240))
- db\_password (varchar(240))
- db\_name (varchar(240))
- db\_prefix (varchar(240))

One field is suppressed in the dialog if the user selected a Standard installation:

- db\_prefix

*void* function InstallWizard::show\_dialog\_finish([\$m = ""]) [*line 1957*]

#### **Function Parameters:**

- *string* **\$m** margin for better readability of generated HTML-code

### construct the finish screen

this dialog is displayed after a succesful installation. The user is prompted to select the next destination, which can be either admin.php (the backoffice), index.php (the frontpage), manual.php (the documentation) or the project's home page.

There is also an option to download config.php. Once the user's choice is submitted, the session is reset and config.php can no longer be downloaded. This session reset is done in the 'Done' dialog (see [end\\_session\\_and\\_redirect\(\)](#)).

Note that the boolean parameter INSTALL['config\_php\_written'] indicates whether the file config.php was already succesfully written in the designated location. If this is the case, we show a different message compared to the case where the user still needs to download+upload config.php.

*void* function InstallWizard::show\_dialog\_installtype([\$m = ""]) [*line 325*]

#### **Function Parameters:**

- *string* **\$m** margin for better readability of generated HTML-code

### construct the installtype + high visibility selection dialog

This dialog contains a radio button where the user selects 'standard' or 'custom' and also a checkbox for high visibility. As always the dialog ends with buttons to move forward, backward or to cancel the installation process altogether.

*void function InstallWizard::show\_dialog\_language([\$m = ""]) [line 242]*

**Function Parameters:**

- *string \$m* margin for better readability of generated HTML-code

### **construct the language selection dialog**

this dialog allows the user to pick a language. The choices are determined by looking for translation files in the file system, specifically for files /program/install/languages/LL/install.php where LL is the language code, see [get\\_list\\_of\\_install\\_languages\(\)](#).

*void function InstallWizard::show\_dialog\_license([\$m = ""]) [line 435]*

**Function Parameters:**

- *string \$m* margin for better readability of generated HTML-code

### **construct a full license agreement and an input where the user must enter 'I agree'**

This constructs a (long) license agreement dialog. We more or less force the user to actually scroll through it by having the input box + buttons after the agreement text. Note that the phrase to enter into the box is also translated, it may be 'I agree' in English but something else in other languages (done via translation file). If the user already accepted the license, the 'I agree'-text is already displayed in the dialog, in the current language. (A user could type 'I agree' in English, change the language into Dutch, in which case the \$value in the textbox would be something like 'Ik ga accoord' or whatever the translation of 'I agree' is.) This is done via an extra level of translation with the 'dialog\_license\_i\_agree' translation in the prompt.

Also, the instruction to enter the exact words are repeated near the bottom of the screen, just to make sure the user understands what to do.

Note that the phrase the user enters is compared to the requested phrase in a more or less case-INsensitive way (see [check\\_license\(\)](#)).

*void function InstallWizard::show\_dialog\_user([\$m = ""]) [line 1075]*

**Function Parameters:**



- *string* **\$m** margin for better readability of generated HTML-code

### construct the dialog for the first user account

This dialog contains the following fields:

- `user_username` (varchar(255))
- `user_full_name` (varchar(255))
- `user_email` (varchar(255))
- `user_password` (varchar(255)) (but only a sha1() or md5() hash is stored eventually)

An additional feature of this routine is to set a default email address for the account, by copying the address that can be found in the Reply-To: field that was entered earlier (or constructed from the From: address).

*string* function InstallWizard::t(\$key, [\$replace = "], [\$language = "]) [*line 2683*]

#### **Function Parameters:**

- *string* **\$key** the key in the string-array with translations
- *array* **\$replace** contains key-value pairs that are used to search/replace in the translated string
- *string* **\$language** indicates which language we should translate into

### retrieve a translated string with optional parameters filled in

this routine tries to find a translated string based on the \$key. If \$replace is not empty, any keys in that array that are found in the translation are replace by the corresponding value.

The translations are read from the files /program/install/languages/LL/install.php, where LL is a language code (usually two-letter e.g. en, nl, de, fr). If the desired language is not available, English is used instead. If the requested translation is not found, the key of the translation is returned, sandwiched between the language codes. Usually this does not happen (all keys used have a translation), but it can be helpful when creating and testing a new translation.

Note that a language file is retrieved completely. This means that all the translations are read from file in one swoop; there is no need to go to the disk for every individual translation. The translation file is buffered in memory via the static variable \$phrases, which is an array keyed by language. That means that multiple languages can co-exist in this static variable. That last feature is used in constructing a list of available languages where the name of the language is expressed in the language itself (see [get\\_list\\_of\\_install\\_languages\(\)](#)).

Note: By convention the keys in \$replace are upper case words, with optional underscores, sandwiched between curly braces. Examples: '{FIELD}', '{DATABASE}', '{RELEASE\_DATE}'. The idea is that these words make life easier for translators.

TRUE function InstallWizard::validate(\$item, \$value) [line 3012]

**Function Parameters:**

- **array \$item** this array holds a field definition from a dialog definition
- **string \$value** this is the magic\_unquote()'d and trim()'ed UTF-8 compliant string value the user POSTed

### minimal validation of data input

this routine is a KISS-validator; we check for min/max stringlengths in strings and passwords (defaults: 0 and 255) and a valid item in listboxes. In case of error, a message is added to \$this->messages and the function returns FALSE. On success we return TRUE. Note that additional validation could or should be done on some fields, e.g. a password of sufficient complexity, etc. This routine does not do that.

TRUE function InstallWizard::validate\_password(\$label, \$password, [\$min\_lower = 1], [\$min\_upper = 1], [\$min\_digit = 1]) [line 3088]

**Function Parameters:**

- **string \$label** this string holds the human-readable field name
- **string \$password** this is the magic\_unquote()'d and trim()'ed password the user POSTed
- **int \$min\_lower** the minimum number of lower case letters
- **int \$min\_upper** the minimum number of upper case letters
- **int \$min\_digit** the minimum number of digits

### validation of password input

this routine analyses the password provided against the minimal requirements of password complexity. Here 'complexity' means a minimum number of upper case and lower case characters and a minimum number of digits. The required 'complexity' of a password is quite ASCII-centric. The idea is to make a user pick from a pool of at least 62 different characters rather than say 26 lowercase latin letters a-z. However, with UTF-8 the story is actually different: what is more "complex": "Aa1" or U+1F150 NEGATIVE CIRCLED LATIN CAPITAL LETTER A encoded as "\xF0\x9F\x85\x90"? Even though it is only 1 character, the result is byte string of length 4 rather than the meager 3-byte string that satisfies the minimum requirements...

Anyway. In order to take into account some additional upper case and lower case characters without resorting to loading the complete Unicode database, I opt for the following tricks. If lowercase(\$str) differs from \$str itself, it was apparently not a lower case character but

probably an upper case (or title case) character; good enough to count it toward the upper case character count. The same idea is used for the opposite: if `upper($str) != $str => $str` probably lowercase.

This algorithm works for A-Z and a-z but also for the 1100+ other Unicode characters that are case-aware. So, the user isn't held back if she insists on the password `p a \xE1 \xBA \x9E w 0 r d` (where `\xE1 \xBA \x9E` equates to U+1E9E LATIN CAPITAL LETTER SHARP S

Note that by default we still require at least 1 digit 0-9 and do not count any of the 410 "digits" like these zeros: U+0660: ARABIC-INDIC DIGIT ZERO U+06F0: EXTENDED ARABIC-INDIC DIGIT ZERO U+07C0: NKO DIGIT ZERO U+0966: DEVANAGARI DIGIT ZERO ... U+1D7EC: MATHEMATICAL SANS-SERIF BOLD DIGIT ZERO U+1D7F6: MATHEMATICAL MONOSPACE DIGIT ZERO

Perhaps some other time... (Did I mention this is quite ASCII-centric?)

*bool function InstallWizard::write\_config\_php() [line 3190]*

#### **attempt to write the file config.php in the correct location**

this routine tries to write the file `config.php`. If this fails, we return `FALSE`, otherwise `TRUE`. Note that the permissions of the file are set to read-only (`chmod 0400`) for the owner of the file, and nothing for group and world. That should be enough for the webserver.

- **TODO** should we make the `filemode` (hardcoded at `0400`) configurable/customisable?



# Package waslang\_en Procedural Elements

## en\_manifest.php

**/program/languages/en/en\_manifest.php - description of the main language/translation (English)**

This file defines the English language package ('en'). This file is used when this essential (core) package is installed.

- **Package** waslang\_en
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >o
- **Version** \$Id: en\_manifest.php,v 1.5 2011-05-11 20:45:50 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)



# Package waslang\_es Procedural Elements

demodata.php

/program/install/languages/es/demodata.php

Language: es (Español) Release: 0.90.1 / 2011050500 (2011-05-05)

- **Package** waslang\_es
- **Author** Anouk Coumans & Hanna Tulleken < [translators@websiteatschool.eu](mailto:translators@websiteatschool.eu) >
- **Version** \$Id: demodata.php,v 1.2 2011-05-05 07:27:20 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Vereniging Website At School, Amsterdam
- **License** [GNU AGPLv3+Additional Terms](#)

# install.php

**/program/install/languages/es/install.php**

Language: es (Español) Release: 0.90.1 / 2011050500 (2011-05-05)

- **Package** waslang\_es
- **Author** Hanna Tulleken < [translators@websiteatschool.eu](mailto:translators@websiteatschool.eu)>
- **Version** \$Id: install.php,v 1.4 2011-05-05 07:27:20 pfokker Exp \$
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- **License** [GNU AGPLv3+Additional Terms](#)



# admin.php

/program/languages/es/admin.php

Language: es (Español) Release: 0.90.1 / 2011050500 (2011-05-05)

- **Package** waslang\_es
- **Author** Anouk Coumans < [translators@websiteatschool.eu](mailto:translators@websiteatschool.eu)>
- **Version** \$Id: admin.php,v 1.2 2011-05-05 07:27:19 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Vereniging Website At School, Amsterdam
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## es\_manifest.php

**/program/languages/es/es\_manifest.php - description of the main language/translation (Spanish)**

This file defines the Spanish language package ('es'). This file is used when this package is installed.

- **Package** waslang\_es
- **Author** Anouk Coumans, Hanna Tulleken, Margot Molier < [translators@websiteatschool.eu](mailto:translators@websiteatschool.eu) >
- **Version** \$Id: es\_manifest.php,v 1.2 2011-05-05 07:27:19 pfokker Exp \$
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<info@websiteatschool.eu>
- **License** [GNU AGPLv3+Additional Terms](#)

# loginlib.php

**/program/languages/es/loginlib.php**

Language: es (Español) Release: 0.90.1 / 2011050500 (2011-05-05)

- **Package** waslang\_es
- **Author** Anouk Coumans < [translators@websiteatschool.eu](mailto:translators@websiteatschool.eu)>
- **Version** \$Id: loginlib.php,v 1.2 2011-05-05 07:27:19 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Vereniging Website At School, Amsterdam
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# was.php

**/program/languages/es/was.php**

Language: es (Español) Release: 0.90.1 / 2011050500 (2011-05-05)

- **Package** waslang\_es
- **Author** Hanna Tulleken < [translators@websiteatschool.eu](mailto:translators@websiteatschool.eu)>
- **Version** \$Id: was.php,v 1.2 2011-05-05 07:27:20 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Vereniging Website At School, Amsterdam
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# htmlpage.php

/program/modules/htmlpage/languages/es/htmlpage.php

Language: es (Español) Release: 0.90.1 / 2011050500 (2011-05-05)

- **Package** waslang\_es
- **Author** Anouk Coumans < [translators@websiteatschool.eu](mailto:translators@websiteatschool.eu)>
- **Version** \$Id: htmlpage.php,v 1.2 2011-05-05 07:27:20 pfokker Exp \$
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# frugal.php

/program/themes/frugal/languages/es/frugal.php

Language: es (Español) Release: 0.90.1 / 2011050500 (2011-05-05)

- **Package** waslang\_es
- **Author** Margot Molier < [translators@websiteatschool.eu](mailto:translators@websiteatschool.eu)>
- **Version** \$Id: frugal.php,v 1.2 2011-05-05 07:27:20 pfokker Exp \$
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# Package waslang\_fr Procedural Elements

demodata.php

/program/install/languages/fr/demodata.php

Language: fr (Fran ais) Release: 0.90.1 / 2011050400 (2011-05-04)

- **Package** waslang\_fr
- **Author** Jean Peyratout < [translators@websiteatschool.eu](mailto:translators@websiteatschool.eu) > < [jean.peyratout@abul.org](mailto:jean.peyratout@abul.org) >
- **Version** \$Id: demodata.php,v 1.2 2011-05-05 20:11:19 pfokker Exp \$
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# install.php

/program/install/languages/fr/install.php

Language: fr (Français) Release: 0.90.1 / 2011050400 (2011-05-04)

- **Package** waslang\_fr
- **Author** Jean Peyratout < [translators@websiteatschool.eu](mailto:translators@websiteatschool.eu) > < [jean.peyratout@abul.org](mailto:jean.peyratout@abul.org) >
- **Version** \$Id: install.php,v 1.2 2011-05-04 15:24:16 pfokker Exp \$
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# admin.php

**/program/languages/fr/admin.php**

Language: fr (FranÃ§ais) Release: 0.90.1 / 2011050400 (2011-05-04)

- **Package** waslang\_fr
- **Author** Jean Peyratout < [translators@websiteatschool.eu](mailto:translators@websiteatschool.eu) > < [jean.peyratout@abul.org](mailto:jean.peyratout@abul.org) >
- **Version** \$Id: admin.php,v 1.1 2011-05-04 14:22:10 pfokker Exp \$
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## fr\_manifest.php

**/program/languages/fr/fr\_manifest.php - description of the main language/translation (French)**

This file defines the French language package ('fr'). This file is used when this package is installed.

- **Package** waslang\_fr
- **Author** Jean Peyratout < [translators@websiteatschool.eu](mailto:translators@websiteatschool.eu) > < [jean.peyratout@abul.org](mailto:jean.peyratout@abul.org) >
- **Version** \$Id: fr\_manifest.php,v 1.1 2011-05-04 14:22:10 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Vereniging Website At School, Amsterdam  
<info@websiteatschool.eu>
- **License** [GNU AGPLv3+Additional Terms](#)

# loginlib.php

**/program/languages/fr/loginlib.php**

Language: fr (Français) Release: 0.90.1 / 2011050400 (2011-05-04)

- **Package** waslang\_fr
- **Author** Jean Peyratout < [translators@websiteatschool.eu](mailto:translators@websiteatschool.eu) > < [jean.peyratout@abul.org](mailto:jean.peyratout@abul.org) >
- **Version** \$Id: loginlib.php,v 1.1 2011-05-04 14:22:10 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Vereniging Website At School, Amsterdam
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# was.php

**/program/languages/fr/was.php**

Language: fr (Français) Release: 0.90.1 / 2011050400 (2011-05-04)

- **Package** waslang\_fr
- **Author** Jean Peyratout < [translators@websiteatschool.eu](mailto:translators@websiteatschool.eu) > < [jean.peyratout@abul.org](mailto:jean.peyratout@abul.org) >
- **Version** \$Id: was.php,v 1.1 2011-05-04 14:22:10 pfokker Exp \$
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# htmlpage.php

/program/modules/htmlpage/languages/fr/htmlpage.php

Language: fr (Français) Release: 0.90.1 / 2011050400 (2011-05-04)

- **Package** waslang\_fr
- **Author** Jean Peyratout < [translators@websiteatschool.eu](mailto:translators@websiteatschool.eu) > < [jean.peyratout@abul.org](mailto:jean.peyratout@abul.org) >
- **Version** \$Id: htmlpage.php,v 1.1 2011-05-04 14:22:11 pfokker Exp \$
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# frugal.php

/program/themes/frugal/languages/fr/frugal.php

Language: fr (Français) Release: 0.90.1 / 2011050400 (2011-05-04)

- **Package** waslang\_fr
- **Author** Jean Peyratout < [translators@websiteatschool.eu](mailto:translators@websiteatschool.eu) > < [jean.peyratout@abul.org](mailto:jean.peyratout@abul.org) >
- **Version** \$Id: frugal.php,v 1.1 2011-05-04 14:22:11 pfokker Exp \$
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# Package waslang\_nl Procedural Elements

## nl\_manifest.php

**/program/languages/nl/nl\_manifest.php - description of the Dutch translation package**

This file defines the Dutch language package('nl'). This file is used when this translation is installed.

