

*Arakhnê*.ORG

# L<sup>A</sup>T<sub>E</sub>X PACKAGES FOR UNIFIED PROCESS METHODOLOGY

---

**L<sup>A</sup>T<sub>E</sub>X Packages for Unified Process Methodology**

**Official Documentation**

---

Reference:	UPM-2007-01
Version:	17.0
Updated:	2009/11/03
Status:	Public

Authors: Stéphane GALLAND

This document describes the  $\LaTeX$  Packages for Unified Process Methodology project.

$\TeX$  is a trademark of the American Mathematical Society.

`tex-upmethodology` is owned by Stéphane Galland, *Arakhnê.org*, France.

This document was realised with  $\LaTeX$  and `tex-upmethodology`.

Copyright © 2006-2009 Stéphane GALLAND.

This document is published by the Arakhnê.org Group. All right reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publishers.

Reference : UPM-2007-01

Document Summary	
Project	L <sup>A</sup> T <sub>E</sub> X Packages for Unified Process Methodology
Document	Official Documentation
Reference	UPM-2007-01
Version	17.0
Last Update	2009/11/03

Authors		
<i>Names</i>	<i>Comments</i>	<i>Emails</i>
Stéphane GALLAND	Original Author	galland@arakhne.org

Validators			
<i>Names</i>	<i>Comments</i>	<i>Emails</i>	<i>Initials</i>
Stéphane GALLAND	Original Author	galland@arakhne.org	

Version History		
<i>Version</i>	<i>Date</i>	<i>Updates</i>
1.0	2006/04/11	First release of this example
2.0	2006/04/19	Add mtabular and mtable environments
3.0	2006/04/27	Add package upmethodology-code
4.0	2007/04/13	Update upmethodology-fmt package
5.0	2007/07/02	Adding macros for informed people
		Update upmethodology-fmt package
		Adding symbols and text formatting functions
6.0	2007/07/04	Updating footnote functions
		Add front page selection macro
7.0	2007/07/07	Add bibliography format macros
8.0	2009/05/08	Fixing several mismatches
		Adding section of document extensions
9.0	2009/06/23	Adding section on upmcaution, upminfo and upquestion environments
10.0	2009/10/09	Add nodocumentinfo option in upmethodology-document class
11.0	2009/10/23	Add back page package
12.0	2009/10/24	Add extension package
13.0	2009/10/27	Add extension macros and publication page
14.0	2009/10/28	Fixing macro names in the upmethodology-fmt package. Add installation chapter.
15.0	2009/10/30	Add document class explanations.
16.0	2009/11/02	Add people name formatting macros.
		Add package dependency list.
17.0	2009/11/03	Add comment parameter for document role macros.



# CONTENTS

<b>1</b>	<b>Introduction</b>	<b>9</b>
<b>I</b>	<b>General User Documentation</b>	<b>11</b>
<b>2</b>	<b>Download and Installation</b>	<b>13</b>
2.1	Download . . . . .	13
2.2	Manual System-wide Installation . . . . .	13
2.3	Manual User-wide Installation . . . . .	13
2.4	Debian Package Installation . . . . .	13
2.5	Package Dependencies . . . . .	14
2.5.1	upmethdology-backpage.sty . . . . .	14
2.5.2	upmethdology-code.sty . . . . .	14
2.5.3	upmethdology-document.cls . . . . .	14
2.5.4	upmethdology-document.sty . . . . .	14
2.5.5	upmethdology-extension.sty . . . . .	15
2.5.6	upmethdology-fmt.sty . . . . .	15
2.5.7	upmethdology-frontpage.sty . . . . .	15
2.5.8	upmethdology-p-common.sty . . . . .	15
2.5.9	upmethdology-spec.sty . . . . .	15
2.5.10	upmethdology-task.sty . . . . .	16
2.5.11	upmethdology-version.sty . . . . .	16
<b>II</b>	<b>Package Documentation</b>	<b>17</b>
<b>3</b>	<b>Class upmethodology-document</b>	<b>19</b>
3.1	Types of documents . . . . .	19
3.2	Class options . . . . .	19
3.3	Additional Features . . . . .	19
<b>4</b>	<b>Package upmethodology-version</b>	<b>21</b>
4.1	Constants for the Document Status . . . . .	21
4.1.1	Information about the Document . . . . .	21

4.2	Register Revisions . . . . .	22
4.3	Formatted List of Versions . . . . .	22
4.4	Localization . . . . .	23
<b>5</b>	<b>Package upmethodology-fmt</b>	<b>25</b>
5.1	Figures . . . . .	25
5.2	Sub-figures . . . . .	25
5.3	Figures with embedded T <sub>E</sub> X macros . . . . .	27
5.4	Tabulars . . . . .	27
5.5	Tables . . . . .	28
5.6	Enumerations . . . . .	28
5.6.1	Enumeration Counters . . . . .	29
5.6.2	Inline Enumeration . . . . .	29
5.7	Footnotes . . . . .	29
5.8	UML diagrams on the side of paragraphs . . . . .	30
5.9	Date formatting . . . . .	30
5.10	Text formatting . . . . .	31
5.11	Symbols . . . . .	32
5.12	Bibliography . . . . .	32
5.13	Framed Mini Pages . . . . .	33
5.14	Message Boxes . . . . .	33
5.15	Additional Document Sectionning Macros . . . . .	34
5.15.1	Non-numbered Part in Table of Content . . . . .	34
5.15.2	Non-numbered Chapter in Table of Content . . . . .	34
5.15.3	Non-numbered Section in Table of Content . . . . .	35
5.15.4	Non-numbered Subsection in Table of Content . . . . .	35
5.15.5	Non-numbered Subsubsection in Table of Content . . . . .	35
<b>6</b>	<b>Package upmethodology-document</b>	<b>37</b>
6.1	Document Information and Declaration . . . . .	37
6.2	Abstract and Key-words . . . . .	37
6.2.1	Declarations . . . . .	38
6.2.2	Rendering . . . . .	38
6.3	Document Summary . . . . .	38
6.4	Change Icons . . . . .	38
6.5	Document Authors . . . . .	38
6.6	Document Validators . . . . .	39
6.7	Informed People . . . . .	39
6.8	Copyright and Publication Information . . . . .	39

