

# **jAPS 2.0 - jAPS Model**

## **Do It The jAPS Way**

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# **jAPS 2.0 - jAPS Model**

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## **Abstract**

Describes the conceptual model of jAPS 2.0. This guide is recommended for technical and non-users.

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# Table of Contents

1. Scope of the document .....	1
Introduction .....	1
Target audience .....	1
Resources .....	1
2. Introduction .....	2
.....	2
3. Contents .....	3
Contents .....	3
Content Type .....	3
Content Attribute .....	4
Content Model .....	5
4. Pages .....	6
Pages .....	6
Page Models .....	6
Showlet .....	6
5. Resources .....	7
Resources .....	7
A. GNU Free Documentation License .....	9

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## List of Examples

3.1. Generic Content .....	4
5.1. Resource Tipe Definition .....	7
5.2. XML example of a Image resource: .....	8
5.3. XML example of a Document resource: .....	8

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# Chapter 1. Scope of the document

## Introduction

Describes the conceptual model of jAPS 2.0. This guide is recommended for technical and non-users.

## Target audience

This document is for developers.

## Resources

Additional informations may be obtained through the following two mailing-lists:

- <japs-devs@lists.sourceforge.net>, focused on developers
- <japs-users@lists.sourceforge.net>, focused on final users

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# Chapter 2. Introduction

This document describes the conceptual model and the elements that are the foundations of jAPS 2.0 platform:

- Content, Content Models and Categories
- Pages, Pages Tree and Page Models
- Resources
- Showlet
- Links
- Custom Showlet

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# Chapter 3. Contents

## Contents

In jAPS the *content* is a set of information (*Content Attributes*) organized in a structure that define the "Content Type". The contents, as defined below, shall be considered only as pure information, not contain indications of how the information will be displayed.

The information are *multilanguage* or *monolanguage*, depending on information that we consider.

Indications how the contents will be displayed are defined in content models. For each type of content can be defined more content models. Structure and informations are stored in the database in XML format.

## Content Type

The *Content Type* groups together all the contents with a similar structure that use the same set of editing operations (in the administration area) and the same content model (in front -end).

An example of content type can be a News, an Article, etc. Each content type is defined, in the system configuration, by set of attributes (id, description, etc.) and by the list of content attributes.

The content types available in the system must be declared and defined in xml in the table `sysconfig`, item `contentTypes`. The structure of the content type is:

```
<contenttypes>
  <contenttype typecode="____" typedescr="____" viewpage="____" listmodel="____" >
    <attributes>
      <attribute name="____" attributetype="____" />
      .....
      <list name="____" attributetype="____" nestedtype="____" />
      .....
    </attributes>
  </contenttype>
  <contenttype ..... >
    .....
  </contenttype>
  .....
</contenttypes>
```

For each content type are defined:

- `typecode`: code (which should be 3 alphanumeric characters);
- `typedescr`: description;
- `viewpage`: the code of the page displaying the complete content;
- `listmodel`: code of Content Model displaying the content lists of that type;
- `defaultmodel`: default model;

The two models identified by `listmodel` and `defaultmodel` are the *extremes*, which displays the contents of that type; the `defaultmodel` display the full content, while `listmodel` display only the minimum elements to interpret the content within the list.

### Example 3.1. Generic Content

```
<contenttypes>
  <contenttype typecode="CNG" typedescr="Generic Content" viewpage="contentview"
    <attributes>
      <attribute name="Title" attributetype="Text" indexingtype="text"/>
      <attribute name="Abstract" attributetype="Longtext" indexingtype="text"/>
      <attribute name="TextBody" attributetype="Hypertext" indexingtype="text"/>
      <attribute name="Image_1" attributetype="Image" />
      <attribute name="Image_2" attributetype="Image" />
      <list name="RelatedLinks" attributetype="Monolist" nestedtype="Link"/>
      <list name="Attachments" attributetype="Monolist" nestedtype="Attach"/>
    </attributes>
  </contenttype>
  <contenttype typecode="NEW" typedescr="News" viewpage="newsview" listmodel="12" />
</contenttypes>
```

Can be configured (without write new JAVA code) new content types, based on existing attribute types.

## Content Attribute

A *Content Attribute* is the basic information which forms the content. Each content attribute is identified, within the content, by a unique name defined during configuration.

For example, the content type `Generic Content` of Portal Example consists of the following content attributes:

- `Title`: multilanguage text type
- `Abstract`: multilanguage textarea type
- `TextBody`: hypertext type
- `Image_1`: image type
- `Image_2`: image type
- `RelatedLinks`: monolist link type
- `Attachments`: monolist document/attach type

In addition, there are other content attributes (for example, attributes of type `Date`, `Number` etc.) useful to define custom content types.