- **Package** waslang\_nl
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl)>
- **Version** \$Id: nl\_manifest.php,v 1.5 2011-05-11 20:45:51 pfokker Exp \$
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# Package waslang\_zh Procedural Elements

demodata.php

/program/install/languages/zh/demodata.php

Language: zh (ä, -æ-þ) Release: 0.90.1 / 2011050500 (2011-05-05)

- **Package** waslang\_zh
- **Author** Liu Jing Fang < [translators@websiteatschool.eu](mailto:translators@websiteatschool.eu)>
- **Version** \$Id: demodata.php,v 1.1 2011-05-05 06:17:24 pfokker Exp \$
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# install.php

/program/install/languages/zh/install.php

Language: zh (ä, -æ-†) Release: 0.90.1 / 2011050500 (2011-05-05)

- **Package** waslang\_zh
- **Author** Liu Jing Fang < [translators@websiteatschool.eu](mailto:translators@websiteatschool.eu)>
- **Version** \$Id: install.php,v 1.2 2011-05-05 06:28:44 pfokker Exp \$
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# admin.php

/program/languages/zh/admin.php

Language: zh (ä, -æ-†) Release: 0.90.1 / 2011050500 (2011-05-05)

- **Package** waslang\_zh
- **Author** Liu Jing Fang < [translators@websiteatschool.eu](mailto:translators@websiteatschool.eu)>
- **Version** \$Id: admin.php,v 1.1 2011-05-05 06:17:23 pfokker Exp \$
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# loginlib.php

/program/languages/zh/loginlib.php

Language: zh (ä, -æ-†) Release: 0.90.1 / 2011050500 (2011-05-05)

- **Package** waslang\_zh
- **Author** Liu Jing Fang < [translators@websiteatschool.eu](mailto:translators@websiteatschool.eu)>
- **Version** \$Id: loginlib.php,v 1.1 2011-05-05 06:17:23 pfokker Exp \$
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# was.php

**/program/languages/zh/was.php**

Language: zh (ä, -æ-†) Release: 0.90.1 / 2011050500 (2011-05-05)

- **Package** waslang\_zh
- **Author** Liu Jing Fang < [translators@websiteatschool.eu](mailto:translators@websiteatschool.eu)>
- **Version** \$Id: was.php,v 1.1 2011-05-05 06:17:23 pfokker Exp \$
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## zh\_manifest.php

**/program/languages/zh/zh\_manifest.php - description of the main language/translation (Chinese)**

This file defines the Chinese language package ('zh'). This file is used when this package is installed.

- **Package** waslang\_zh
- **Author** Liu Jing Fang < [translators@websiteatschool.eu](mailto:translators@websiteatschool.eu)>
- **Version** \$Id: zh\_manifest.php,v 1.1 2011-05-05 06:17:23 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Vereniging Website At School, Amsterdam  
<info@websiteatschool.eu>
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# htmlpage.php

/program/modules/htmlpage/languages/zh/htmlpage.php

Language: zh (ä, -æ-ţ) Release: 0.90.1 / 2011050500 (2011-05-05)

- **Package** waslang\_zh
- **Author** Liu Jing Fang < [translators@websiteatschool.eu](mailto:translators@websiteatschool.eu)>
- **Version** \$Id: htmlpage.php,v 1.1 2011-05-05 06:17:23 pfokker Exp \$
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# frugal.php

/program/themes/frugal/languages/zh/frugal.php

Language: zh (ä, -æ-ţ) Release: 0.90.1 / 2011050500 (2011-05-05)

- **Package** waslang\_zh
- **Author** Liu Jing Fang < [translators@websiteatschool.eu](mailto:translators@websiteatschool.eu)>
- **Version** \$Id: frugal.php,v 1.1 2011-05-05 06:17:23 pfokker Exp \$
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# Package wasmod\_guestbook Procedural Elements

## guestbook\_admin.php

**/program/modules/guestbook/guestbook\_admin.php - management interface for module**

This file defines the administrative interface to this module. The interface consists of the following four functions.

```
guestbook_disconnect(&$output,$area_id,$node_id,$module)
guestbook_connect(&$output,$area_id,$node_id,$module)
guestbook_show_edit(&$output,$area_id,$node_id,$module,$viewonly,$edit_again,$href)
guestbook_save(&$output,$area_id,$node_id,$module,$viewonly,&$edit_again)
```

These functions are called from pagemanagerlib.php whenever necessary.

- **Package** wasmod\_guestbook
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl)>
- **Version** \$Id: guestbook\_admin.php,v 1.2 2011-02-03 14:03:59 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

*bool* function guestbook\_connect(&\$output, \$area\_id, \$node\_id, \$module) [*line 71*]

### **Function Parameters:**

- *object* **&\$output** collects the html output (if any)
- *int* **\$area\_id** the area in which \$node\_id resides
- *int* **\$node\_id** the node to which we need to connect

- *array* **\$module** the module record straight from the database

### connect this module to a node

this makes the link between the node \$node\_id in area \$area\_id and this module. It depends on the module what this function should do. Often it simply boils down to a no-op returning TRUE to indicate success.

*bool* function guestbook\_disconnect(&\$output, \$area\_id, \$node\_id, \$module) [*line 52*]

#### **Function Parameters:**

- *object* **&\$output** collects the html output (if any)
- *int* **\$area\_id** the area in which \$node\_id resides
- *int* **\$node\_id** the node from which we need to disconnect
- *array* **\$module** the module record straight from the database

### disconnect this module from a node

this breaks the link between the node \$node\_id in area \$area\_id and this module. It depends on the module what this function should do. Often it simply boils down to a no-op returning TRUE to indicate success.

*bool* function guestbook\_save(&\$output, \$area\_id, \$node\_id, \$module, \$viewonly, &\$edit\_again, \$edit\_again) [*line 153*]

#### **Function Parameters:**

- *object* **&\$output** collects the html output (if any)
- *int* **\$area\_id** the area in which \$node\_id resides
- *int* **\$node\_id** the node to which we need to connect
- *array* **\$module** the module record straight from the database
- *bool* **\$viewonly** if TRUE, editing and hence saving is not allowed
- *bool* **\$edit\_again** set to TRUE if we need to edit the content again, FALSE otherwise
- **&\$edit\_again**

### **save the modified content data of this module linked to node \$node\_id**

this validates and saves the data that was submitted by the user. If validation fails, or storing the data doesn't work, the flag \$edit\_again is set to TRUE and the return value is FALSE.

If the user has cancelled the operation, the flag \$edit\_again is set to FALSE and the return value is also FALSE.

If the modified data is stored successfully, the return value is TRUE (and the value of \$edit\_again is a don't care).

Here is a summary of return values.

- `retval = TRUE` ==> data saved successfully
- `retval = FALSE && edit_again = TRUE` ==> re-edit the data, show the edit dialog again
- `retval = FALSE && edit_again = FALSE` ==> cancelled, do nothing

*bool* function guestbook\_show\_edit(&\$output, \$area\_id, \$node\_id, \$module, \$viewonly, \$edit\_again, \$href) [*line 104*]

#### **Function Parameters:**

- *object* **&\$output** collects the html output (if any)
- *int* **\$area\_id** the area in which \$node\_id resides
- *int* **\$node\_id** the node to which this module is connected
- *array* **\$module** the module record straight from the database
- *bool* **\$viewonly** if TRUE, editing is not allowed (but simply showing the content is allowed)
- *bool* **\$edit\_again** if TRUE start with data from \$\_POST, else use data from database
- *string* **\$href** the action property of the HTML-form, the place where data will be POST'ed

### **present the user with a dialog to modify the content that is connected to node \$node\_id**

this prepares a dialog for the user filled with existing data (if any), possibly allowing the user to modify the content. If the flag \$viewonly is TRUE, this routine should only display the content rather than let the user edit it. If the flag \$edit\_again is TRUE, the routine should use the data available in the \$\_POST array, otherwise it should read the data from the database (or wherever the data comes from). The parameter \$href is the place where the form should be POST'ed.

The dialog should be added to the \$output object. Useful routines are:

```
$output->add_content($content): add $content to the content area  
$output->add_message($message): add $message to the message area (feedback to the user)  
$output->add_popup_bottom($message): make $message popup in the browser after loading the page (uses  
javascript)  
$output->add_popup_top($message): make $message popup in the browser before loading the page (uses  
javascript)
```

## guestbook.php

/program/modules/guestbook/languages/en/guestbook.php - translated messages for module (English)

- **Package** wasmod\_guestbook
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: guestbook.php,v 1.2 2011-02-03 14:03:59 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)



## guestbook.php

/program/modules/guestbook/languages/nl/guestbook.php - translated messages for module (Dutch)

- **Package** wasmod\_guestbook
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: guestbook.php,v 1.2 2011-02-03 14:04:00 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
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# Package wasmod\_htmlpage Procedural Elements

## htmlpage\_admin.php

**/program/modules/htmlpage/htmlpage\_admin.php** - management interface for **htmlpage-module**

This file defines the administrative interface to this module. The interface consists of the following four functions.

```
htmlpage_disconnect(&$output,$area_id,$node_id,$module)
htmlpage_connect(&$output,$area_id,$node_id,$module)
htmlpage_show_edit(&$output,$area_id,$node_id,$module,$viewonly,$edit_again,$href)
htmlpage_save(&$output,$area_id,$node_id,$module,$viewonly,&$edit_again)
```

These functions are called from pagemanagerlib.php whenever necessary.

- **Package** wasmod\_htmlpage
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: htmlpage\_admin.php,v 1.2 2011-02-03 14:04:00 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

*bool* function htmlpage\_connect(&\$output, \$area\_id, \$node\_id, \$module) [*line 73*]

### **Function Parameters:**

- *object* **&\$output** collects the html output (if any)
- *int* **\$area\_id** the area in which \$node\_id resides
- *int* **\$node\_id** the node to which we need to connect

- *array* **\$module** the module record straight from the database

### connect this module to a node

this makes the link between the node \$node\_id in area \$area\_id and this module. In this case we simply link a data container to node \$node\_id in a 1-to-1 relation. Note that we might decide later on to keep versions of pages around, e.g. by inserting new records every save rather than updating the existing.

*bool* function `htmlpage_disconnect(&$output, $area_id, $node_id, $module)` [line 53]

#### **Function Parameters:**

- *object* **&\$output** collects the html output (if any)
- *int* **\$area\_id** the area in which \$node\_id resides
- *int* **\$node\_id** the node from which we need to disconnect
- *array* **\$module** the module record straight from the database

### disconnect this module from a node

this breaks the link between the node \$node\_id in area \$area\_id and this module. For now we simply delete the record with page data. In a future version we might want to retain the page data, 'for future reference' (but: what do we do with it? Oh well).

*bool* function `htmlpage_save(&$output, $area_id, $node_id, $module, $viewonly, &$edit_again)` [line 180]

#### **Function Parameters:**

- *object* **&\$output** collects the html output (if any)
- *int* **\$area\_id** the area in which \$node\_id resides
- *int* **\$node\_id** the node to which the content is connected
- *array* **\$module** the module record straight from the database
- *bool* **\$viewonly** if TRUE, editing and hence saving is not allowed
- *bool* **&\$edit\_again** set to TRUE if we need to edit the content again, FALSE otherwise

### save the modified content data of this module linked to node \$node\_id

this validates and saves the data that was submitted by the user. If validation fails, or storing the data doesn't work, the flag \$edit\_again is set to TRUE and the return value is FALSE.

If the user has cancelled the operation, the flag \$edit\_again is set to FALSE and the return value is also FALSE.

If the modified data is stored successfully, the return value is TRUE (and the value of \$edit\_again is a don't care).

Here is a summary of return values.

- `retval = TRUE` ==> data saved successfully
- `retval = FALSE && edit_again = TRUE` ==> re-edit the data, show the edit dialog again
- `retval = FALSE && edit_again = FALSE` ==> cancelled, do nothing

*bool* function `htmlpage_show_edit(&$output, $area_id, $node_id, $module, $viewonly, $edit_again, $href)` [line 115]  
**Function Parameters:**

- *object* **&\$output** collects the html output (if any)
- *int* **\$area\_id** the area in which \$node\_id resides
- *int* **\$node\_id** the node to which this module is connected
- *array* **\$module** the module record straight from the database
- *bool* **\$viewonly** if TRUE, editing is not allowed (but simply showing the content is allowed)
- *bool* **\$edit\_again** if TRUE start with data from \$\_POST, else use data from database
- *string* **\$href** the action property of the HTML-form, the place where data will be POST'ed

### **present the user with a dialog to modify the content that is connected to node \$node\_id**

this prepares a dialog for the user filled with existing data (if any), possibly allowing the user to modify the content. If the flag \$viewonly is TRUE, this routine should only display the content rather than let the user edit it. If the flag \$edit\_again is TRUE, the routine should use the data available in the \$\_POST array, otherwise it should read the data from the database (or wherever the data comes from). The parameter \$href is the place where the form should be POST'ed.

The dialog should be added to the \$output object. Useful routines are:

```
$output->add_content($content): add $content to the content area  
$output->add_message($message): add $message to the message area (feedback to the user)  
$output->add_popup_bottom($message): make $message popup in the browser after loading the page (uses
```

```
javascript)
$output->add_popup_top($message): make $message popup in the browser before loading the page (uses
javascript)
```

## htmlpage\_cron.php

**/program/modules/htmlpage/htmlpage\_cron.php** - interface to the cron-part of the **htmlpage module**

This file defines the interface with the htmlpage-module for cron. The interface consists of this function:

```
htmlpage_cron()
```

This function is called whenever cron determines that it is time to perform this function.

- **Package** wasmod\_htmlpage
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: htmlpage\_cron.php,v 1.2 2011-02-03 14:04:00 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **TODO** change this stub into a real cron function.
- **License** [GNU AGPLv3+Additional Terms](#)

*bool* function htmlpage\_cron(\$keywords, \$areas) [*line 42*]

**Function Parameters:**

- **\$keywords**
- **\$areas**

**routine that is called periodically by cron**

# htmlpage\_install.php

## /program/modules/htmlpage/htmlpage\_install.php - installer of the htmlpage module

This file contains the htmlpage module installer. The interface consists of these functions:

```
htmlpage_install(&$messages,$module_id)
htmlpage_upgrade(&$messages,$module_id)
htmlpage_uninstall(&$messages,$module_id)
htmlpage_demodata(&$messages,$module_id,$config,$manifest)
```

These functions can be called from the main installer and/or admin.php.

Note You cannot be sure about the environment from which these routines are called. If the caller is the Install Wizard, you do not have all subroutines available. However, it IS possible to manipulate the database via the `db_*`() routines and/or the global `$DB` object. Therefore you have to keep the install routine extremely simple. You also have no option to interact with the user; the install has to be a silent install; you can only indicate success (TRUE) or failure (FALSE) and maybe an error message in `$messages[]` but that's it. Good luck.

- **Package** wasmod\_htmlpage
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: htmlpage\_install.php,v 1.3 2011-03-07 14:14:19 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

*bool* function htmlpage\_demodata(&\$messages, \$module\_id, \$config, \$manifest, \$configuration) [line 138]

### **Function Parameters:**

- *array* **&\$messages** collects the (error) messages
- *int* **\$module\_id** the key for this module in the modules table
- *array* **\$configuration** pertinent data for the new website + demodata foundation
- *array* **\$manifest** a copy from the manifest for this module
- **\$config**

### **add demonstration data to the system**

this routine is a no-op because all htmlpage demodata is already created in the main



demodata-routine in /program/install/demodata.php. This routine is retained here as an example alias placeholder.