6.8.1	Setting Information . . . . .	39
6.8.2	Retreiving Information . . . . .	40
6.8.3	Publication Page . . . . .	40
6.9	Localization . . . . .	40
<b>7</b>	<b>Package upmethodology-frontpage</b>	<b>43</b>
7.1	Display the front page . . . . .	43
7.2	Change Front Page Layout . . . . .	43
7.3	Change Illustration Picture . . . . .	43
7.4	Define a Front Page in Extensions . . . . .	44
7.5	Localization . . . . .	45
<b>8</b>	<b>Package upmethodology-backpage</b>	<b>47</b>
8.1	Display the back page . . . . .	47
8.2	Change Back Page Layout . . . . .	47
8.3	Define a Back Page in Extensions . . . . .	47
<b>9</b>	<b>Package upmethodology-extension</b>	<b>49</b>
9.1	Load a Document Extension . . . . .	49
9.2	Write a Document Extension . . . . .	49
<b>10</b>	<b>Package upmethodology-task</b>	<b>51</b>
10.1	Task Definition . . . . .	51
10.2	Task Reference . . . . .	52
10.3	Localization . . . . .	52
<b>11</b>	<b>Package upmethodology-code</b>	<b>53</b>
<b>12</b>	<b>Authors and License</b>	<b>55</b>





## LIST OF FIGURES

5.1	Example of figure inclusion with <code>\mfigure</code> . . . . .	26
5.2	Example of subfigures with <code>mfigures</code> . . . . .	26
6.1	Example of Publication Page generated with <code>\upmpublicationpage</code> . . . . .	41
7.1	Front Page Layouts . . . . .	44



## LIST OF TABLES

3.1	Options of <code>upmethodology-document</code> class . . . . .	20
5.1	Example of <code>mtable</code> . . . . .	28
5.2	List of supported date formats . . . . .	31
5.3	List of symbols . . . . .	32
9.1	List of overridable value names . . . . .	50



# 1

## INTRODUCTION

This set of package permits to write documents according to Unified Process Methodology. It was initially wittren by Stéphane GALLAND from Systems and Transport laboratory<sup>1</sup> and is distributed by the *Arakliné.ORG* website.

Packages are:

- `upmethodology-version.sty`: permits to set the version and the status of the document. It also permits to manage the document history;
- `upmethodology-fmt.sty`: provides some usefull functions to format the UP documents;
- `upmethodology-document.sty`: provides functions to manage the project, the subproject and the status of the document;
- `upmethodology-frontpage.sty`: formats and provides a front page for the document;
- `upmethodology-backpage.sty`: formats and provides a back page for the document;
- `upmethodology-task.sty`: is the  $\text{\LaTeX} 2_{\epsilon}$  package that provides macros to manage project's tasks.
- `upmethodology-document.cls`: is the  $\text{\LaTeX} 2_{\epsilon}$  class that provides the whole document specification. It is based on `book` and on the previous packages;
- `upmethodology-code.sty`: provides macros for source code formatting;
- `upmethodology-extension.sty`: provides macros for extension mechanism.

---

<sup>1</sup>Systems and Transport Laboratory, University of Technology of Belfort-Montbéliard, France, <http://set.utbm.fr/>



# I

## GENERAL USER DOCUMENTATION





## DOWNLOAD AND INSTALLATION

This chapter describes how to download `tex-upmethodology` and how to install it.

### 2.1/ DOWNLOAD

`tex-upmethodology` is available on the *Arakhne.org* website: <http://www.arakhne.org/tex-upmethodology/>. Different types of installation are available: manual installation, Debian packages.

### 2.2/ MANUAL SYSTEM-WIDE INSTALLATION

To make `tex-upmethodology` available to all users, copy the content of the `tex-upmethodology` archive inside one of your system `texmf` directory, usually one of:

- `/usr/share/texmf-texlive/tex/latex/upmethodology`,
- `/usr/share/texmf/tex/latex/upmethodology`.

The second is to rebuild the  $\text{\LaTeX}$  databases by invoking on a console (Unix syntax is used):

```
$> sudo mktexlsr  
$> sudo update-updmap --quiet
```

`sudo` is a standard Linux tool which permits to authorized users to temporarily obtain the administration rights.

### 2.3/ MANUAL USER-WIDE INSTALLATION

To make `tex-upmethodology` available to one user, copy the content of the `tex-upmethodology` archive inside the `$HOME/texmf` directory.

It is not required to rebuild the system-wide  $\text{\LaTeX}$  databases because the user's `texmf` are dynamically parsed by the  $\text{\LaTeX}$  distributions.

### 2.4/ DEBIAN PACKAGE INSTALLATION

Debian packages are available on *Arakhne.org* website: <http://www.arakhne.org/download.html>. Please follow the given rules.

## 2.5/ PACKAGE DEPENDENCIES

This section contains the list of all the package dependencies for the upmethodology packages.