The attribute content types available in the system are defined in specific system configuration files.

Configuring the content types, the XML that specifies the content attribute must contains the XML attributes `name` and `attributetype`;

```
<attribute|list|table name="ATTRIBUTECODE" attributetype="ATTRIBUTECODETYPE"
```

In addition to these two XML attributes may be present others, characteristic of particular attribute content type (for example attribute of type "Monolist").

It is possible to add a configuration for required fields: `required = "true | false"` (default value: false). During editing, imposition of required configuration involves different effects depending on the attribute type in question.

It is possible to add a configuration for searchable fields: `searchable="true|false"` (default value: false). Setting "true" the attribute value is replicated in a table where you can search SQL.

This option is used by jAPS, for example, providing a list of contents filtered by attribute values.

Below it is described the configuration of each content attribute types. The Content Attributes are divided into two types: simple attributes and composite attributes.

The Content Attributes are divided into two types: basic (monolanguage and multilanguage) and complex.

## Content Model

jAPS has a formatting engine for the contents based on models. The information in the contents must be formatted in different ways. For each contents type are available different models.

The models define how the content will display in the pages of the Portal.

The Content Model is a formatting scheme for a specific content type. For each content type can be defined more content models. The formatting engine receives as input a content and a model, and produces in output a formatted content.

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# Chapter 4. Pages

## Pages

The page in jAPS is like a blank sheet, uniquely defined by its code and title. The pages are related to each other in a hierarchical "tree", with no exceptions.

The pages in jAPS consist of 3 main elements:

- Model
- Property
- Showlet configuration

Page = Model + Property + Showlet Configuration

## Page Models

The Page Model defines a characterization for the pages. Within a Portal jAPS You can configure multiple page models. Each page has a single model. The Model is characterized by two elements:

- Scheme: split of the page in area
- Decoration: look and feel of the page

## Showlet

jAPS is a system that operates on a centralized set of services through components called showlets. Each showlet provides part of markup that must be incorporated in the final layout. The engine portal contains the logic control and aggregation of showlets and services. The showlets provide the ideal link between services and portal. The showlets are a simplification of portlet.

The Showlet is an object that allows to display information and functionality (services) on the pages of the Portal. Can be configured a Showlet in each of the areas on the page defined by the associated page model.

### Note

Showlets in jAPS are similar to portlet (JSR 168 standard), but are simpler and do not follow standard. Therefore they have a different name.

Showlet = JSP model + Logic + Configuration

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# Chapter 5. Resources

## Resources

Resources usually corresponds to information on file, which you can attach to content. Resources can be of different types (eg images, documents, etc.). Each type of resource provides a repository and tools to manage it. A resource, in general, includes several files (eg the same image in different sizes, or a document in several languages) and also support attributes (eg file name, extension, etc.).

A resource is a set of objects on file that form a logical unit. The different files of a resource represent different "instances" or "views" or "versions", for example, different sizes or cuttings of a picture.

The concept of "multiple files for the same resource" is reserved for the following cases:

- the end user is allowed to access a single resource-file per time;
- the context defines which resource-file have be used.

### *Resources type*

- Image: multidimensional image (resource characterized by a number of instances/views composed by the original image and those obtained from resize).
- Attach: word document, pdf, txt or similar (resource characterized by a single instance).

The resource types are defined in XML format on the `sysconfig` table:

### **Example 5.1. Resource Tipe Definition**

```
<resourcetypes>
  <resourcetype code="Image" folder="cms/images" class="com.agiletec.aps.cms.mo
  <resourcetype code="Attach" folder="cms/documents" class="com.agiletec.aps.cms
</resourcetypes>
```

**Example 5.2. XML example of a Image resource:**

```
<resource id="444" typecode="Image">
  <descr>descrizione</descr>
  <categories/>
  <instance>
    <size>0</size>
    <filename>fotografia_0.jpg</filename>
    <mimetype>image/jpeg</mimetype>
    <lenght>2.8Kb</lenght>
  </instance>
  <instance>
    <size>1</size>
    <filename>fotografia_1.jpg</filename>
    <mimetype>image/jpeg</mimetype>
    <lenght>3.8Kb</lenght>
  </instance>
</resource>
```

**Example 5.3. XML example of a Document resource:**

```
<resource id="448" typecode="Attach">
  <descr>descrizione</descr>
  <categories/>
  <instance>
    <size>0</size>
    <filename>schema.pdf</filename>
    <mimetype>application/pdf</mimetype>
    <lenght>440 Kb</lenght>
  </instance>
</resource>
```

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