This routine is retained here as an example and also because a routine by this name should exist (even if it does nothing).

Note If the module is installed via the Install Wizard, this routine is called. However, if a module is installed as an additional module after installation, the `{ $mode }_demodata()` routine is never called. This is because the only time you know that demodata is installed is when the Install Wizard runs. If we're called from admin.php, the webmaster may have already deleted existing (core) demodata so you never can be sure what to expect. To put it another way: it is hard to re-construct \$config when we're NOT the Instal Wizard.

*bool function htmlpage\_install(&\$messages, \$module\_id) [line 63]*

**Function Parameters:**

- *array &\$messages* collects the (error) messages
- *int \$module\_id* the key for this module in the modules table

### install the module

this routine installs the module. For this module there is nothing to install, so we simply return success. The appropriate table is already created based on the tabledefs); see install/htmlpage\_tabledefs.php.

Note that the record for this module is already created in the modules table; the pkey is \$module\_id.

*bool function htmlpage\_uninstall(&\$messages, \$module\_id) [line 108]*

**Function Parameters:**

- *array &\$messages* collects the (error) messages
- *int \$module\_id* the key for this module in the modules table

### uninstall the module

this is a hook for future extensions of Website@School. For now we simply return success. Any real code could look like this: DELETE FROM htmlpage; to delete all existing data (but who would want that). For now this is simply a nop.

*bool* function `htmlpage_upgrade(&$messages, $module_id)` [line 91]

**Function Parameters:**

- *array* **&\$messages** collects the (error) messages
- *int* **\$module\_id** the key for this module in the modules table

### **upgrade the module**

this routine performs an upgrade to the installed module. Note that this minimalistic 'htmlpage' module does not need any upgrade at all because there never was an earlier version.

However, if there was to be a newer version of this module, this routine is THE place to bring the database up to date compared with the existing version. For example, if an additional field 'page\_data\_backup' was to be added to the htmlpage-table, it could be added using a suitable (default) value, e.. the current contents of 'page\_data'.

Any existing htmlpage could then be updated here to fill the new field with data, e.g.

```
UPDATE htmlpage SET page_data_backup = page_data;
```

etcetera. For now this routine is a nop.

## htmlpage\_manifest.php

### /program/modules/htmlpage/htmlpage\_manifest.php - description of the htmlpage module

This file defines the various components of the htmlpage-module such as the names of the various scripts and version information. This file is used when this module is installed.

- **Package** wasmod\_htmlpage
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: htmlpage\_manifest.php,v 1.5 2011-05-11 20:45:51 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

## htmlpage\_search.php

/program/modules/htmlpage/htmlpage\_search.php - interface to the search-part of the htmlpage module

This file defines the interface with the htmlpage-module for searching content. The interface consists of this function:

```
htmlpage_search($keywords,$areas)
```

This function is called whenever data is searched.

- **Package** wasmod\_htmlpage
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl)>
- **Version** \$Id: htmlpage\_search.php,v 1.2 2011-02-03 14:04:00 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **TODO** change this stub into a real search function, with limits on the number of results, an offset where to start and perhaps even a time limit. for now this always returns an empty array
- **License** [GNU AGPLv3+Additional Terms](#)

*bool|array* function htmlpage\_search(\$keywords, \$areas) [line 46]

### **Function Parameters:**

- *string|array* **\$keywords** one or more keywords to search for
- *int|array* **\$areas** one or more \$area\_id's to search

**search the content of the htmlpage linked to node \$node\_id**

## htmlpage\_view.php

**/program/modules/htmlpage/htmlpage\_view.php** - interface to the view-part of the htmlpage module

This file defines the interface with the htmlpage-module for viewing content. The interface consists of this function:

```
htmlpage_view(&$output,$area_id,$node_id,$module)
```

This function is called from /index.php when the node to display is connected to this module.

- **Package** wasmod\_htmlpage
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: htmlpage\_view.php,v 1.2 2011-02-03 14:04:00 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

*bool* function htmlpage\_view(&\$theme, \$area\_id, \$node\_id, \$module) [*line 46*]

### **Function Parameters:**

- *object* **&\$theme** collects the (html) output
- *int* **\$area\_id** identifies the area where \$node\_id lives
- *int* **\$node\_id** the node to which this module is connected
- *array* **\$module** the module record straight from the database

**display the content of the htmlpage linked to node \$node\_id**

# htmlpage\_tabledefs.php

/program/modules/htmlpage/install/htmlpage\_tabledefs.php - data definition for module

- **Package** wasmod\_htmlpage
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: htmlpage\_tabledefs.php,v 1.2 2011-02-03 14:04:00 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

## htmlpage.php

/program/modules/htmlpage/languages/en/htmlpage.php - translated messages for module (English)

- **Package** wasmod\_htmlpage
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: htmlpage.php,v 1.3 2011-04-01 07:32:56 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

## htmlpage.php

/program/modules/htmlpage/languages/nl/htmlpage.php - translated messages for module (Dutch)

- **Package** wasmod\_htmlpage
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: htmlpage.php,v 1.2 2011-02-03 14:04:00 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)



# Package wasmod\_htmlpage Classes

## Class ModuleHtmlpage

[line 30]

**/program/modules/htmlpage/htmlpage.class.php - module for plain HTML-pages**

This file defines a class for dealing with plain HTML-pages. It is derived from the base class Modules.

- **Package** wasmod\_htmlpage
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: htmlpage.class.php,v 1.2 2011-02-03 14:04:00 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

*string* function ModuleHtmlpage::get\_content(\$node\_id) [line 37]

**Function Parameters:**

- *int* **\$node\_id** identifies the node

**get the actual content for node \$node\_id**



# Package wasmod\_mypage Procedural Elements

mypage.php

/program/modules/mypage/languages/en/mypage.php - translated messages for module (English)

- **Package** wasmod\_mypage
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: mypage.php,v 1.2 2011-02-03 14:04:00 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

## mypage.php

/program/modules/mypage/languages/nl/mypage.php - translated messages for module (Dutch)

- **Package** wasmod\_mypage
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl)>
- **Version** \$Id: mypage.php,v 1.2 2011-02-03 14:04:01 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
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## mypage\_admin.php

### /program/modules/mypage/mypage\_admin.php - management interface for module

This file defines the administrative interface to this module. The interface consists of the following four functions.

```
mypage_disconnect(&$output,$area_id,$node_id,$module)
mypage_connect(&$output,$area_id,$node_id,$module)
mypage_show_edit(&$output,$area_id,$node_id,$module,$viewonly,$edit_again,$href)
mypage_save(&$output,$area_id,$node_id,$module,$viewonly,&$edit_again)
```

These functions are called from pagemanagerlib.php whenever necessary.

- **Package** wasmod\_mypage
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: mypage\_admin.php,v 1.2 2011-02-03 14:04:00 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

*bool* function mypage\_connect(&\$output, \$area\_id, \$node\_id, \$module) [*line 72*]

#### **Function Parameters:**

- *object* **&\$output** collects the html output (if any)
- *int* **\$area\_id** the area in which \$node\_id resides
- *int* **\$node\_id** the node to which we need to connect
- *array* **\$module** the module record straight from the database

#### **connect this module to a node**

this makes the link between the node \$node\_id in area \$area\_id and this module. It depends on the module what this function should do. Often it simply boils down to a no-op returning TRUE to indicate success.

*bool* function mypage\_disconnect(&\$output, \$area\_id, \$node\_id, \$module) [*line 53*]

### **Function Parameters:**

- *object* **&\$output** collects the html output (if any)
- *int* **\$area\_id** the area in which \$node\_id resides
- *int* **\$node\_id** the node from which we need to disconnect
- *array* **\$module** the module record straight from the database

### **disconnect this module from a node**

this breaks the link between the node \$node\_id in area \$area\_id and this module. It depends on the module what this function should do. Often it simply boils down to a no-op returning TRUE to indicate success.

*bool* function mypage\_save(&\$output, \$area\_id, \$node\_id, \$module, \$viewonly, &\$edit\_again, \$edit\_again) [*line 154*]

### **Function Parameters:**

- *object* **&\$output** collects the html output (if any)
- *int* **\$area\_id** the area in which \$node\_id resides
- *int* **\$node\_id** the node to which we need to connect
- *array* **\$module** the module record straight from the database
- *bool* **\$viewonly** if TRUE, editing and hence saving is not allowed
- *bool* **\$edit\_again** set to TRUE if we need to edit the content again, FALSE otherwise
- **&\$edit\_again**

### **save the modified content data of this module linked to node \$node\_id**

this validates and saves the data that was submitted by the user. If validation fails, or storing the data doesn't work, the flag \$edit\_again is set to TRUE and the return value is FALSE.

If the user has cancelled the operation, the flag \$edit\_again is set to FALSE and the return value is also FALSE.

If the modified data is stored successfully, the return value is TRUE (and the value of \$edit\_again is a don't care).

Here is a summary of return values.

- `retval = TRUE` ==> data saved successfully
- `retval = FALSE && edit_again = TRUE` ==> re-edit the data, show the edit dialog again
- `retval = FALSE && edit_again = FALSE` ==> cancelled, do nothing

*bool* function mypage\_show\_edit(&\$output, \$area\_id, \$node\_id, \$module, \$viewonly, \$edit\_again, \$href) [line 105]  
**Function Parameters:**

- *object* **&\$output** collects the html output (if any)
- *int* **\$area\_id** the area in which \$node\_id resides
- *int* **\$node\_id** the node to which this module is connected
- *array* **\$module** the module record straight from the database
- *bool* **\$viewonly** if TRUE, editing is not allowed (but simply showing the content is allowed)
- *bool* **\$edit\_again** if TRUE start with data from \$\_POST, else use data from database
- *string* **\$href** the action property of the HTML-form, the place where data will be POST'ed

### **present the user with a dialog to modify the content that is connected to node \$node\_id**

this prepares a dialog for the user filled with existing data (if any), possibly allowing the user to modify the content. If the flag \$viewonly is TRUE, this routine should only display the content rather than let the user edit it. If the flag \$edit\_again is TRUE, the routine should use the data available in the \$\_POST array, otherwise it should read the data from the database (or wherever the data comes from). The parameter \$href is the place where the form should be POST'ed.

The dialog should be added to the \$output object. Useful routines are:

```
$output->add_content($content): add $content to the content area
$output->add_message($message): add $message to the message area (feedback to the user)
$output->add_popup_bottom($message): make $message popup in the browser after loading the page (uses javascript)
$output->add_popup_top($message): make $message popup in the browser before loading the page (uses javascript)
```





# Package wastheme\_frugal Procedural Elements

## frugal\_install.php

**/program/themes/frugal/frugal\_install.php -- installer of the frugal theme**

This file contains the frugal theme installer. The interface consists of these functions:

```
frugal_install(&$messages,$theme_id)
frugal_upgrade(&$messages,$theme_id)
frugal_uninstall(&$messages,$theme_id)
frugal_demodata(&$messages,$theme_id,$config,$manifest)
```

These functions can be called from the main installer and/or admin.php.

Note You cannot be sure about the environment from which these routines are called. If the caller is the Install Wizard, you do not have all subroutines available. However, it IS possible to manipulate the database via the `db_*`() routines and/or the global `$DB` object. Therefore you have to keep the install routine extremely simple. You also have no option to interact with the user; the install has to be a silent install; you can only indicate success (TRUE) or failure (FALSE) and maybe an error message in `$messages[]` but that's it. Good luck.

- **Package** wastheme\_frugal
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: frugal\_install.php,v 1.4 2011-03-07 14:14:20 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

*bool* function frugal\_demodata(&\$messages, \$theme\_id, \$config, \$manifest, \$configuration) [line 292]

### **Function Parameters:**

- *array* **&\$messages** collects the (error) messages
- *int* **\$theme\_id** the key for this theme in the themes table

- *array* **\$configuration** pertinent data for the new website + demodata foundation
- *array* **\$manifest** a copy from the manifest for this theme
- **\$config**

### add demonstration data to the system

this routine is a no-op because all frugal demodata is already created in the main demodata-routine in `/program/install/demodata.php`. This routine is retained here as an example and also because a routine by this name should exist (even if it does nothing).

Note If the theme is installed via the Install Wizard, this routine is called. However, if a theme is installed as an additional theme after installation, the `{ $theme }_demodata()` routine is never called. This is because the only time you know that demodata is installed is when the Install Wizard runs. If we're called from `admin.php`, the webmaster may have already deleted existing (core) demodata so you never can be sure what to expect. To put it another way: it is hard to re-construct `$config` when we're NOT the Instal Wizard.

Fortunately 'frugal' does not need demodata.

*bool* function `frugal_install(&$messages, $theme_id)` [line 61]

#### **Function Parameters:**

- *array* **&\$messages** collects the (error) messages
- *int* **\$theme\_id** the key for this theme in the themes table

### install the theme

this routine performs the necessary actions to make this theme usable. More specific, this routine adds a handfull of default values into the `themes_properties` table. Once a theme is actually used in an area, these defaults are copied from the `themes_properties` table to the `themes_areas_properties` table for the selected area. The user can subsequently edit these properties in the Area Manager.

*bool* function `frugal_uninstall(&$messages, $theme_id)` [line 262]

#### **Function Parameters:**

- *array* **&\$messages** collects the (error) messages
- *int* **\$theme\_id** the key for this theme in the themes table

## uninstall the theme

this is a hook for future extensions of Website@School. For now we simply return success. Any real code could look like this:

```
DELETE FROM themes_areas_properties WHERE theme_id = $theme_id; DELETE FROM
themes_properties WHERE theme_id = $theme_id; DELETE FROM themes WHERE
theme_id = $theme_id;
```

or whatever.

*bool function frugal\_upgrade(&\$messages, \$theme\_id) [line 240]*

### **Function Parameters:**

- *array &\$messages* collects the (error) messages
- *int \$theme\_id* the key for this theme in the themes table

## upgrade the theme

this routine performs an upgrade to the installed theme. Note that this minimalistic 'frugal' theme does not need any upgrade at all because there never was an earlier version.

However, if there was to be a newer version of this theme, this routine is THE place to bring the database up to date compared with the existing version. For example, if an additional property 'foobar' was to be added to the theme configuration, it could be added to the themes\_properties table with a suitable (default) value, Any existing areas with this theme could have their configuration updated with this additional foobar property, e.g. INSERT INTO themes\_properties: foobar for all areas in themes\_areas\_properties with theme\_id = \$theme\_id do INSERT INTO themes\_areas\_properties: foobar etcetera,

The current version of the theme could be determined by consulting the database (db\_select\_single\_record(themes,'\*', 'theme\_id = \$theme\_id') etcetera.

Note that it is the responsibility of the caller to correctly store the data from the manifest in the themes table. You don't have to do this here, in this routine.

# frugal\_manifest.php

**/program/themes/frugal/frugal\_manifest.php - description of the frugal theme**

This file defines the frugal theme. This file is used when this theme is installed.