### 2.5.1/ UPMETHDOLOGY-BACKPAGE.STY

upmethodology-backpage package depends on:

- upmethodology-p-common
- upmethodology-extension

### 2.5.2/ UPMETHDOLOGY-CODE.STY

upmethodology-code package depends on:

- upmethodology-p-common

### 2.5.3/ UPMETHDOLOGY-DOCUMENT.CLS

upmethodology-document class depends on:

- upmethodology-p-common
- a4wide
- fancyhdr
- upmethodology-document
- upmethodology-extension
- upmethodology-frontpage
- upmethodology-backpage
- upmethodology-task
- upmethodology-code
- upmethodology-spec
- url
- hyperref

### 2.5.4/ UPMETHDOLOGY-DOCUMENT.STY

upmethodology-document package depends on:

- upmethodology-p-common
- babel
- vmargin
- upmethodology-extension
- upmethodology-fmt
- upmethodology-version

### 2.5.5/ UPMETHDOLOGY-EXTENSION.STY

upmethodology-extension package depends on:

- upmethodology-p-common

### 2.5.6/ UPMETHDOLOGY-FMT.STY

upmethodology-fmt package depends on:

- upmethodology-p-common
- graphicx
- subfigure
- tabularx
- multicol
- colortbl
- picinpar
- amsmath
- pifont
- setspace
- txfonts

### 2.5.7/ UPMETHDOLOGY-FRONTPAGE.STY

upmethodology-frontpage package depends on:

- upmethodology-p-common
- upmethodology-extension
- upmethodology-document

### 2.5.8/ UPMETHDOLOGY-P-COMMON.STY

upmethodology-p-common package depends on:

- ifthen
- xspace
- color

### 2.5.9/ UPMETHDOLOGY-SPEC.STY

upmethodology-spec package depends on:

- upmethodology-p-common
- ulem
- upmethodology-fmt
- upmethodology-code

### 2.5.10/ UPMETHDOLOGY-TASK.STY

upmethodology-task package depends on:

- upmethodology-p-common
- upmethodology-version

### 2.5.11/ UPMETHDOLOGY-VERSION.STY

upmethodology-version package depends on:

- upmethodology-p-common
- upmethodology-fmt

# II

## PACKAGE DOCUMENTATION



# CLASS UPMETHODOLOGY-DOCUMENT

Version: 2009/10/30

The  $\LaTeX$  class `upmethodology-document` provides the basic configuration for a document. According to an option, this class is able to extend the standard `book`, `report` or `article`  $\LaTeX$  classes. It also include a snipset of the other `upmethodology` packages.

## 3.1/ TYPES OF DOCUMENTS

`upmethodology-document` supports three special options which permits to set the type of document:

- **book:** A book-specification is a two-sided document composed of parts and chapters, and with a copyright page and document information page. This option indicates to `upmethodology-document` to load the  $\LaTeX$  standard `book` class. In addition the `\part` and `\chapter` macros are supported, and the following macros are automatically expanded: `\makefrontcover`, `\upmpublicationpage`, `\upmdocumentsummary`, `\makebackcover`. This behaviour may be overridden by the other class options.
- **report:** A report-specification is a one-sided document composed of chapters (no part), and with a document information page. This option indicates to `upmethodology-document` to load the  $\LaTeX$  standard `report` class. In addition the `\part` macro is ignored<sup>1</sup> and `\chapter` macro is supported, and the following macros are automatically expanded: `\makefrontcover`, `\upmdocumentsummary`, `\makebackcover`. This behaviour may be overridden by the other class options.
- **article:** An article-specification is a one-sided document composed of sections (no part nor chapter). This option indicates to `upmethodology-document` to load the  $\LaTeX$  standard `article` class. In addition the `\part` and `\chapter` macros are ignored<sup>1</sup>, and the following macros are automatically expanded: `\makefrontcover`, `\makebackcover`. This behaviour may be overridden by the other class options.

## 3.2/ CLASS OPTIONS

Table 3.1 contains the options supported by `upmethodology-document`. Any option not explicitly supported by the class is directly pass to the underlying standard  $\LaTeX$  class (`book`, `report` or `article` according to the type of document, see 3.1).

## 3.3/ ADDITIONAL FEATURES

`upmethodology-document` provides a constant behaviour for all types of document:

---

<sup>1</sup>The macro is redefined to print a warning message when used, no error message is generated.

Options of upmethodology-document class	
<i>Option</i>	<i>Explanation</i>
book	see section 3.1.
report	see section 3.1.
article	see section 3.1.
oneside	the document is generated assuming that each page will be printed on its recto side. This option overrides any previous occurrence of twoside option.
twoside	the document is generated assuming that each page will be printed on both recto and verso sides. This option overrides any previous occurrence of oneside option.
francais	same as french.
french	the document is written in French. upmethodology packages use the French translations for the generated texts. This option overrides any previous occurrence of english option.
english	the document is written in English. upmethodology packages use the English translations for the generated texts. This option overrides any previous occurrence of french option.
documentinfo	invoke <code>\upmdocumentsummary</code> , <code>\upmdocumentauthors</code> , <code>\upmdocumentvalidators</code> , <code>\upmdocumentinformedpeople</code> , and <code>\upmhistory</code> macros at the begining of the document. This option overrides any previous occurrence of nodocumentinfo option.
nodocumentinfo	do not invoke <code>\upmdocumentsummary</code> , <code>\upmdocumentauthors</code> , <code>\upmdocumentvalidators</code> , <code>\upmdocumentinformedpeople</code> , nor <code>\upmhistory</code> macros at the begining of the document. This option overrides any previous occurrence of documentinfo option.
pubpage	invoke <code>\upmpublicationpage</code> macro at the begining of the document. This option overrides any previous occurrence of nopubpage option.
nopubpage	do not invoke <code>\upmpublicationpage</code> macro at the begining of the document. This option overrides any previous occurrence of pubpage option.

Table 3.1: Options of upmethodology-document class

- `hyperref` is loaded and set with the document informations;
- `\setpdfcolor` is redefined and linked to `hyperref`;
- `fancyhdr` is loaded and default page header and page footer is provided.



## PACKAGE UPMETHODOLOGY-VERSION

Version: 2009/12/30

The package `upmethodology-version` permits to set the version and the status of the document. It also provides functions to manage the document history;

### 4.1/ CONSTANTS FOR THE DOCUMENT STATUS

Some  $\text{\LaTeX} 2_{\epsilon}$  variables provides strings that describe the status of the document. They can be used in functions such as `\updateversion`.

- `\upmrestricted`: the document is under a restricted access, generally corresponding to the list of authors;
- `\upmvalidable`: authors indicates with this that the document could be sent to validators;
- `\upmvalidated`: the document was validated, but not published and published by all people;
- `\upmpublic`: the document published and accessible by all people;

#### 4.1.1/ INFORMATION ABOUT THE DOCUMENT

The following functions permit to access to the informations about the document:

- `\theupmversion`: replies the last version number for the document;
- `\upmdate{version}`: replies the updating date of the document corresponding to the given version number;
- `\upmdescription{version}`: replies the updating comment of the document corresponding to the given version number;
- `\upmstatus{version}`: replies the status of the document corresponding to the given version number.
- `\theupmdate`: replies the last updating date for the document. It is equivalent to `\upmdate{\theupmversion}`;
- `\theupmlastmodif`: replies the last updating comment for the document. It is equivalent to `\upmdescription{\theupmversion}`;
- `\theupmstatus`: replies the last status for the document. It is equivalent to `\upmstatus{\theupmversion}`;

## 4.2/ REGISTER REVISIONS

The package `upmethodology-version` permits to register revisions for building an history. The available functions are:

- `\updateversion{version}{date}{description}{status}`: registers an revision for the document. The revision indicates that the given version was produced at the given date. A small description of the changes and the resulting document's status must be also provided. The function `\updateversion` is a generalization of the following functions;
- `\initialversion[version]{date}{description}{status}`: registers the initial version of the document. If not given, the version is assumed to be `0.1`;
- `\incversion{date}{description}{status}`: registers a revision corresponding to the next major version. For example, if the version number was `2.67` before `\incversion`, this function add the version `3.67` with the given informations (incrementation of the major part of the version number);
- `\incsubversion{date}{description}{status}`: registers a revision corresponding to the next minor version. For example, if the version number was `2.67` before `\incsubversion`, this function add the version `2.68` with the given informations (incrementation of the minor part of the version number);

## 4.3/ FORMATTED LIST OF VERSIONS

To obtain a formatted list of versions, you could use the macro `\upmhistory[width]` which produces:

Version History		
Version	Date	Updates
1.0	2006/04/11	First release of this example
2.0	2006/04/19	Add mtabular and mtable environments
3.0	2006/04/27	Add package <code>upmethodology-code</code>
4.0	2007/04/13	Update <code>upmethodology-fmt</code> package Adding macros for informed people
5.0	2007/07/02	Update <code>upmethodology-fmt</code> package Adding symbols and text formatting functions Updating footnote functions
6.0	2007/07/04	Add front page selection macro
7.0	2007/07/07	Add bibliography format macros
8.0	2009/05/08	Fixing several mismatches Adding section of document extensions
9.0	2009/06/23	Adding section on <code>upmcaution</code> , <code>upminfo</code> and <code>upquestion</code> environments
10.0	2009/10/09	Add <code>nodocumentinfo</code> option in <code>upmethodology-document</code> class
11.0	2009/10/23	Add back page package
12.0	2009/10/24	Add extension package
13.0	2009/10/27	Add extension macros and publication page
14.0	2009/10/28	Fixing macro names in the <code>upmethodology-fmt</code> package. Add installation chapter.
15.0	2009/10/30	Add document class explanations.
16.0	2009/11/02	Add people name formatting macros. Add package dependency list.
17.0	2009/11/03	Add comment parameter for document role macros.

## 4.4/ LOCALIZATION

The following macros defines some localized strings used by `upmethodology-version`:

- `\upm@lang@date`: Date;
- `\upm@lang@updates`: Updates;
- `\upm@lang@version`: Version;
- `\upm@lang@version@history`: Version History;



## PACKAGE UPMETHODOLOGY-FMT

Version: 2012/09/17

The package `upmethodology-fmt` provides some usefull facilities to format an UP document.

### 5.1/ FIGURES

You could include afigure inside your document with the following macros:

```
\mfigure[position]{options}{filename}{caption}{label}  
\mfigure*[position]{options}{filename}{caption}{label}
```

These two macros permits to include an image in your document. The parameters are:

- `position`: is the desired position of the figure (see `\beginfigure[position]`). It could be `t` (top of the page), `b` (bottom of the page), `h` (at the macro location if possible) or `H` (at macro location);
- `options`: are the options passed to `\includegraphics`;
- `filename`: is the filename passed to `\includegraphics`;
- `caption`: is the caption of the figure (see `\caption{caption}`);
- `label`: is the label used to reference the figure (see `\label{fig:label}`).

The difference between `\mfigure` and `\mfigure*` is the same as the difference between `\begin{figure}` and `\begin{figure*}`: the star-version fits to the entire paper width event if the document has two or more columns.

Because the two macros above register a label with string starting with `fig:`, we propose the following function to easily access to the figure's references:

- `\figref{label}`: is equivalent to `\ref{fig:label}`;
- `\figpageref{label}`: is equivalent to `\pageref{fig:label}`.