- **Package** wastheme\_frugal
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl)>
- **Version** \$Id: frugal\_manifest.php,v 1.5 2011-05-11 20:45:51 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

## frugal.php

/program/themes/frugal/languages/en/frugal.php - translated messages for theme (English)

- **Package** wastheme\_frugal
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: frugal.php,v 1.2 2011-02-03 14:04:01 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
- **License** [GNU AGPLv3+Additional Terms](#)

## frugal.php

/program/themes/frugal/languages/nl/frugal.php - translated messages for theme (Nederlands)

- **Package** wastheme\_frugal
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: frugal.php,v 1.2 2011-02-03 14:04:01 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
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# Package wastheme\_frugal Classes

## Class ThemeFrugal

*[line 27]*

**/program/themes/frugal/frugal.class.php** - the class that comprises the most minimal theme

- **Package** wastheme\_frugal
- **Author** Peter Fokker < [peter@berestijn.nl](mailto:peter@berestijn.nl) >
- **Version** \$Id: frugal.class.php,v 1.2 2011-02-03 14:04:01 pfokker Exp \$
- **Copyright** Copyright (C) 2008-2011 Ingenieursbureau PSD/Peter Fokker
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# Appendices



# Appendix A - Class Trees

Package wascore

## AclManager

- [AclManager](#)

## AdminOutput

- [AdminOutput](#)

## Area

- [Area](#)

## AreaManager

- [AreaManager](#)

## ConfigAssistant

- [ConfigAssistant](#)

## DatabaseMysql

- [DatabaseMysql](#)

## DatabaseMysqlResult

- [DatabaseMysqlResult](#)

## Email

- [Email](#)

## FileManager

- [FileManager](#)

## GroupManager

- [GroupManager](#)

## Language

- [Language](#)

## Module

- [Module](#)
  - [ModuleHtmlpage](#)

## Node

- [Node](#)

## PageManager

- [PageManager](#)

## Theme

- [Theme](#)
  - [ThemeFrugal](#)

## TranslateTool

- [TranslateTool](#)

## Useraccount

- [Useraccount](#)

## UserManager

- [UserManager](#)

## Zip

- [Zip](#)

Package default

## FCKeditor

- [FCKeditor](#)

## FCKeditor

- [FCKeditor](#)

Package waslang\_en

Package waslang\_es

Package waslang\_fr

Package waslang\_nl

Package waslang\_zh

Package wasinstall

## InstallWizard

- [InstallWizard](#)

Package wasmod\_guestbook

Package wasmod\_htmlpage

## ModuleHtmlpage

- [Module](#) (Different package)
  - [ModuleHtmlpage](#)

Package wasmod\_mypage

Package wastheme\_frugal

## ThemeFrugal

- [Theme](#) (Different package)
  - [ThemeFrugal](#)

# Appendix B - README/CHANGELOG/INSTALL

# FAQ

/program/FAQ.txt

\$Id: FAQ.txt,v 1.1.1.1 2011-02-01 13:00:05 pfokker Exp \$

This file will contain answers to frequently asked questions.

Q1: Can I temporarily close my website?

A1: Yes. If a file called 'maintenance.html' exists in the top level directory (i.e. the directory holding the main entry points and also the file 'config.php'), a website visitor will be redirected to that file 'maintenance.html' instead of the real site.

Q2: What is this message "condition code 010"?

A2: It means that the site is not yet configured. Point your browser to /program/install.php to start the installation wizard and follow the instructions.

Q3: What is "condition code 050"?

A3: This indicates that the version of the program (the .PHP-files) is not the same as the structure of the database. Usually this means that an update needs to be done in the database, changing the database structure.

# TODO

/program/TODO.txt

\$Id: TODO.txt,v 1.2 2011-05-02 20:51:01 pfokker Exp \$

2008-01-29

- convert /program/\*.txt to DOS-text
- decide on exact license conditions

2008-02-01

- add an explanation to the manual about \$CFG->datadir within the document root and a 'difficult' name that cannot be guessed.

2008-02-07

- OK should we document \$CFG->debug? this is a feature that is handy during development, but it should be 'off' on a production server  
Answer: this is now documented.
- how can we discriminate between a call from the command line and a call via a web interface? Is it a mere check of \$\_SERVER['REMOTE\_ADDR']? (You \_never\_ have a remote address when working from the command line, do you?). Would be handy in case of cron.php.

2008-02-14

-- make a separate subtree for testing purposes. I don't think that that test environment should be published for end users (but it should be for developers). Maybe a subdirectory /devel/test/ and a corresponding /devel/test/test.php?

2008-02-19

-- can it be possible to have a page visible in navigation and not available to serve? I'm inclined to say yes: if a node only has a href, no actual data is available in the database. However, should we treat this as a call nevertheless and count the page view just before we redirect via header()? Mmm....

2008-03-22

OK Protect password fields with AUTOCOMPLETE="off" (see [http://www.owasp.org/index.php/Guide\\_to\\_Authentication](http://www.owasp.org/index.php/Guide_to_Authentication))

OK Count the number of failed login-attempts within a certain period of time

OK On-time password reset should time out in a short time, e.g. 15 minutes (ok, make it 30 minutes)

OK Should there be password requirements (min 1 digit, min 1 capital, minimum length?): YES one of each.

OK Add delay in user validation (3 seconds per attempt)

OK Should login-forms have short-lived unique identifiers? (prevents brute force attacks?) Methinks that our blacklist facility (8 minutes after more than 10 failed attempts) is enough.

2008-04-25

-- Add to cronjobs: cleanup of expired sessions + logging of the fact

OK Should we add the number of calls + length of session in seconds to the logout message? What then if the session expires without a proper logoff? A: added this for regular logouts

-- Add to cron: removal of obsolete login\_failures? It should be auto-cleaning but if a user fails once and never returns, the failure will be there forever.

OK Get rid of the 'trigger\_error()' calls now that we have logger(), maybe except errors in the database routines..

-- Logrotate for log\_messages table? How? Send a summary to the webmaster before deletion?

2008-04-27

-- we should be able to optimise with relative links (sometimes) if the hostname part of \$CFG->www and \$CFG->progwww are the same. Example: when pointing to the source of an image the src would be {\$CFG->progwww}/graphics/foo.png, i.e. including the 'http://www.exemplum.websiteatschool.org' part. If \$CFG->www also starts with that string, we can leave it out in the src property: src="/program/graphics/foo.png".

Here is a generic example from RFC3986:

```
foo://example.com:8042/over/there?name=ferret#nose
  \_/  \_____/  ^  \_____/  \_____/  \_____/
  |         |         |         |         |
scheme authority path query fragment
```

If \$CFG->www and \$CFG->progwww have the same scheme and authority, links could be made relative, e.g.  
<a href="/over/there/?name=ferret#nose"> and



 instead of prefixing with an explicit "foo://example.com:8042/". What if the scheme and authority are NOT the same?

2008-05-01

-- About the installer: if the installer is not able to write 'config.php' to the target directory, it should be possible to 'download' a .ZIP-file with this config.php, and perhaps also with index.php, cron.php, admin.php? Unzip that in the appropriate place and you are in business.

2008-08-01

-- How about storing ETags and be friendly to caches/proxies?  
-- How about using index.php/aaa/nnn/friendly-title-of-page-for-bookmark instead of index.php?area=aaa&node=nnn  
That too is cache/proxy-friendly...

2008-09-29

OK How about adding an extra parameter to manual.php in order to 'deep link' to the manual? Example: if the user has selected the pagemanager in admin.php, should the help button be calling 'manual.php?language=en&job=pagemanager' or something? Done: additional parameter 'topic' is added, at least from page manager. Could be employed from start centre too if necessary.

2008-10-01

-- Should there be an attribute 'is\_root' or 'is\_guru' in the users table? E.g. if a node is owned by some user, only that user is allowed to remove the read-only bit. Shouldn't there be a way to override that other than by using phpMyAdmin to manipulate the database directly?

2008-10-10

-- Edit permissions not only depend on the user's permission bits but also on the read-only attribute of a node.  
-- We should isolate the check-permission routines because they are used when creating icons and also when executing the corresponding function.

2008-10-20

-- get some decent graphics for button\_save and button\_cancel and other buttons...

2008-10-28

OK How about changing all where clauses with "(value = 'NULL') into "(value IS NULL)" to be more SQL-standard compliant? Done, in databaselib.php and function db\_where\_clause().  
-- So how about recovering from a crashed browser with an inaccessible session? It is very annoying to be locked out in the cold if the browser crashed and I immediately login again using the same credentials and still not be able to carry on...  
Should we add the time of the lock, too? That would give the other user an educated guess about the odds that the other session is still active. Mmmmm...

2008-11-12

-- the output object AdminOutput should have something like a 'funnel mode'. This mode should disable all navigation links and other

links that could distract and/or seduce the user to leave the page. Main use: prevent locked records hanging around without the user actively editing that record.

2008-11-20

- the Theme should have a property 'date/time last modified' so a module can update it via `module_view()`.
- how to create an alert based on edit content (or not)? How can we tell that the content actually changed? Is there a 'dirty' bit somewhere? Should we return a status insted of simply true/false?

2008-12-10

- How about the visibility of nodes when in preview mode????

2009-02-25

- do we actually `_USE_` the field `muser_id` in the page manager? we do in the area manager.

2009-02-26

- How about adding transactions (rollback, commit)  
See function that deletes areas.  
Q: How well is MySQL suited for transactions?  
A: Mmmmm.... Which version? Which storage engine?

2009-05-31

- Why not use the 'name' field in the `dialogdef[]` arrays?  
`$dialogdef = array('fullname' => array('name' => 'fullname', 'type' => F_STRING, ...));` Much more convenient when saving data.
- Doublecheck for `htmlspecialchars()` when displaying information from the database in a dialog: a username like say `'<u>ser</u>name'` should be converted to `'&lt;u&gt;ser&lt;/u&gt;name'` before being sent to the browser.

2009-06-04

- we should re-analyse the repercussions of the option to delete user accounts. If only the `user_id` is logged, it is difficult to figure out whodunnit if the account has already disappeared, not to mention breaking the constraint of the foreign key. This is also a problem for tables with `cuser_id` and `muser_id`...

2009-09-22

- We should have a graphics designer restyle all icons etc. I'm no good at that.

2009-12-04

- Should we make the permissions 0700 configurable, eg in `areamanager`?

2010-09-27

- There is a potential security issue with relative paths: the check on `'../'` is inconclusive if the `$path` is encoded in UTF-8: the overlong sequence `2F C0 AE 2E 2F` eventually yields `2F 2E 2E 2F` or `'../'`. Reference: RFC3629 section 10. Applies to `main_file.php` and also `filemanager.class.php`.

2010-12-08

-- Should we add a configurable favicon to themes as a config option (defaulting to /program/graphics/favicon.ico)?

2011-05-02

-- Can we think of a smart way to assign hotkeys to HTML-labels where the hotkey is a multi-byte UTF-8 sequence? And more important: does it make sense to do so or is a hotkey like [Alt-R] always connected to the keyboard-key 'R' in combination with 'Alt'? Does it even work to have something like "~\xC2\xAEegister" where \xC2\xAE is the (R) symbol and the tilde would indicate hotkey [Alt-(R)] or what? And, how does one generate such a character (R)? If you generate it with say [AltGr] + [R] then the hotkey-combination becomes [Alt-AltGr-R]. Mmmmm, sounds counter-intuitive to me.

-- Is it better to assign quasi-random ASCII-characters to translated labels, something like "~<A>\xC2\xAEegister" which might yield hotkey [Alt-A] for the label that would display as "\xC2\xAEegister" ie without the '~' '<' 'A' and '>'. Mmmm.... confusing...

## LICENSE

/program/LICENSE.txt

\$Id: LICENSE.txt,v 1.2 2011-02-03 14:04:01 pfokker Exp \$

The 'LICENSE AGREEMENT for Website@School' can be found in the file 'license.html' in the program directory or on-line at <<http://websiteatschool.eu/license.html>>.

The necessary 'Appropriate Legal Notices' can be found in the file 'about.html' in the program directory.

[eof]

## README

/program/README.txt

\$Id: README.txt,v 1.2 2011-02-03 14:04:02 pfokker Exp \$

This is the README for the Website@School Content Management System.

See INSTALL.txt for installation instructions.  
See LICENSE.txt for license information.  
See HISTORY.txt for the project history.  
See CREDITS.txt for information about contributors to Website@School.  
See FAQ.txt for answers to frequently asked questions.

See CHANGES.txt for significant changes between revisions.  
See TODO.txt for a list of things that still need to be done.

The homepage of the Website@School Project is at <<http://websiteatschool.eu>>.  
The project development site is hosted at BerliOS, see  
<<http://developer.berlios.de/projects/websiteatschool>>.

## HISTORY

/program/HISTORY.txt  
\$Id: HISTORY.txt,v 1.1.1.1 2011-02-01 13:00:01 pfokker Exp \$

History of Website@School

=====

Website@School started in Amsterdam in 2002 and as they say: the rest is history.

## INSTALL

/program/INSTALL.txt  
\$Id: INSTALL.txt,v 1.2 2011-03-11 15:21:14 pfokker Exp \$

Quick Install of Website@School

=====

1. Download the latest distribution version of Website@School (either as a .ZIP-file or a tar.gz-file.), e.g. from <<http://download.websiteatschool.eu>> or directly from BerliOS.
2. Unpack the distribution file somewhere on your webserver, e.g. in /home/httpd/htdocs. This will yield a number of files (index.php, admin.php, etc.) in the CURRENT directory. Also, a subdirectory 'program' with all the other program files will be created.
3. (optional but recommended) Install the Website@School Manual:
  - 3A. Download the latest version of the Website@School Manual (either as a .ZIP-file or a tar.gz-file.), e.g. from <<http://download.websiteatschool.eu>> or directly from BerliOS.
  - 3B. Unpack the manual file in the same place as you did unpack the distribution file in step 2 above.
4. Start the installation process by pointing your browser to 'program/install.php' and follow the directions.

5. Your new website is ready.

#### Quick Upgrade of Website@School

=====

1. Download the latest distribution version of Website@School (either as a .ZIP-file or a tar.gz-file.), e.g. from <http://download.websiteatschool.eu> or directly from BerliOS.
2. Unpack the distribution file in the same place on your webserver as you did before, e.g. in /home/httpd/htdocs. This will yield a number of files (index.php, admin.php, etc.) in the CURRENT directory. Also, a subdirectory 'program' with all the other program files will be created. Note: the new version is supposed to overwrite the existing version.
3. (optional but recommended) Install or update the Website@School Manual, by downloading the latest version and unpacking the file in the same directory you used before (see step 2).
4. Surf to the admin.php file and login. If you are not redirected to the Update Manager please do so manually, using the Tools menu.
- 5A. A clickable link in the Status column indicates that the core system needs to be updated. Please follow that link. After this update the status should change to 'OK'.
- 5B. Please follow the other links (if any) in the Status column until every item has the status 'OK'.
6. Your website is now up to date.

#### More information

=====

For more information and detailed installation instructions please consult the Website@School Manual. The latest version of the manual can be found on-line at <http://manual.websiteatschool.eu>.

[eof]

## CHANGES

/program/CHANGES.txt

\$Id: CHANGES.txt,v 1.39 2011-05-11 20:45:51 pfokker Exp \$

-----

### Release 0.90.2 - 2011-05-11 ###

2011-05-11

- configassistant.class.php: cosmetics in formatting of float parameter
- theme.class.php: always indicate UTF-8 via http-equiv too

- theme.class.php: minor cosmetics
- version.php: bump release and release date to 0.90.2 and 2011-05-11 (the internal version was already bumped two days ago)

2011-05-09

- init.php: we now always include utf8lib.php with essential UTF-8 utilities
- mysql.class.php: corrected stupid typo in dump().
- useraccount.class.php: yet another stupid typo (in Useraccount())
- updatelib.php: database conversion from charset 'whatever' and collation 'whatever\_whatever\_ci' to 'utf8' and 'utf8\_unicode\_ci' (or 'utf8mb4' and 'utf8mb4\_unicode\_ci').
- version.php: bumped internal version from '2011020100' to '2011051100' in preparation for the upcoming release '0.90.2'.