The figure 5.1 page 26 is obtained with the macro: `\mfigure[ht]{width=.6\linewidth}{slogo}{Example of figure inclusion with \texttt{\textbackslash mfigure}}{example:mfigure}`.  
The reference and page reference are obtained with `\figref{example:mfigure}` and `\figpageref{example:mfigure}`.

### 5.2/ SUB-FIGURES

In some case, it is usefull to put several images inside the same picture, but without lousing the possibility to reference each subfigure. This feature was proposed by the package `subfigure`. The following environ-

# Arakhnê.ORG

Figure 5.1: Example of figure inclusion with `\mfigure`

```
ments provides helper functions for subfigure: \begin{mfigures}[position]{caption}{label}
...
\end{mfigures}
\begin{mfigures*}[position]{caption}{label}
...
\end{mfigures*}
```

These two macros permits to include an image in your document. The parameters are:

- **position:** is the desired position of the figure (see `\beginfigure[position]`). It could be `t` (top of the page), `b` (bottom of the page), `h` (at the macro location if possible) or `H` (at macro location);
- **caption:** is the caption of the figure (see `\caption{caption}`);
- **label:** is the label used to reference the figure (see `\label{fig:label}`).

Inside the environment `\mfigures[*]`, you could use the macro `\mfigure` to properly include a subfigure (the first optional parameter is ignored) or you could use the macro `\msubfigure{options}{file}{caption}`.

The figure 5.2 page 26 is obtained with the environment:

```
\begin{mfigures}{Example of subfigures with \texttt{mfigures}}{example:msubfigure}
\mfigure[width=.4\linewidth]{logo}{First subfigure}{example:firstsubfigure}
\hfill
\msubfigure[width=.4\linewidth]{smalllogo}{Second subfigure}
\end{mfigures}
```

The reference and page reference are obtained with `\figref{example:msubfigure}` and `\figpageref{example:msubfigure}`.



Figure 5.2: Example of subfigures with `mfigures`

The references to the subfigures could be obtained in two way:

- using the label given as the last parameter of `\mfigure`, eg. the label `example:firstsubfigure` corresponds to 5.2(a);
- using the label of the enclosing figure to which the index of the subfigure could be appended (in its roman representation and prefixed by the character “:”), eg. the label `example:msubfigure:b` corresponds to 5.2(b);

### 5.3/ FIGURES WITH EMBEDDED T<sub>E</sub>X MACROS

In several case it is usefull to include T<sub>E</sub>X macros inside a figure. It is possible with the files `.pstex` exporting from a software such as `xfig`.

To put a T<sub>E</sub>X macro inside your figure, follows the steps:

1. in `xfig` create a text label with the *special* property set. In this label types the string `\FIG $\delta$`  where  $\delta$  must be replaced by an identifier of your choice but only composed of letters (example: `\FIGmyid`);
2. in `xfig` saves your figure as `.pstex` files;
3. in L<sup>A</sup>T<sub>E</sub>X, just before including the figure with the embedded T<sub>E</sub>X macros, define the expressions to put in the figure. This action must be done with one of the macros:
  - `\figmath{id}{expr}` will associate to the given identifier the given mathematical expression,
  - `\figtext{id}{expr}` will associate to the given identifier the given text expression;
4. in L<sup>A</sup>T<sub>E</sub>X, include the figure with one of the macros:
 

```
\mfigurewtx[position]{width}{filename}{caption}{label}
\mfigurewtx*[position]{width}{filename}{caption}{label}
```

### 5.4/ TABULARS

You could include a tabular inside your document with the following environment:

```
\begin{mtabular}[width][ncolumns]{columns}...\end{mtabular}
```

This tabular is an extension of the `tabularx` environment which provides dynamic columns with the specifier `X`. The parameters are:

- `width`: is the desired width of the tabular;
- `ncolumns`: is the count of columns in the tabular. It must be consistent with the column description;
- `columns`: is the description of the columns according to the `tabular` and `tabularx` packages.

The `mtabular` environment provides:

- `\tabulartitle{title}`  
this macro permits to define the title of the tabular. It uses the colors `backtableheader` and `fronttableheader` for the background and the foreground respectively;
- `\tabularheader{header1}\dots{headern}`  
this macro permits to define the titles of the columns. It uses the colors `backtableheader` and `fronttableheader` for the background and the foreground respectively. Because the count of columns was given to the environment this function takes the same count of parameters as the count of columns.

The following example of table is obtained by:

```
\begin{mtabular}[\linewidth]{4}{lXrX}
\tabulartitle{Example of \texttt{mtabular}}
\tabularheader{Col1}{Col2}{Col3}{Col4}
a & b & c & d \\
\hline
e & f & g & h \\
\end{mtabular}
```

Example of mtabular			
Col1	Col2	Col3	Col4
a	b	c	d
e	f	g	h

## 5.5/ TABLES

You could include a table inside your document with the following environment:

```
\begin{mtable}[position]{width}{ncolumns}{columns}{caption}{label}...\end{mtable}
```

This environment is based on the `mtabular` environment. The parameters are:

- `position`: is the desired position of the table according to the  $\LaTeX$ 's table definition;
- `width`: is the desired width of the table (ie., the tabular inside the table);
- `ncolumns`: is the count of columns in the table (ie., the tabular inside the table). It must be consistent with the column description;
- `columns`: is the description of the columns according to the `tabular` and `tabularx` packages;
- `caption`: is the caption of the table;
- `label`: is the label referencing the table.

Because the `mtable` environment registers a label with a string starting with `tab:`, the following functions are proposed to easily access to the table's references:

- `\tabref{label}`: is equivalent to `\ref{tab:label}`;
- `\tabpageref{label}`: is equivalent to `\pageref{tab:label}`.

The table 5.1 page 28 is an illustration of the following  $\LaTeX$  code:

```
\begin{mtable}{\linewidth}{4}{lXrX}{Example of \texttt{mtable}}{example:mtable}
\captionastitle
\tabularheader{Col1}{Col2}{Col3}{Col4}
a & b & c & d \\
\hline
e & f & g & h \\
\end{mtable}
```

Example of mtable			
Col1	Col2	Col3	Col4
a	b	c	d
e	f	g	h

Table 5.1: Example of `mtable`

The macro `\captionastitle` is equivalent to a call to the macro `\tablartitle` with the caption in parameter.

## 5.6/ ENUMERATIONS

The package `upmethodology-fmt` provides a set of macros dedicated to enumeration lists.



### 5.6.1/ ENUMERATION COUNTERS

Sometimes it is useful to start an enumeration list from a specific given number. This package provides several macros for saving and restoring the counter use by the enumeration lists.

Caution: only once counter could be saved at a given time.

- `\savecounter{name}`  
save the counter identifier by the given name;
- `\restorecounter{name}`  
put the previously saved value into the given counter;
- `\setenumcounter{value}`  
force the value of the enumeration counter;
- `\getenumcounter`  
replies the value of the enumeration counter;
- `\saveenumcounter`  
save the enumeration counter;
- `\restoreenumcounter`  
force the enumeration to use the saved counter's value;

### 5.6.2/ INLINE ENUMERATION

In several documents, an enumeration of things is written inside a paragraph instead of inside a list of points. A simple example is: (i) first thing; (ii) second thing; (iii) etc. And it is produced by the L<sup>A</sup>T<sub>E</sub>X code:

```
\begin{inlineenumeration}
\item first thing;
\item second thing;
\item etc.
\end{inlineenumeration}
```

## 5.7/ FOOTNOTES

The package `upmethodology-fmt` provides a set of macros allowing to save the reference number of a footnote and to recall this reference many times as required.

- `\savefootnote{footnote text}{footnote id}`  
put a footnote and mark it with the corresponding label.  
Example: `\savefootnote{This is an example of a recallable footnote}{footrecalla}1;`
- `\savefootnote*{footnote text}{footnote id}`  
mark a footnote with the corresponding label but do not put in the current page.  
Example 1: `\savefootnote*{This is a second example of a recallable footnote}{footrecallb};`  
Example 2: `\savefootnote*{This is a third example of a recallable footnote}{footrecallc}.`

---

<sup>1</sup>This is an example of a recallable footnote

- `\reffootnote{footnote id}`  
recall the footnote reference without page number.  
Example 1: `\reffootnote{footrecalla}`<sup>1</sup> = *B*;  
example 2: `\reffootnote{footrecallb}`<sup>2</sup> = *A*;  
example 4: `\reffootnote{footrecalld}`<sup>??</sup> = ?.
- `\reffootnote*{footnote id}`  
recall the footnote reference with the page number if different of the current page.  
Example 1: `\reffootnote*{footrecalla}`<sup>1(29)</sup>;  
example 2: `\reffootnote*{footrecallb}`<sup>2(30)</sup>;  
example 3: `\reffootnote*{footrecallc}`<sup>3</sup>;  
example 4: `\reffootnote*{footrecalld}`<sup>??(??)</sup>.

## 5.8/ UML DIAGRAMS ON THE SIDE OF PARAGRAPHS

The package `upmethodology-fmt` provides an environment which permits to put an UML diagram (or any other picture) on the side of a paragraph.

- `\begin{umlinpar}[width]{picture_path}`  
`text`  
`\end{umlinpar}`  
put the specified picture on the side of the given text. The optional parameter `width` corresponds to the desired width of the picture. By default it is `.5\linewidth`.

This paragraph is an typical example of the usage of the environment `umlinpar`. To obtain it, the following  $\text{\LaTeX}$  code was typed:

```
\begin{umlinpar}{smallllogo}
This paragraph is an typical example
of the usage of the environment
\texttt{umlinpar}.
\end{umlinpar}
```



## 5.9/ DATE FORMATTING

Because the concept of date was important and unfortunately localized, this package provides a set of functions to define and extract information from dates (the supported date formats are described in table 5.2):

- `\makedate{day}{month}{year}`  
permits to create the text corresponding to the given date according to the current localized date format.
- `\extractyear{formatted_date}`  
extract the year field from a date respecting the localized date format.
- `\extractmonth{formatted_date}`  
extract the month field from a date respecting the localized date format.
- `\extractday{formatted_date}`  
extract the day field from a date respecting the localized date format.

<sup>2</sup>This is a second example of a recallable footnote

<sup>3</sup>This is a third example of a recallable footnote

yyyy/mm/dd	default format
dd/mm/yyyy	french format

Table 5.2: List of supported date formats

## 5.10/ TEXT FORMATTING

The package `upmethodology-fmt` provides a set of macros to format the text.