2011-05-08

- mysql.class.php:
  - . cosmetic/documentation changes
  - . added code for full / partial utf8 support (partial <5.5.3, full 5.5.3+)
  - . set charset to utf8 or utf8mb4 on connect()ing to the database
  - . also remember the MySQL-version in the backup (dump())

2011-05-06

- install.php: https on a non-standard port yielded the wrong port number
- utf8lib.php: added a function to map characters with diacriticals to plain ASCII as far as possible
- install.php: added the utf8\_strtoascii() mapping when generating data directories; makes it more readable for some languages compared to simply deleting all multibyte UTF-8 characters
- demodata.php: better UTF-8 support and better sanitised directory names

2011-05-05

- added Chinese translation (based on 0.90.1)
- updated Spanish translation: now also based on 0.90.1

2011-05-04

- loginlib.php: explicitly go to 'index.php' in 'home' link in login dialog
- install: added some more comments for translators in Ennglish languages files
- added French translation (based on 0.90.1)
- we now refer interested parties to <http://websiteatschool.eu> for a full overview of credits (see CREDITS.txt).

2011-05-02

- install.php:
  - . suppress PHP-errors when realpath, opendir are outside the open\_basedir tree
  - . more checks on possible UTF-8 issues
  - . added warning for obsolete MySQL-version (< 4.1) in database and compatibility screens (including Dutch and Spanish translation (partial))
- filemanager: added the untranslated path to directory overview in task\_list\_directory()
- dialoglib.php:
  - . slight change of the meaning of ~ as hotkey-indicator: we now only accept ASCII-characters. UTF-8 characters are silently ignored.
- main\_admin.php: we now go explicitly to 'index.php' when navigating to the pulic area so a bare CFG->www\_short

will not take us to say index.html or default.htm.

- pagemanager.class.php: same for the preview function:  
explicit link to index.php.

2011-04-29

- install.php:
  - . UTF-8 support for password validation routine
  - . UTF-8 aware use of substr()
- utf8lib.php:
  - . added function utf8\_substr()

2011-04-22

- install.php:
  - . more support for UTF-8 in save\_database()
  - . additional input checks on absurd lengths

2011-04-18

- install.php: all input (GET/POST) is now checked for UTF-8 conformance

2011-04-15

- created utf8lib.php with essential routines for handling UTF-8  
(based on Unicode 6.0.0, February 2011)
- install.php:
  - . we now explicitly check user input for valid UTF-8
  - . added 'accept-charset="UTF-8"' to all forms (perhaps superfluous)
  - . improved caseInsensitive check for the 'I Agree' prompt

2011-04-13

- install.php: added http-equiv Content-Type: text/html; charset=UTF-8

2011-03-11

- bugfix: there was a problem with the database dump:  
NULL-values were not properly dumped.
- clarification: all relevant fields in the database  
can accomodate an IP-address of 15 or 39 characters  
because the relevant fields are varchar(255)
- finetuning the message-id header field in email class
- updated INSTALL.txt with instructions for upgrading  
and installing the manual
- replaced email address for submission of translations  
(in the translate tool)

### Release 0.90.1 - 2011-03-09 ###

2011-03-09

- bugfix: a newly added language in the translate tool  
was always labeled 'active' even when the box was  
unchecked; fixed in translateTool.class.php
- re-arranged the status overview table in updatelib.php:  
we now have additional columns for release date and  
release.
- a new language without a corresponding manifest but  
added/created locally can now exist in the database  
without raising an error in the update status overview
- changes in /program/version.php:
  - . Bumped WAS\_RELEASE from 0.90.0 to 0.90.1
  - . Bumped WAS\_RELEASE\_DATE from 2011-02-01 to 2011-03-09
  - . WAS\_VERSION remains unchanged at 2011020100
- bumped release/release date in various manifests too

(languages, modules, themes).

2011-03-08

- done with `install_theme()` and `install_module()`: we can now install new themes and modules
- corrected a few typos
- added the Spanish translation of v0.90.0 to CVS
- bumped all versions and releases of all existing languages, themes and modules to 2011020100 / 0.90.90 / 2011-02-01 in order to make it clear to which core version a particular subsystem belongs. Old (internal) versions: frugal: 2008022000, htmlpage: 2008112500, en: 2010092700, nl: 2010092700. This requires a manual update in the update manager (which is in fact a no-op).

2011-03-07

- added more clarification in `htmlpage_install.php` about inner workings
- corrected a few typos
- modified a few translations in 'en' and 'nl'
- added the routine for updating existing modules
- started on `install_theme()` and `install_module()`

2011-03-03

- added some more clarification in `frugal_install.php` about the inner workings of the call-back routines
- we can now call the `theme_upgrade()` call-back from the Update Manager (`updatelib.php`).

2011-03-02

- streamlined the update status overview in `updatelib.php`
- added code to update and install additional language packs in `updatelib.php`.

2011-02-21

- updated version of `manual.php`

2011-02-18

- bugfix: typo in `/program/manual.php`

2011-02-03

- the new Project Home Page is now at <http://websiteatschool.eu>; many, many sourcefiles modified to include the new location (mainly in copyright messages)

### Release 0.90.0 - 2011-02-01 ###

2011-02-01

Today the complete development of WebsiteAtSchool was transferred to CVS at the development site BerliOS (<http://developer.berlios.de>), using the current version (which we used to call 0.1.7).

We now start with a new phase in the development, i.e. a publicly visible CVS-server and official releases etc. This is a good opportunity to bump both the internal version and the external version (release) and start with a more or less clean slate.



Furthermore, we will be generating a first 'official' release today.

Changes in /program/version.php:

- Bumped WAS\_RELEASE from 0.1.7 to 0.90.0
- Bumped WAS\_VERSION from 2010122100 to 2011020100
- Bumped WAS\_RELEASE\_DATE from 2010-01-20 to 2011-02-01

Changes in /program/lib/updatelib.php:

- Added logic to update existing database versions to 2011020100

```
*****
*****
*****
***** BELOW THIS LINE ONLY OLD AND OBSOLETE CHANGES *****
*****
*****
*****
*****
```

2011-02-01

- changed development colours to something more appropriate

2011-01-20

- completely overhauled version of devel/tools/makedist.sh:  
we can now generate 'official' releases too
- updated copyright/license message in scripts in devel/tools
- bumped release from 0.1.6 to 0.1.7 just to test the release procedure. After checking in version.php we need to add a revision tag with 'cvs rtag release-0\_1\_7 was' and see what happens.

2011-01-12

- added a simple counter/index to translate tool: makes it easier to refer to a particular translate string on the phone
- added a devel tool to identify changed and added strings between versions in a convenient single HTML-page (langdiff.sh in the tools directory)
- corrected a stupid typo in English and Dutch translations
- bumped version from 0.1.5 to 0.1.6

2011-01-10

- Changed bottom line in main\_admin.php: we now only display the execution time, # of queries and TOD when in debug-mode.
- Removed the (empty demo-like) stubs in the group manager and user manager indicating configurable modules per user/group. This makes it easier to create realistic screenshots for the upcoming manual.
- Bumped release from 0.1.4 to 0.1.5

2010-12-20

- completed the automatic execution of the update manager (called whenever there is a mismatch in the core version)
- added update manager to tools menu
- bugfix: removed double escape in version check icon in start center
- bumped release from 0.1.3 to 0.1.4
- bumped version from 2010120800 to 20101221 (just for testing purposes)

2010-12-17

- started with support for automatic update wizard (driven by internal version number mismatch)

- bumped version to 0.1.3

2010-12-13

- bugfix: missing closing '>' in buttons in install.php
- bumped release to 0.1.2
- bugfix: error with deleting of sections/nodes in pagemanager.

2010-12-10

- bugfix: if CFG->www\_short is empty, the link to the public site was broken [main\_admin.php]
- bumped release to 0.1.1

2010-12-08

- mass update of all source files, now with the correct copyright text and link to license.html etc. (continued)
- renamed DatabaseResult to DatabaseMysqlResult to prevent name clashes once DatabasePostgresql and DatabasPostgresqlResult once these are written
- cleaned up various files (removed obsolete chunks of dead code)
- added the 'registered trademark' message to the loginlib
- removed the old (wrong) logo from the standard theme
- updated base.css to increase height of quickbottom div
- added a rel link to /program/graphics/favicon.ico (in main\_admin.php)
- bumped external version from 0.0.7 to 0.1.0
- bumped internal version from 2010092700 to 2010120800

2010-12-07

- cleanup of init.php; streamline the error\_exit() routine
- mass update of all source files, now with the correct copyright text and link to license.html etc.
- various cosmetics
- added link to on-line license.html in LICENSE.txt too

2010-12-02

- added the final version of license.html with all the legalese
- added /program/about.html with 'Appropriate Legal Notices'
- modified the installer to check for the exact version of license.html
- added global definition: WAS\_ORIGINAL in version.php
- added some more logic to the online version check
- bumped release from 0.0.6 to 0.0.7
- added a few graphics files for 'powered by' and 'based on'
- added a new logo file of 284x71 (instead of 248x53)
- incorporated the 'powered by' and 'based on' graphics in install.php
- incorporated new logo in install.php
- header height in base\_admin.css from 53 to 71 pixels for new logo
- added link to about.html via function appropriate\_legal\_notices() in install.php
- added link to about.html via function appropriate\_legal\_notices() in main\_admin.php
- modified the translatable text in footer: we now force the English 'powered by' (or 'based on') even in other languages.
- added an explanation for creating modified versions in '/program/about.html'
- also changed the address for new users from schoutdi@knoware.nl to online@websiteatschool.org

2010-10-28

- raised the priority of logmessage when a virus is detected

in filemanager.viruscan()

2010-10-27

- we now use UTF-8 in the default Theme class; send it to browser via http-headers
- stupid typo in Theme class corrected (bugfix)
- new function: log view (in tools menu)
- added two more job permissions and changed existing: we now have separate permissions for translate tool, backup an logview.

2010-10-26

- minor cosmetics: we now have a database backup named host-database-prefix-date-time (either .zip or .sql)
- we now have a 'hidden' feature that allows for downloading the uncompressed .sql by specifying 'download=sql' instead of 'download=zip'.

2010-10-21

- bugfix in rfc2047\_qstring(): we now keep UTF8-tails together with the first octet in the sequence in the same 'encoded-word'
- completed backup function in tools menu

2010-10-20

- implemented a (database-specific) database/SQL-dump in mysql class
- first draft of database dump downloader in tools (no check on user perms yet)
- minor cosmetics

2010-10-19

- moved a few mail-related routines from waslib to email.class
- adapted loginlib: we now use email class to send mail
- added a header implying that we send UTF-8 in login dialog too
- added an extra download feature: file.php/websateatschool/languages now returns a ZIP-file with all user-defined translations of active languages

2010-10-18

- added a supersimple mailer class in email.class.php
- adapted translatetool to use this new email class
- minor cosmetics

2010-10-17

- fixed some bugs in filemanager.class.php
- preliminary changes in interfacing to mail() command (viruscan)
- cosmetics

2010-10-15

- implementation of RFC2047-style quoted-printable mail header extensions in translate tool

2010-10-11

- implementation of conversion to quoted printable according to RFC2045 section 6.7 (waslib.php)
- adapted routine to submit translations to deal with quoted printable message
- (finally) converted the program's native language to UTF-8, at least in AdminOutput in main\_admin.php (we still need to deal with UTF-8 in the database)

2010-10-06

- translatetool.class.php: we can now really save user translation files under CFG->datadir/languages/ (submit of translations is still work in progress)
- (later) initial version of sending translation works (more or less).
- added a cache reset to \$LANGUAGE to force re-read of the userfile just written

2010-10-05

- minor changes in language.class.php:
  - . we now cache a list of `_all_` (active+inactive) languages
  - . removed obsolete and unused routine `get_languages()`
  - . renamed `get_language_names()` to `get_active_language_names()`
- minor changes in files which relied on the old language.class.php
- nasty bug: a `'` in a fieldname yields a `'_'` in `$_POST`. Huh?  
workaround: use a `:`

2010-10-04

- translatetool:
  - . we now have visible codes in the translation dialog.
  - . we also have fields for metadata (per `full_domain`)
  - . still work in progress

2010-09-30

- translatetool: we can now show a domain menu in the edit translation dialog but otherwise it is still work in progress

2010-09-29

- translatetool: we can now add new languages and edit existing ones but it still work in progress

2010-09-28

- translatetool is work in progress

2010-09-27

- changed the way languages are handled: we now store the name of the language expressed in the language itself in the languages table which required a change in the tabledefs
- bumped version from 2010070700 to 2010092700 because of the changes in the database (table definition of 'languages').

2010-09-23

(after the summer break)

- bugfix (finally) in language class where valid translations were overwritten in memory when another phrase key was not found.

2010-07-08

- we now have a distinction between browsing files limited by filename extension and uploading files limited by extension. bottom line: in the file/image/flash browser the user can only see and upload selected files, in the file `_manager_` the user can upload selected files but see `_all_` files, including 'forbidden' files (eg. some random script uploaded by an intruder)
- new feature: if a file is detected (in filemanager) which would currently not pass the test for allowable upload, the entry in the filemanager listing is displayed with the CSS error class and the preview links are completely disabled, preventing the user from accidentally previewing a rogue file.

2010-07-07

- now suppress menu too in filebrowser/imagebrowser (via .CSS)
- started with support for new job 'flashbrowser' (cousin of 'imagebrowser')
- added support for three new configuration parameters that limit the allowable file extensions (as a shorthand for allowable file types)
- bumped version from 2010063000 to 2010070700 because of the three new configuration options in the installer

2010-07-02

- initial version of thumbnail-based file/image browser (still incomplete)

2010-07-01

- added check on GD in installer
- added a hint to print the summary page in installer

2010-06-30

- bumped WAS\_VERSION from 2010052400 to 2010063000 because of a typo last week (it should have read 2010062400 but the actual value was 2010052400). Also, the new default value for 'thumbnail\_dimension' decreased from 150 to 100 pixels.
- added support for thumbnails in the basic style sheet (based on the new default dimension of 100).

2010-06-24

- added generation of thumbnails to file upload routine in file manager
- added more about limits (file size, upload size) in file upload explanation
- minor cosmetics
- bumped WAS\_VERSION from 2010051300 to 2010062400 because of new configuration option 'thumbnail\_dimension'

2010-06-22

- re-arranged code and added new file /program/lib/filelib.php

2010-06-15

- filemanager extended so it can double as a filebrowser via job=filebrowser and image browser via job=imagebrowser
- linked FCKEditor to the filebrowser and imagebrowser

2010-06-14

- draft version of link browser combined in filemanager (filebrowser)

2010-05-04

- done with file upload except for 1 small thing (sanitise file type)
- minor cosmetics here and there

2010-05-13

- renamed new parameter 'files\_upload\_count' to 'upload\_max\_files'
- bumped WAS\_VERSION from 2010051200 to 2010051300 because of this
- minor cosmetics here and there
- implemented F\_FILE in dialoglib

2010-05-12

- added comptibility check for Safe Mode (should be 'Off') in install.php
- added support for clamscan anti-virus in install.php
- added extra configuration options in site config for clamscan

- added configuration option for maximum number of simultaneous uploads
- bumped WAS\_VERSION from 2010010700 to 20100512 because of extra site configuration options

2010-04-14

- almost done with filemanager; what remains is file upload implementation

2010-04-13

- added file delete confirmation dialog to filemanager

2010-03-31

- filemanager: added a Javascript one-liner to select all files
- filemanager: we can now add (create) subdirectories

2010-02-13

- filemanager:
  - . directory listing layout done
  - . sort option for three columns (ascending or descending)
  - . human-readable filesize
  - . various stubs for delete and add file/dir
- still work in progress though

2010-02-10

- filemanager: navigation basically works but still: work in progress

2010-02-08

- filemanager is still work in progress

2010-02-05

- added some more navigation to file manager

2010-02-03

- traded filemanagerlib.php for filemanager.class.php

2010-01-28

- for now done with main\_file.php: we can serve files from the data directory using the correct (?) mime types etc.