- `\textsup{text}`  
put a text as exponent in text mode instead of the basic L<sup>A</sup>T<sub>E</sub>X `exponent` in math mode.  
Example: `\textsup{this is an exponent}`<sup>this is an exponent</sup>;
- `\textsub{text}`  
put a text as indice in text mode instead of the basic L<sup>A</sup>T<sub>E</sub>X `indice` in math mode.  
Example: `\textsub{this is an indice}`<sub>this is an indice</sub>;
- `\makename[von]{first name}{last name}`  
format the specified people name components according to the document standards. By default, the format `first von last` is used.  
Example: `\makename[von]{Ludwig Otto Frederik Wilhelm}{Wittelsbach}`,  
“Ludwig Otto Frederik Wilhelm von WITTELSBACH”;
- `\upmmakename[von]{first name}{last name}{separator}`  
format the specified people name components according to the document standards. By default, the format `first von last` is used.  
Example: `\upmmakename[von]{Ludwig Otto Frederik Wilhelm}{Wittelsbach}{/}`,  
“Ludwig Otto Frederik Wilhelm/von/WITTELSBACH”;
- `\prname[von]{first name}{last name}`  
`\prname*[von]{first name}{last name}`  
format the specified people name components according to the document standards for *Professor* title. By default, the format `first von last` is used. The star-ed version is post-fixed, the non-star-ed version is prefixed.  
Example 1: `\prname{Pierre}{Martin}`, “PR. Pierre MARTIN”;  
Example 2: `\prname*{Pierre}{Martin}`, “Pierre MARTIN, PR.”;
- `\drname[von]{first name}{last name}`  
`\drname*[von]{first name}{last name}`  
format the specified people name components according to the document standards for *Doctor* title. By default, the format `first von last` is used. The star-ed version is post-fixed, the non-star-ed version is prefixed.  
Example 1: `\drname{Pierre}{Martin}`, “DR. Pierre MARTIN”;  
Example 2: `\drname*{Pierre}{Martin}`, “Pierre MARTIN, DR.”;
- `\phdname[von]{first name}{last name}`  
`\phdname*[von]{first name}{last name}`  
format the specified people name components according to the document standards for *Philosophiae-Doctor* title. By default, the format `first von last` is used. The star-ed version is post-fixed, the non-star-ed version is prefixed.  
Example 1: `\phdname{Pierre}{Martin}`, “PH.D. Pierre MARTIN”;  
Example 2: `\phdname*{Pierre}{Martin}`, “Pierre MARTIN, PH.D.”;
- `\scdname[von]{first name}{last name}`  
`\scdname*[von]{first name}{last name}`  
format the specified people name components according to the document standards for *Scientiae-Doctor* title. By default, the format `first von last` is used. The star-ed version is post-fixed, the

non-star-ed version is prefixed.

Example 1: `\scdname{Pierre}{Martin}`, “Sc.D. Pierre MARTIN”;

Example 2: `\scdname*{Pierre}{Martin}`, “Pierre MARTIN, Sc.D.”;

- `\mdname[von]{first name}{last name}`  
`\mdname*[von]{first name}{last name}`  
 format the specified people name components according to the document standards for *Medicinae-Doctor* title. By default, the format `first von last` is used. The star-ed version is post-fixed, the non-star-ed version is prefixed.  
 Example 1: `\mdname{Pierre}{Martin}`, “M.D. Pierre MARTIN”;  
 Example 2: `\mdname*{Pierre}{Martin}`, “Pierre MARTIN, M.D.”;
- `\pengname[von]{first name}{last name}`  
`\pengname*[von]{first name}{last name}`  
 format the specified people name components according to the document standards for *Professional/Chartered Engineer* title. By default, the format `first von last` is used. The star-ed version is post-fixed, the non-star-ed version is prefixed.  
 Example 1: `\pengname{Pierre}{Martin}`, “CENG. Pierre MARTIN”;  
 Example 2: `\pengname*{Pierre}{Martin}`, “Pierre MARTIN, CENG.”;
- `\iengname[von]{first name}{last name}`  
`\iengname*[von]{first name}{last name}`  
 format the specified people name components according to the document standards for *Incorporated Engineer* title. By default, the format `first von last` is used. The star-ed version is post-fixed, the non-star-ed version is prefixed.  
 Example 1: `\iengname{Pierre}{Martin}`, “IENG. Pierre MARTIN”;  
 Example 2: `\iengname*{Pierre}{Martin}`, “Pierre MARTIN, IENG.”.

## 5.11/ SYMBOLS

The package `upmethodology-fmt` provides several symbols described inside the table 5.3.

<code>\arakhneorg</code>	Arakhnê.ORG
<code>\copyright</code>	©
<code>\trademark</code>	™
<code>\regmark</code>	®
<code>\smalltrade</code>	™
<code>\smallreg</code>	®
<code>\smallcopy</code>	©
<code>\ust</code>	st
<code>\und</code>	nd
<code>\urd</code>	rd
<code>\uth</code>	th

Table 5.3: List of symbols

## 5.12/ BIBLIOGRAPHY

The package `upmethodology-fmt` provides a set of macros allowing to manage the bibliography. The default bibliography style is `abbr`.

- `\bibliographystyle{style}`  
set the bibliography style to use.  
Example: `\bibliographystyle{alpha};`
- `\bibliography{file}`  
set the BibT<sub>E</sub>X file to use.  
Example: `\bibliography{mybib};`
- `\bibsiz{size}`  
set the font size used for the bibliography section.  
Example: `\bibsiz{\Huge};`

### 5.13/ FRAMED MINI PAGES

Standard L<sup>A</sup>T<sub>E</sub>X distribution provides the `minipage` environment. This environment permits to put a small piece of page inside your document. Package `upmethodology-fmt` provides a framed extension of the original `minipage` environment:

```
\begin{framedminipage}[\linewidth]
This is an example of a framed
minipage.
\end{framedminipage}
```

This is an example of a framed minipage.