2010-01-20

- Oops. Bug in tabledefs: there was no unique index on areas.path. Fixed.
- Done with download of source code: we now recognise file.php/websiteatschool/program (program code) and file.php/websiteatschool/manual (manual in current language)
- More oops. Another bug in tabledefs: we didn't have the unique index on path for users and groups either. Fixed.
- Busy with file.php: validation and access control done.

2010-01-19

- started on file.php and download of source in .ZIP-file

2010-01-13

- created a new class Zip (in /program/lib/zip.class.php) which allows for creating ZIP-archives on the fly, including Deflate compression, file and archive type comments and zipping from memory or from existing file.

2010-01-09

- removed a lot of superfluous files from /program/lib/fckeditor

- suppressed the option 'fcksource=true' in dialoglib: the user that sets that parameter in \$\_GET gets the plain text area instead of the source-variation of FCKeditor (which is mostly deleted from /program/lib/fckeditor and wouldn't work anyway).

2010-01-08

- added the full tarball FCKeditor\_2.6.5.tar.gz to devel/imports so we have the original source nearby
- added type F\_RICHTEXT as a gateway to the FCKeditor in dialoglib
- first steps to actually incorporate FCKeditor 2.6.5 in directory /program/lib/fckeditor via CVS import function. We consider the extensions gif png swf pfx and fla to be binary files, the rest done via -ko.

2010-01-07

- added view-only field in edit user that shows the data directory name
- removed the 'advanced' option from the edit user menu because there is no 'advanced' dialog (yet)
- added editor selection to basic user properties, choices are: plain and fckeditor
- added the logic for groups path parameter
- added r/o view of data dir name in edit function in areamanager
- added r/o view of data dir name in edit function in usermanager
- added r/o view of data dir name in edit function in groupmanager
- corrected some typos
- added unique index on path field in areas table
- bumped version from 2010010600 to 2010010700 because of changed tabledefinition
- added the data path to the add area dialog
- update demodata so we have readable area data dirs now instead of numbers

2010-01-06

- we now also make subdirectories 'users' and 'groups' in the data directory (next to 'areas' and 'languages') in the installer
- we no longer record the words 'areas' and 'users' and 'groups' in the path fields in the corresponding tables, dirs are strictly separated now.
- added global configuration option for generating friendly URLs instead of querystrings
- added routine to sanitise filenames to waslib (used in creating datadirectories for areas, users and groups)
- we now check to see if the user tries to install with a username that is also used in the demodata
- we now actually create the datastructures in the datadir for all demo-data users, groups and also the areas
- bumped version from 2009120300 to 2010010600 because of changed tabledefinitions
- added more translation texts for new config items 'friendly\_url' and 'editor'
- fixed a few typos

2009-12-22

- done with pagemanager class
- removed obsoleted pagemanagerlib.php

2009-12-21

- almost done with pagemanager class

2009-12-19

- 'playing' with stylesheet: we now see line-through on 'dimmed' links in high-visibility mode (works for funnel mode)

2009-12-18

- added funnel mode support to AdminOut

2009-12-17

- very busy re-arranging code in page manager

2009-12-08

- changed the has\_...\_permissions() routines in useraccount: we now test for 1 or more permissions, not an exact match anymore: (\$perm & \$mask) != 0 versus (\$perm & \$mask) == \$mask.

2009-12-04

- finally decided on the issue of 'per-area' datadirectories: we simply use \$CFG->datadir/areas/<area\_id>
- reworked the permissions in the area manager
- we no longer allow changes in the path property of areas; the field isn't even shown anymore.

2009-12-03

- finally got rid of the tables users\_areas and users\_nodes because they are now replaced by the acs-tables.
- removed fields job\_permissions and permissions from users table because they are now replaced by the acs-tables.
- implementing acs in the useraccount class (work in progress)
- bumped version from 2009102100 to 2009120300 because of changed/removed tables
- removed PERMISSION\_VIEW from useraccount.class.php because it is now replaced by ACL\_ROLE\_INTRANET\_ACCESS
- removed PERMISSION\_ADMIN (which was added 2008-10-01) from area manager. It still needs to go from pagemanager.

2009-11-30

- added an item to the CMS dialog in the installer to query the user for a generic demonstration data password (will be assigned to all demo accounts)

2009-11-04

- done with demodata: we now have a public area with 16 pages and 6 sections and a private area with 8 pages and 3 sections, altogether in 2 languages (en and nl). Pfew!

2009-11-03

- demodata() now adds 3 areas, 4 groups and 8 users in 2 languages
- demodata() now also adds many nodes in 2 languages (work in progress)
- reduced the htmlpage\_demodata() and frugal\_demodata() to no-ops because all demodata is already inserted in the main demodata() routine.

2009-11-02

- finished logic for datadirectory name based on dataroot and quasi-random subdirectory (to obfuscate the datadir if it happens to be located within the document root)



- we now create an empty index.html in both dataroot and datadir to prevent leakin information if dataroot is located within document root.
- added creation of subtree 'languages' to datadirectory, also with empty index.html files

2009-10-23

- re-arranged the interface via manifest-files: we now fill the array manifests[] (plural), just like tabledefs[]
- main logic for installing is done, only thing left to do is insert demodata
- quick fix in set defaults for cms\_dir

2009-10-21

- yet another changed tabledef: bumped version from 2009102000 to 2009102100
- we now install themes and languages too (not just modules)

2009-10-20

- bumped version to from 2009101600 to 2009102000 because of changed tabledefs 'modules', 'themes' and 'languages'
- added manifest files for languages 'en' and 'nl'

2009-10-19

- changed manual.php: we made a start with linking topics and subtopics to html-files under /program/{\$language}/
- changed handling of help\_topic in install wizard (subtopics)
- we now actually create the data directory if it doesn't exist already
- we now return a link to check for new versions rather than the simple assumption 'OK' in the compatibility dialog in the install wizard

2009-10-16

- removed fields manifest\_script and install\_script from modules table; if necessary we can construct these from the manifest or use 'well known' script names (like 'tabledefs.php' and {\$module}\_manifest).
- Bumped version from 2009061100 to 2009101600 because of change in the datadefinition of the modules table.
- We now are able to install modules via their manifest (but not yet demodata)

2009-10-15

- extra debugging in database library and mysql class
- almost done with actual installer

2009-10-13

- added more documentation to functions
- added functionality to write config.php (if filesystem permits)

2009-10-12

- added a check on already installed
- added optional version check in compatibility screen

2009-10-05

- the installer is still work in progress but all the dialogs are done

2009-10-01

- more checks/validation in the installer

2009-09-30

- re-arranged the code in install.php: we now have the InstallWizard class
- re-arranged the order of the funnel: we now require valid database credentials before we leak any information
- added delays to the database validation if something goes wrong, to scare off the spooks

2009-09-29

- added suppress\_output mode to AdminOutput class

2009-09-24

- installer: work in progress

2009-09-23

- installer: work in progress

2009-09-22

- installer: work in progress
- added an ad-hoc image for an OK-button

2009-09-21

- installer: work in progress

2009-09-18

- added style for previous and next buttons to admin\_base.css + icon

2009-09-10

- we now require a new password twice when adding a new user
- code cosmetics

2009-07-24

- done with pagemanager permissions in usermanager and groupmanager; we can now store and retrieve permissions on node level.
- added minor cosmetics in the expanding/collapsing of areas in aclmanager: we now always keep the section to expand/collapse visible on the current screen by setting the offset to the offset of that area
- updated translations

2009-07-23

- after a lot of time I finally got the pagemanager permissions in the ACL Manager right: we can now actually save the settings via a complex dialog (for the programmer) that deals with screens (in long lists) and also allows for opening and closing areas.  
\*pfew\*

2009-07-01

- more work on the pagemanager permissions dialog, including walking the node tree in an area (work in progress)

2009-06-30

- moved pagination code to AdminOutput()

2009-06-19

- we now have fully implemented the 'related-acls' feature for the user intranet access dialog and the user admin access dialog.
- some more streamlining in the install.php to navigate in tabledefs and

datadump

2009-06-18

- we now also delete user associations with a group/capacity when a capacity is removed from a group in the groupmanager
- (special request) we now have a jump-menu in the theme via which a visitor can jump to any area available to her (logged-in users also see private areas if they have permission)
- added a users+groups summary to the account manager intro screen
- added support for user privileges intranet and also user privileges for admin, the latter including the related feature
- various typo's corrected

2009-06-17

- we can now manipulate a user's group memberships: view, add, delete

2009-06-16

- completed pagination routine with a limit on links to show
- changed default number of links to show to 7 (was 5)

2009-06-11

- added pagination to users list in user manager
- added configuration parameters for pagination to \$CFG via config table
- added 'memory' to users list: after editing you return to list/screen you started from (if possible)
- bump version to 2009061100

2009-06-05

- added function for sorted list of languages to \$LANGUAGE
- saving basic properties of user now works

2009-06-04

- minor tweaks in loginlib in order to reuse the password/salt-code
- added 'add user'
- added 'delete user'
- started with 'edit user'
- added more Dutch translations, again

2009-05-31

- done with acl for admin jobs
- fine-tune in groupc apacity menu: suppress pagemanager link if this group/capacity has no permission for page manager
- more or less done with users overview (but Dutch translations lack)

2009-05-30

- code cleanup in group manager
- more logging in group manager
- some small convenient enhancements to the install.php making it easier to keep track of the logging
- delete group function now works
- added more Dutch translations

2009-05-29

- we can now save group data, including checks on ACLs etc.

2009-05-28

- busy with implementing ACL-configuration starting with intranet permissions
- added more and more information to the demodata: now with an acls-record

for every user and every group/capacity.

2009-05-26

- typo in tabledefs; bumped version to 2009052600

2009-05-22

- added a breadcrumb trail to the admin output object because we really need this to remember where we are in the account manager
- added list of users per group-capacity (task=capacityoverview)
- minor cosmetics (including correction of type in name Helen Parkhurst)
- busy with the navigation between various screens dealing with group-capacity properties

2009-05-20

- added some 55 dummy-users and 15 dummy-groups to demodata in order to 'play' with the account manager
- we now are able to add new groups, including up to 8 capacities per group

2009-05-19

- group manager: we can now show a list of existing groups and group-capacities including clickable links
- added some group data to the demodata
- bumped the version to 2009051900 to make sure that the demodata is re-created in the testversion

2009-05-18

- updated logo's, now with &reg;
- added new icon for account manager
- moved usermanager around together with the group manager; there is now a top-level accountmanager for users and groups

2009-05-14

- (after some two months of thinking we're back with more)
- start with better access control via 6 new tables
  - added three tables for additional group-based access control
  - obsoleted two tables (users\_areas and users\_nodes) and some fields in the users table: the functionality is now available via ACLs.
  - bumped versions to 0.0.5 and 2009041500
  - Deprecated the 'unsigned' attribute in tabledefs because this is a non-standard feature which MySQL happens to implement but other DBMSs might not. In general  $2^{31}$  integers should suffice anyway.

2009-03-18

- rearranged code for calculating the URL for version checker on project's website
- added support for Bazaar Style Style Sheets on static level and on area level (not yet on node level; todo)

2009-03-17

- fixed bug in dialog\_validate(): viewonly fields should not need to be validated because they are not supposed to change anyway
- added routine for manipulating/editing the main site configuration (via ConfigAssistant)
- got rid of get\_configuration(): we now use get\_properties() for the

main config too

- done with the area manager except 1 little detail (the handling of the data directory)
- added support for datatypes 'l' (picklist) and 'r' (radio) in ConfigAssistant; the type 'c' (checklist) still needs to be done

2009-03-14

- bumped version internal number to 2009031400 because of significant changes in the database (the extended configuration table format)
- added begin of support for 'Cascading Cascading Style Sheets' or 'Bazaar Style Style Sheets'.
- added yet more demodata to show the possibilities of the area manager

2009-03-06

- almost done with area manager; we only need to copy the theme parameters when adding a new area
- rearranged/renamed some phrases in order to keep at least a little overview

2009-03-05

- added a configassistant class as a quick tool for editing generic configuration data (first used in editing theme properties in areamanager)

2009-02-27

- moved all code dealing with area management to seperate class

2009-02-26

- added functionality to delete areas
- started with functionality to add areas

2009-02-25

- added fields mtime, muser\_id, ctime, cuser\_id to areas table
- bumped internal version to 2009022500
- bumped external version to 0.0.4
- added copy of webmaster account to account 'textmaster' to demodata: easy checking text interface with permissions of webmaster
- optimising queries on 'nodes' table by adding an index on field 'area\_id'

2009-02-24

- (finally) started with configuration manager
- added has\_site\_permissions() to user class so we can use access control in area manager
- moved some code from pagemanagerlib to waslib so we can reuse it

2008-12-14

- incorporated a stub with base.css so we can see what a page will look like (more or less)
- minor cosmetics in the demo data

2008-12-10

- more navigation in base theme: now tree-like menu
- added language files en and nl to frugal theme
- minor cosmetics

2008-12-08

- added table themes\_areas\_properties
- added more demo data, including a quicklinks top + bottom in hidden sections
- changes in the built-in theme object

- bumped internal version to 2008120800
- added some more functionality to the built-in theme object

2008-12-04

- removed global \$NODE and \$AREA; we use a local variable \$area in main\_index() and information about the node is to be found in the local variable \$tree
- obsoleted file area.class.php
- obsoleted file modulelib.php
- obsoleted file module.class.php

2008-12-03

- moved some more code from pagemanagerlib.php to waslib.php
- we no 'fix' circular references in function is\_under\_embargo() (this should be fixed and properly done in a database repair tool or something)

2008-12-01

- moved build\_tree() to waslib because it is used from main\_index() too and not just from main\_admin()

2008-11-26

- some files re-arranged and renamed: e.g. /program/lib/adminlib.php now lives in /program/main\_admin.php
- added stubs to /cron.php (which call /program/main\_cron.php) and /index.php (which call /program/main\_index.php)
- removed adminlib.php from CVS repository because it is now obsolete
- added begin of support for Apache's PATH\_INFO feature for specifying area and node like index.php/aaa/nnn or index.php/nnn. This does pose a few problems with relative urls... to be fixed

2008-11-25

- yet another change to the database: modules table
- version bumped to 2008112500

2008-11-24

- added more logic to the garbage collection and expiry of obsolete sessions
- added unconditional garbage collection after successful login
- added a default value for session\_expiry to demodata
- renamed global config option sessionname to session\_name throughout
- version bumped to 2008112400 because of change in demodata

2008-11-21

- first attempt to actually save htmlpage content
- version bumped to 20081121 because of change in data definition

2008-11-20

- added three stubs for modules: htmlpage, mypage and guestbook
- we now actually delegate the task of editing content to the module admin code

2008-11-17

- we now take readonly into account when deleting nodes
- documentation in dialoglib
- minor cosmetics

2008-11-10

- save advanced node properties now working (except moving a non-empty

subtree to another area)

- bumped internal version number (WAS\_VERSION) from 2008020100 to 2008111000. This forces an error message/condition code 050, which means that the database is not in sync with the program. Normally, this would mean that an updater should be executed which changes the database structure. In the development phase we simply need to reload the demodata. Naturally I changed the version number in the demodata too.
- I also bumped the external version number from 0.0.1 to 0.0.2, just to gain some experience with changing versions.
- Added a FAQ about condition code 050.
- Added a field 'locked\_since' to the nodes table, allowing to make the 'sorry, record is locked' message even more friendly

2008-11-09

- minor changes:
  - . default visibility for a new page is now 'hidden' as per Dirk's request
  - . field order in basic node properties now has module as last in the list
  - . a 'default node' now loses the default node bit when the node is moved to another parent (preventing ending up with two defaults).
- added a class 'current' to options in the menu (currently there are two menus: the area menu and the node edit menu). The current item is underlined (via CSS).

2008-11-08

- we now manipulate the sort order in such a way that the sort order of other nodes is increased/decreased in order to make room for the moved node.

2008-11-07

- added stubs for module\_connect() and module\_disconnect() so we can actually link a module to a node (and unlink too, obviously)
- we can now almost save the data from the basic properties dialog (everything except the sort order by itself)

2008-11-06

- we can now fill the dialogs for editing a node with data from database
- added Dutch translations for all prompts etc.

2008-11-05

- rearranging the translations in /program/languages/em/admin.php
- minor change in admin\_basic.css so we can indent options in a drop down list (tree)
- added a comment feature to the English translation file admin.php: this allows for communicating the purpose and context of strings to the translators
- completed the dialogs for basic and advanced editing of nodes (but not yet the actual saving etc.)

2008-11-04

- removed PERMISSION\_NODE\_EDIT\_CHILD from useraccount class, changed into PERMISSION\_NODE\_EDIT\_NODE because that makes more sense, I think.
- started with edit a node dialogs
- cosmetics

2008-10-31

- cleaning up code (it takes time to condense rough code and make it more elegant)
- added better logging to the alert feature
- on special request: now new nodes are added at the top of their section rather than at the end (some logic is more logic than other logic)
- we play a special trick when adding a node: we force switch to custom view with all ancestors opened and any other sections closed.

2008-10-30

- added a routine that churns out alert messages every now and then
- added more logging + alert to change default routine
- minor cosmetics

2008-10-29

- we now can add new sections and pages
- we now accumulate alerts when a new page/section is added

2008-10-28

- a small diversion in the past week: add tables for alert function (alerts, alerts\_areas\_nodes)
- updated demodata to 'play' with alerts
- added function to lock records of nodes table, alerts table

2008-10-20

- added even more functionality to dialoglib.php + documentation
- first attempt to do a dialog in pagemanager (no save yet) with new lib

2008-10-18

- added more functionality to dialoglib.php

2008-10-15

- added dialoglib.php

2008-10-13

- moved some html-utilities to new file /program/lib/htmllib.php
- added some links + translations to the start center
- first start on 'add a section' code

2008-10-10

- re-arranged icons, added new icons for visible/invisible page
- modified page preview to use a one-time access code via md5-hash
- documented all routines in pagemanagerlib.php, code cleanup
- implemented the 'set home' function for nodes

2008-10-09

- changed layout of node tree a little bit:
  - . add a node is now displayed at the top of the tree
  - . we no longer show sort\_order and node\_id in the anchor text (we do show the node\_id in the mouse-over (title) though)
- added logic to switch between collapsed, customised, expanded tree view
- we now have stubs in place for all tasks in pagemanager, including preview
- we can now use index.php to show a preview (stub)

2008-10-08

- many changes in page manager: we now have an almost working tree



view that can expand and collapse

2008-10-01

- inserted a new permission: PERMISSION\_ADMIN. If this bit is set in the user's permissions (either site, area or node), the user has at least one permission bit set to manipulate the site, area or node. It is more or less shorthand for 'one of the permission bits is set'.
- we now have an area menu in pagemanager

2008-09-30

- a few tweaks in adminlib.php (http-equiv headers)
- added a help topic in help button in navigation in adminlib.php

2008-09-29

- moved workhorse /program/admin.php to /program/lib/adminlib.php to avoid confusion with file names (which 'admin.php' do you mean?)
- further documented adminlib.php, tweaked the page layout

2008-09-26

- basic dispatcher in admin.php done
- change in datadefinition: added field job\_permissions to user table
- change in datadefinition: added field high\_visibility to user table
- added support for high visibility via additional stylesheet
- basic admin.php navigation is more or less done

2008-09-22

- further refined page layout for admin.php
- added a basic version checker at <http://siteatschool.org/version/index.php>

2008-09-21

- started with admin.php

2008-06-10

- added shortcuts for \$CFG->www and \$CFG->progwww

2008-05-28

- changed \$NODE, \$AREA and \$THEME into objects
- added support for redirecting users if they accidentally request a page with an external link
- made a start with a base class for themes
- started with a minimalistic theme called 'frugal'
- created start of a theme factory
- minor cosmetics

2008-05-09

- changed the creation of the \$DB global object: we now use a database factory

2008-04-29

- removed some of the trigger\_error() calls in waslib/calculate\_node(); only database errors now emit to screen if debug is TRUE; the rest now use logger(..., LOG\_DEBUG) which writes to the database in itself.
- we now kick unauthorised users/passersby out of protected areas with a fatal error 070 (cannot find node in area). They should login the regular way IMHO. I re-used error code '070' on purpose in order not to leak information about protected areas.

2008-04-25

- changed name of config parameter for language from 'language' to 'language\_key' to stay in sync with other (database) fields dealing with language codes.
- moved all code dealing with translations and languages to a separate file and into a special class.

2008-04-23

- cleaned up loginlib.php, added more documentation
- added logger() which logs important events in the database

2008-04-21

- done with t() and supporting routines
- added en and nl translations for loginlib.php

2008-04-16

- busy with translating strings via function t()

2008-04-11

- changed interface for last\_insert\_id() method: use table+field instead of sequencename
- added new table login\_failures
- loginlib.php now also implements the blacklist feature and the failures counters

2008-04-09

- login mostly works, except blacklisting/failure counts
- added confirmation mail to user after succesful change of password

2008-04-08

- added a javascript alert in every login dialog (near the end)
- created a random password/laissez passer-generator

2008-04-07

- changed password requirements in loginlib: now min 6 chars etc.
- rearranged code in loginlib
- added more demodata to play with

2008-04-05

- first draft of WAS-logo incorporated in login dialog

2008-04-04

- still working on login/logout and various failure modes and also on the 2-step laissez-passer + bypass routine

2008-04-03

- still working on login/logout and various failure modes

2008-04-02

- started with login/logout routines, added file loginlib.php

2008-04-01

- rearranged some code
- we now always read the complete config table in core
- added more config parameters in demodata
- refined session handling code
- added if\_exist\_session() type of routine to make sure we are not fooled by spurious cookies

2008-03-30

- added tabledef for users, sessions
- added more support routines for database manipulation to waslib.php
- added a new file dbsessionlib.php

2008-03-19

- renamed db\_quoted() to db\_escape\_and\_quote() to make the effect more obvious
- we now know the \$node and the \$area and even the \$theme to use
- re-arranged some code; moved to waslib.php
- added even more demodata to 'play' with index.php and we added a clickable breadcrumb trail (that was \_easy\_).

2008-03-17

- renamed the quote() method to escape() in Database class because it may add confusion; the difference between escaping apostrofs and adding apostrofs around a string in order to insert into the database like in db\_quote().
- added a simple test-routine to dump data from the database

2008-03-14

- added optional parameters \$limit and \$offset to Database->query() method
- we are now able to determine a valid area based on the user's request of 'area' and 'node'.

2008-03-13

- some more database manipulation routines added

2008-03-12

- evade the magic in magic\_quotes\_sybase by issuing a fatal error, circumvent the magic in magic\_quotes\_gpc() with function magic\_unquote()
- changed the format of demodata from SQL-statements to nested arrays

2008-03-03

- added version check in init.php: the database version MUST match the code version, or else...

2008-02-29

- started with demodata.php to play with

2008-02-20

- added a simple tabledef dumper to install.php so we can see tabledefs in a tabluar form
- more tabledefinitions in tabledefs.php

2008-02-19

- added much to the main tabledefs.php

2008-02-16

- added a subtree under /program/install for tabledefs of the main system and also places for storing language specific demo data
- started with main tabledefs
- quick and dirty testcode in install.php to excercise/test the tabledefs

2008-02-15

- moved a lot of test code from install.php to /devel/test directory so I can 'play' with various subsystems without interfering with the real code. Currently /deve/test/test.php is focused on excercising the Database class.

2008-02-14

- added an extra dummy parameter to `$DB->last_insert_id()` as hook for future extension with other database drivers
- added a function `$DB->table_exists()`
- added a test with some 128 fielddefs in `install.php` (for now)

2008-02-12

- added `$DB->debug` (default `FALSE`), can be set via constructor
- added `$DB->drop_table()`
- added `$DB->create_table()` using 'generic' (not MySQL-specific) datadefinition
- added another file to 'play' with: `/program/install.php`
- moved `diff_microtime()` to `init.php`

2008-02-11

- added new object type `DatabaseResult` to deal with queries returning data
- added a few more stubs in `index.php` to casually test `Database/DatabaseResult`-classes

2008-02-10

- documented `$CFG->debug`
- got a few more methods working in `mysql.class.php` + q&d tests in `index.php`

2008-02-07

- experiments with the 'poor mans' database factory were more or less successful: the code works, but `phpdoc` fails badly when the same class is defined multiple times within the same package. However, a `pgsql-driver` in a separate @packages does work with `phpdoc`. Oh well.
- re-arranged some code in the `Database`-class: we now have a separate method to connect to the server and open the database, we no longer do that from the constructor. Also, we no longer bail out on MySQL-errors because we can expect errors during install and we don't want to bail out at that point.
- added error and `errno` to `Database` class which store the results from the underlying database, handy to find out what, exactly, went wrong.
- added the parameter `$CFG-debug` in `init.php`
- moved the `unset($CFG)` from `config(-example).php` to `index.php` in order to make certain that we won't be fooled by a stray global set via `$_GET` or whatever user input
- added a fake `microtime()` function in case it doesn't exist in the environment. The fake version uses a fractional part of 0.0 but is otherwise 100% compatible with the real `microtime()` string format. The reported time will be off by at most 2 seconds, oh well.
- Added a global object to record the performance, including the time of start and stop of the script execution. Could be used to identify bottlenecks.
- rearranged the order of code in `init.php`
- added `error_reporting` depending on the value of `$CFG->debug`.
- brought the call to the new `Database` class in line with the new class definition
- removed the calls to `error_exit()` from the `Database` class; they do not belong there.
- documented the format of the release date variable in `version.php` to include the full seconds-resolution ISO 8601 date
- added more error checking in `Database` class via `$DB->errno` and `$DB->error`

2008-02-06

- made a start with databaselib.php and mysql.class.php
- some tweaking in version.php: now record full release date+time

2008-02-04

- re-arranged the comments in config-example.php, hopefully clarifies

2008-02-01

- added init.php
- added version.php: keeps track of version of php-files (for comparison with database to determine necessary update actions)

2008-01-31

- added preliminary versions of README, INSTALL, etc.
- completed a quick and dirty script to generate documentation with phpdoc
- completed a script to generate both distribution version and development version of W@S

2008-01-28

- committed a first version of /index.php and config-example.php to CVS; we have now actually started creating program code

## CREDITS

/program/CREDITS.txt

\$Id: CREDITS.txt,v 1.2 2011-05-04 14:24:52 pfokker Exp \$

For a full overview of credits, please visit the project website at <<http://websiteatschool.eu>>.

# Appendix D - Todo List

## In Package wascore

### In [AclManager](#)

- there is something not right with buffering the tabledefs. If an error occurs, we get FALSE instead of an array. Mmmmm....

### In [GroupManager::acl\\_delete\(\)](#)

- should this routine be moved to an acl-object? Hmmm....

### In [AdminOutput::AdminOutput\(\)](#)

- do we need a link rel="shortcut icon" type of header too?
- do we really need more meta-headers?
- is it really wise to add a base header? It interferes with the session cookie whenever you login at another URL than the base+'admin.php'... Comment it out for now

### In [AdminOutput](#)

- add a 'funnel mode': disable all distracting links that could seduce the user to leave and leave locked records (eg. nodes)
- carefully check if we need more headers in html-head section of document, see AdminOutput().

### In [Area](#):

- refactor/change the way the default node and area are calculated from the requested node and

area. We now go the the database too often.

In [area.class.php](#)

- we probably need to get rid of this file because it is not used (2010-12-07/PF)

In [AreaManager](#)

- we need to take care of spurious spaces in inputs (or do we?)

In [AreaManager::area\\_delete\(\)](#)

- should we also require the user to delete any files associated with the area before we even consider deleting it? Or is OK to leave the files and still delete the area. We do require that nodes are removed from the area, but that is mainly because of maintaining referential integrity. Mmmmm... Maybe that applies to the files as well, especially in a private area. Food for thought.
- since multiple tables are involved, shouldn't we use transaction/rollback/commit? Q: How well is MySQL suited for transactions? A: Mmmmm.... Which version? Which storage engine?

In [AreaManager::area\\_overview\(\)](#)

- should we add a paging function to the list of areas? Currently all areas are shown in a single list...
- should we make two categories: 'public' and 'private' in the list of areas? Maybe handy when there are many manu areas, but it would be inconsistent with the page manager menu which simply lists the areas in the sort order. Easy way out: the user is perfectly capable to set the sort order in such a way that the sort order already groups the public and private areas. Oh well....

In [AreaManager::area\\_setdefault\(\)](#)

- should we acknowledge the changed default to the user or is it enough to see the icon 'move'?
- should we send alerts? If so, can we use the routine to queue messages from pagemanager? A reason not to send alerts: the alerts will be sent as soon as a page is added to the new area,

so why bother?

#### In [build\\_tree\(\)](#)

- repairing a node doesn't really belong here, in this routine. we really should have a separate 'database repair tool' for this purpose. someday we'll fix this....
- what if we need the trees of two different areas? should the static var here be an array, keyed by area\_id?

#### In [Node::calculate\\_node\(\)](#)

- refactor into two different functions: one for specified node, other for unspecified node

#### In [Theme::calc\\_breadcrumb\\_trail\(\)](#)

- split into two separate routines, one to set the tree, another to construct the list of anchors

#### In [Theme::calc\\_tree\\_visibility\(\)](#)

- how about making all nodes under embargo visible when previewing a page or at least the path from the node to display?

#### In [TranslateTool::code\\_highlight\(\)](#)

- should we turn to ereg() instead of a simple str\_replace() for {VARIABLE} highlighting?

#### In [DatabaseMysql::column\\_definition\(\)](#)

- 'enum' type equivalent with varchar, enum\_values[] array is not used at all, only as a form of documentation
- should we allow both int and integer?



#### In [DatabaseMysql::concat\(\)](#)

- perhaps extend this function to accept more than 2 strings?

#### In [ConfigAssistant](#)

- implement checklist

#### In [DatabaseMysql::connect\(\)](#)

- weigh pros and cons of persistent database connections, perhaps add as config option?

#### In [convert\\_to\\_type\(\)](#)

- perhaps change the possible values of \$type to full strings rather than 'cryptic' single letter codes. Furthermore: what do we do with invalid dates, times and date/times? For now it is a stub, returning \$value as-is. Oh well.

#### In [DatabaseMysql::create\\_table\(\)](#)

- document correct link for documentation of generic table definition 'tabledefs.php'

#### In [DatabaseMysql::create\\_table\\_sql\(\)](#)

- document correct link for documentation of generic table definition 'tabledefs.php'
- find a way to deal with the enum values: where do we keep them? Or do we keep them at all?

#### In [database\\_factory\(\)](#)

- perhaps add postgresql in a future version

### In [dbsession\\_close\(\)](#)

- should we do something with locking the session record from `dbsession_open()` until `dbsession_close()`? For now, the session record is not locked in any way, so the latest call gets to keep its changes Mmmm....

### In [dbsession\\_create\(\)](#)

- should we also record the IP-address of the user in the session record? In a way this is a case of information leak, even though it is only between authenticated users. Mmmm...

### In [GroupManager::delete\\_group\\_capacities\\_acls\(\)](#)

- should we also require the user to delete any files associated with the area before we even consider deleting it? Or is it OK to leave the files and still delete the area. We do require that nodes are removed from the area, but that is mainly because of maintaining referential integrity. Mmmmm... Maybe that applies to the files as well, especially in a private area. Food for thought.
- since multiple tables are involved, shouldn't we use transaction/rollback/commit? Q: How well is MySQL suited for transactions? A: Mmmmm.... Which version? Which storage engine?

### In [dialog\\_get\\_label\(\)](#)

- if we let the hotkey from the label prevail and add it to the input tag, why add a hotkey to the label too?

### In [dialog\\_get\\_widget\(\)](#)

- we could manipulate the title attribute of input strings like "please enter a number between {MIN} and {MAX}" based on the various value properties instead of just displaying the title. oh well, for a future version, perhaps...
- we now only cater for buttons via input type="submit" without the option to visualise the accesskey. Using the button tag could solve that, but button is not defined before HTML 4.01. What to do?

In [dialog\\_get\\_widget\\_file\(\)](#)

- if we let the hotkey from the label prevail and add it to the input tag, why add a hotkey to the label too?
- should we do something with an um-empty \$value? If so, waht? The browser ignores this...

In [dialog\\_get\\_widget\\_richtextinput\(\)](#)

- if we let the hotkey from the label prevail and add it to the input tag, why add a hotkey to the label too?

In [dialog\\_get\\_widget\\_textinput\(\)](#)

- if we let the hotkey from the label prevail and add it to the input tag, why add a hotkey to the label too?

In [AclManager::dialog\\_tableform\(\)](#)

- bailing out on non-array is a crude way of error handling: this needs to be fixed

In [error\\_exit\(\)](#)

- do we really want to 'leak' a link to the main site?

In [FileManager::FileManager\(\)](#)

- a nice filter for JOB\_IMAGEBROWSER and also an alternative user interface for browsing/selecting images

In [Theme::get\\_address\(\)](#)

- should we add additional text to the address, e.g. prefix 'URL: ' or something? now it is just a plain old URL without any comments whatsoever.

In [ConfigAssistant::get\\_dialogdef\(\)](#)

- implement checklist

In [PageManager::get\\_dialogdef\\_add\\_node\(\)](#)

- should we make the defaults in this routine configurable? (I'm not convinced they should)

In [AclManager::get\\_dialogdef\\_admin\(\)](#)

- handle the related information in this dialog

In [AclManager::get\\_dialogdef\\_intranet\(\)](#)

- handle the related information in this dialog

In [TranslateTool::get\\_dialogdef\\_language\\_domain\(\)](#)

- try to figure this out: when the delimiter in \$name was a dot '.' \$\_POST contained a '\_' instead. WTF? (it seems that a colon works... for now)

In [Theme::get\\_div\\_breadcrumbs\(\)](#)

- how about adding a title to the items? or do we do that already?

In [UserManager::get\\_editor\\_names\(\)](#)

- this list here is hardcoded: we do not expect to be adding or removing editors to/from the CMS soon. However, it might be cleaner to do this elsewhere.

In [Theme::get\\_html\\_head\(\)](#)

- also deal with Bazaar Style Style Sheets at node level in this routine

In [AreaManager::get\\_icon\\_delete\(\)](#)

- should we check to see if the area is empty before showing delete icon? Or is it soon enough to refuse deletion when the user already clicked the icon? I'd say the latter. For now...

In [PageManager::get\\_icon\\_delete\(\)](#)

- should we display trash can icons for sections with non-empty subsections? there really is no point, because we eventually will not accept deletion of sections with grandchildren in task\_node\_delete. Hmmmmm..... For now I just added the condition that access is denied when a section has grandchildren. Need to refine this, later. Also, how about readonly nodes? Surely those cannot be deleted... should it not show in the icon?

In [PageManager::get\\_icon\\_edit\(\)](#)

- move permission check to a separate function permission\_edit\_node()

In [PageManager::get\\_icon\\_page\\_preview\(\)](#)

- if this is a public area, the user can see every page, except the expired/embargo'ed ones should we take that into account too? I'd say that is way over the top. How about pages in an intranet where the user has view privilege? Complicated. KISS: only show preview to those that can edit or edit content.

In [Theme::get\\_logo\(\)](#)

- should we take path\_info into account here too???? how about /area/aaa/node/nnn instead of

/aaa/hnn???

In [get\\_mimetype\(\)](#)

- there is room for improvement here: the code in step 1 and step 2 is largely untested

In [AdminOutput::get\\_navigation\(\)](#)

- we need to clean up this code and properly implement the funnel mode (2009-12-18)

In [Language::get\\_phrase\(\)](#)

- should we return an error for an invalid specific language?

In [Theme::get\\_quicklinks\(\)](#)

- should we take Apache's PATH\_INFO feature into account to create friendly links?

In [GroupManager](#)

- Perhaps this class should be merged with the UserManager class because there is a lot of overlap. Mmmmm.... maybe in a future refactoring operation.

In [GroupManager::group\\_delete\(\)](#)

- should we also require the user to delete any files associated with the group before we even consider deleting it? Or is it OK to leave the files and still delete the group. Food for thought.
- since multiple tables are involved, shouldn't we use transaction/rollback/commit? Q: How well is MySQL suited for transactions? A: Mmmmm.... Which version? Which storage engine?

In [GroupManager::group\\_savenew\(\)](#)

- maybe we should find a more elegant way to check a field for uniqueness
- should we delete the datadirectory if something goes wrong?

In [href\(\)](#)

- should we merge this with `html_a()` and/or rename this routine to `html_href()`?

In [install\\_module\(\)](#)

- we should refactor and combine `install_theme()` and `install_module()`

In [install\\_theme\(\)](#)

- we should refactor and combine `install_theme()` and `install_module()`

In [is\\_expired\(\)](#)

- this function also 'repairs' circular references. This should move to a separate function but for the time being it is "convenient" to have automatic repairs... tree-repair

In [is\\_under\\_embargo\(\)](#)

- this function also 'repairs' circular references. This should move to a separate function but for the time being it is "convenient" to have automatic repairs... tree-repair

In [job\\_start\(\)](#)

- this routine is a stub

In [job\\_tools\(\)](#)

- fix permissions for backup tool! perhaps another bit?

#### In [TranslateTool::languages\\_overview\(\)](#)

- should we add a paging function to the (perhaps loooooong) list of languages?

#### In [lock\\_record\(\)](#)

- do we need a 'force lock' option to forcefully take over spurious locks?
- perhaps we can save 1 trip to the database by checking for something like `UPDATE SET locked_by = $session_id WHERE (id = $id) AND ((locked_by IS NULL) OR (locked_by = $session_id))` but I don't know how many affected rows that would yield if we already had the lock and effectively nothing changes in the record. (Perhaps always update atime to force 1 affected row?)
- we need to resolve the problem of crashing browsers and locked records

#### In [logger\(\)](#)

- should we make this configurable and maybe log directly to syslog (with automatic logrotate) or do we want to keep this 'self-contained' (the webmaster can read the table, but not the machine's syslog)?

#### In [loginlib.php](#)

- should we normalize the `remote_addr` everywhere? We now rely on the `remote_addr` being equal to some stored value (in the database) but with an IPv6 address there are several possibilities to have different representations of the same address (e.g. `:::dead:beef` is equivalent to `::0:dead:beef` or even `:::DeAd:BeeF` or `'0000:0000:0000:0000:0000:0000:DEAD:BEEF'`. This problem also exists with IPv4: `'127.0.0.1'` is equivalent to `'127.000.000.001'`. \*sigh\*
- should we suppress the username in the laissez-passer routine? We `_do_` leak the the username in an insecure email message. This does require making the laissez-passer code unique in the database (currently only username+code has to be unique and that's easy because the username itself is unique).



In [login\\_dialog\\_open\(\)](#)

- should we add another 'powered by' link to '/program/about.html'?

In [login\\_stylesheet\(\)](#)

- this routine needs some cleaning up

In [main\\_admin\(\)](#)

- should we cater for a special 'print' button + support for a special style sheet for media="print"?

In [main\\_file\(\)](#)

- the check on '/../' is inconclusive if the \$path is encoded in UTF-8: the overlong sequence 2F C0 AE 2E 2F eventually yields 2F 2E 2E 2F or '/../'. Reference: RFC3629 section 10.

In [main\\_index\(\)](#)

- cleanup login/logout-code

In [main\\_index.php](#)

- add the performance results in a HTML-comment if not CFG->debug, in sight otherwise

In [module.class.php](#)

- we probably need to get rid of this file because it is not used (2010-12-07/PF)

In [modulelib.php](#)

- we probably need to get rid of this file because it is not used (2010-12-07/PF)

In [PageManager::module\\_connect\(\)](#)

- should we pass the area\_id at all? What happens when a node is moved to another area without informing the module? Questions, questions, questions...

In [PageManager::module\\_disconnect\(\)](#)

- should we pass the area\_id at all? What happens when a node is moved to another area without informing the module? Questions, questions, questions...

In [module\\_factory\(\)](#)

- what if the module is not found? Currently no alternative is loaded but FALSE is returned.

In [PageManager::module\\_load\\_admin\(\)](#)

- should we sanitise the modulename here? It is not user input, but it comes from the modules table in the database. However, if a module name would contain sequences of "../" we might be in trouble

In [module\\_load\\_view\(\)](#)

- should we sanitise the modulename here? It is not user input, but it comes from the modules table in the database. However, if a module name would contain sequences of "../" we might be in trouble

In [Node:](#)

- we probably need to get rid of this file because it is not used (2010-12-07/PF)

In [performance\\_get\\_seconds\(\)](#)

- maybe we should get rid of this \$PERFORMANCE object, because it doesn't do that much anyway

In [PageManager::permission\\_delete\\_node\(\)](#)

- we should also take the readonly flag into account (or should we?) when determining delete permissions

In [quoted\\_printable\(\)](#)

- should we change the code to accomodate the canonical newline CRLF in the input?

In [Email::rfc2047\\_qstring\(\)](#)

- maybe optimise this routine to let pure ASCII-words through unencoded (in a later version)

In [Email::rfc5322\\_message\\_id\(\)](#)

- how about UTF-8 hostnames? Mmmm...

In [sanitise\\_filename\(\)](#)

- should we check for overlong UTF-8 encodings: C0 AF C0 AE C0 AE C0 AF equates to ../ or is that dealt with already by filtering on letters/digits and embedded dots/dashes/underscores?

In [AclManager::save\\_data\\_admin\(\)](#)

- fix the crude error check on `dialogdef === FALSE` here

#### In [PageManager::save\\_node\(\)](#)

- there is something wrong with embargo: should we check starting at parent or at node? this is not clear: it depends on basic/advanced and whether the embargo field changed. mmmm... safe choice: start at `node_id` for the time being
- this routine could be improved by refactoring it; it is too long!

#### In [Email::set\\_header\(\)](#)

- should we bring the Capi-Tali-Sation of `$name` in line with the default capitalisation in the list above?

#### In [FileManager::show\\_directories\\_and\\_files\(\)](#)

- This routine is way too long, it should be split up into smaller subroutines

#### In [FileManager::sort\\_entries\(\)](#)

- it is a pity I cannot reference `$this->sort` from within the 6 cmp-functions...

#### In [task\\_logview\(\)](#)

- should we allow for fancy selection mechanisms on the logfile or is that over the top?

#### In [PageManager::task\\_node\\_delete\(\)](#)

- should we display trash can icons for sections with non-empty subsections in treeview? there really is no point, because we eventually will not accept deletion of sections with grandchildren. Hmmmmm.....

#### In [PageManager::task\\_page\\_preview\(\)](#)

- the check on permissions can be improved (is PERMISSION\_XXXX\_EDIT\_NODE enough?)
- there is an issue with redirecting to another site: officially the url should be fully qualified (ie. \$CFG->www). I use the shorthand, possibly without scheme and hostname (\$CFG->www\_short). This might pose a problem with picky browsers. See [calculate uri shortcuts](#) for more information.

#### In [PageManager::task\\_save\\_newnode\(\)](#)

- about 'sort\_order': do we insert nodes at the end or the beginning of a parent section?
- how do we alert users that an embargo date has come around? Do we schedule alerts via cron?

#### In [theme\\_factory\(\)](#)

- should we massage the directory and file names of the included theme?
- what if the theme is not found? Currently no alternative is loaded but FALSE is returned.

#### In [FileManager::unique\\_filename\(\)](#)

- Should we take care of the race condition in this routine? Should we already create an empty file or is that clutter?

#### In [update\\_statistics\(\)](#)

- maybe extend this routine to actually store more statistics information in a separate table

#### In [UserManager](#)

- Perhaps this class should be merged with the GroupManager class because there is a lot of overlap. Mmmmm.... maybe in a future refactoring operation.

### In [UserManager::user\\_delete\(\)](#)

- should we also require the user to delete any files associated with the user before we even consider deleting it? Or is it OK to leave the files and still delete the user. Food for thought.
- since multiple tables are involved, shouldn't we use transaction/rollback/commit? Q: How well is MySQL suited for transactions? A: Mmmmm.... Which version? Which storage engine?

### In [UserManager::user\\_edit\(\)](#)

- maybe it is better to call this routine with \$user\_id as a parameter? that allows for moving from adduser() -> saveuser() -> edituser(\$user\_id). Mmmm, food for thought

### In [UserManager::user\\_saveuser\(\)](#)

- maybe we should find a more elegant way to check a field for uniqueness
- shouldn't we end with the edit-user dialog rather than the users overview? that might make more sense...

### In [FileManager::valid\\_path\(\)](#)

- the check on '/../' is inconclusive if the \$path is encoded in UTF-8: the overlong sequence 2F C0 AE 2E 2F eventually yields 2F 2E 2E 2F or '/../'. Reference: RFC3629 section 10.

### In [FileManager::virusscan\(\)](#)

- maybe use MIME for sending alert if not 7bit message?
- This routine is quite \*nix-centric. I'm not sure how this would work on other server platforms. Should we do something about that?

### In [Zip::zip\\_add\\_data\(\)](#)

- should we handle the option of a better compression level (eg. level 9) in gzcompress()? we

could check to see if CMF equals 0x78 and FLG is either 0x01, 0x5E, 0x9C or 0xDA the latter 4 values might have an effect on general purpose bit flag bits 2 and 3. for now we'll just keep it simple, but there might be a little something to improve here.

- should we handle the possibility of an additional 4 bytes for DICTID (RFC1950, reference [2])?

## In Package wasinstall

In [InstallWizard::check\\_compatibility\(\)](#)

- add more tests, e.g. for gd, safe\_mode, memory limit, etc.

In [demodata\\_users\\_groups\(\)](#)

- get rid of the \$wizard kludge!
- should we append an underscore to the userpaths to make sure we don't clash with the first user account?

In [InstallWizard::get\\_default\\_install\\_values\(\)](#)

- should we check the program version versus the stored program version here?
- there is something wrong with the default for \$cms\_www; FIXME (commented out for now)

In [InstallWizard::get\\_page\(\)](#)

- should we promote language and high\_visibility to function parameters instead of using \$\_SESSION directly?

In [install.php](#)

- how prevent third party-access to install.php after initial install? .htaccess? !exists(../config.php)?
- we should make sure that autosession is disabled in php.ini, otherwise was won't work

- we should make sure that register globals is off
- we should make sure that we can actually set cookies (necessary when logging in).

In [InstallWizard::perform\\_installation\(\)](#)

- should we save the config.php to the datadir if the main dir fails? Mmmm.... security implications?
- this routine badly needs refactoring

In [InstallWizard::save\\_cms\(\)](#)

- also take safe\_mode into account? Should that be a requirement for succesfull installation?

In [InstallWizard::show\\_dialog\\_cms\(\)](#)

- can we suppress even more fields here in case of a Standard installation?

In [InstallWizard::show\\_dialog\\_compatibility\(\)](#)

- more tests to perform here: safe mode, memory limit, processing time limit, register globals

In [tabledefs.php](#)

- automatically create appropriate sequence name for serial fields??? or add seqdefs too?

In [InstallWizard::write\\_config\\_php\(\)](#)

- should we make the filemode (hardcoded at 0400) configurable/customisable?

In Package wasmod\_htmlpage



In [htmlpage\\_cron.php](#)

- change this stub into a real cron function.

In [htmlpage\\_search.php](#)

- change this stub into a real search function, with limits on the number of results, an offset where to start and perhaps even a time limit. for now this always returns an empty array

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