### 5.14/ MESSAGE BOXES

The package `upmethodology-fmt` provides a set of environment to put emphasis message boxes in the text. Three types of boxes are supported: caution, information, and question.

```
\begin{upmcaution}[width]
This is an example of a caution
message. This text must be rendered
with enough height (usually 2 lines
of text) to avoid intersection between
the caution icon and the box frame.
\end{upmcaution}
```



This is an example of a caution message. This text must be rendered with enough height (usually 2 lines of text) to avoid intersection between the caution icon and the box frame.

```
\begin{upminfo}[width]
This is an example of an information
message. This text must be rendered
with enough height (usually 2 lines
of text) to avoid intersection between
the caution icon and the box frame.
\end{upminfo}
```



This is an example of an information message. This text must be rendered with enough height (usually 2 lines of text) to avoid intersection between the caution icon and the box frame.

```
\begin{upmquestion}[width]
This is an example of a question
message. This text must be rendered
with enough height (usually 2 lines
of text) to avoid intersection between
the caution icon and the box frame.
\end{upmquestion}
```



This is an example of a question message. This text must be rendered with enough height (usually 2 lines of text) to avoid intersection between the caution icon and the box frame.

## 5.15/ ADDITIONAL DOCUMENT SECTIONNING MACROS

The package `upmethodology-fmt` provides several macros that permit to create special sections.

### 5.15.1/ NON-NUMBERED PART IN TABLE OF CONTENT

If you want to add a document part that has no part number but appearing inside the table of content, the classical  $\text{\LaTeX}$  macros `\part` and `\part*` are inefficient. Indeed, `\part` is adding a numbered part inside the table of content, and `\part*` is adding an unnumbered part but not inside the table of content.

To add a unnumbered part inside the table of content, you could use one of the macros:

```
\parttoc[toctitle]{title}
\parttoc*[toctitle]{title}
```

The macros `\parttoc` and `\parttoc*` have the same effect except that `\parttoc*` aligns the part's title to the other numbered parts' titles; and `\parttoc` not.

### 5.15.2/ NON-NUMBERED CHAPTER IN TABLE OF CONTENT

If you want to add a document chapter that has no chapter number but appearing inside the table of content, the classical  $\text{\LaTeX}$  macros `\chapter` and `\chapter*` are inefficient. Indeed, `\chapter` is adding a numbered chapter inside the table of content, and `\chapter*` is adding an unnumbered chapter but not inside the table of content.

To add a unnumbered chapter inside the table of content, you could use one of the macros:

```
\chaptertoc[toctitle]{title}  
\chaptertoc*[toctitle]{title}
```

The macros `\chaptertoc` and `\chaptertoc*` have the same effect except that `\chaptertoc*` aligns the chapter's title to the other numbered chapters' titles; and `\chaptertoc` not.

### 5.15.3/ NON-NUMBERED SECTION IN TABLE OF CONTENT

If you want to add a document section that has no a section number but appearing inside the table of content, the classical L<sup>A</sup>T<sub>E</sub>X macros `\section` and `\section*` are inefficient. Indeed, `\section` add a numbered section inside the table of content, and `\section*` adds an unnumbered section but not inside the table of content.

To add a unnumbered section inside the table of content, you could use one of the macros:

```
\sectiontoc[toctitle]{title}  
\sectiontoc*[toctitle]{title}
```

The macros `\sectiontoc` and `\sectiontoc*` have the same effect except that `\sectiontoc*` aligns the section's title to the other numbered sections' titles; and `\sectiontoc` not.

### 5.15.4/ NON-NUMBERED SUBSECTION IN TABLE OF CONTENT

If you want to add a document subsection that has no subsection number but appearing inside the table of content, the classical L<sup>A</sup>T<sub>E</sub>X macros `\subsection` and `\subsection*` are inefficient. Indeed, `\subsection` is adding a numbered subsection inside the table of content, and `\subsection*` is adding an unnumbered subsection but not inside the table of content.

To add a unnumbered subsection inside the table of content, you could use one of the macros:

```
\subsectiontoc[toctitle]{title}  
\subsectiontoc*[toctitle]{title}
```

The macros `\subsectiontoc` and `\subsectiontoc*` have the same effect except that `\subsectiontoc*` aligns the subsection's title to the other numbered subsections' titles; and `\subsectiontoc` not.

### 5.15.5/ NON-NUMBERED SUBSUBSECTION IN TABLE OF CONTENT

If you want to add a document subsubsection that has no subsubsection number but appearing inside the table of content, the classical L<sup>A</sup>T<sub>E</sub>X macros `\subsubsection` and `\subsubsection*` are inefficient. Indeed, `\subsubsection` is adding a numbered subsubsection inside the table of content, and `\subsubsection*` is adding an unnumbered subsubsection but not inside the table of content.

To add a unnumbered subsubsection inside the table of content, you could use one of the macros:

```
\subsubsectiontoc[toctitle]{title}  
\subsubsectiontoc*[toctitle]{title}
```

The macros `\subsubsectiontoc` and `\subsubsectiontoc*` have the same effect except that `\subsubsectiontoc*` aligns the subsubsection's title to the other numbered subsubsections' titles; and `\subsubsectiontoc` not.





## PACKAGE UPMETHODOLOGY-DOCUMENT

Version: 2009/11/03

The package `upmethodology-document` provides base function to manage document information (project, subproject, authors...).

### 6.1/ DOCUMENT INFORMATION AND DECLARATION

The informations associated to an UP document are:

- `\theupmproject` is the name of the project for which the document was produced;
- `\theupmsubproject` is the name of the sub-project for which the document was produced;
- `\theupmdocname` is the name of the document;
- `\theupmdocref` is the reference number of the document;
- `\theupmfulldocname` is the complete name of the document (composing by the project, subproject and name of the document).

You could declare the information about your document with one of the following functions:

`\declaredocument{project}{name}{ref}`

`\declaredocumentex{project}{subproject}{name}{ref}`

where the parameters are:

- `project` is the name of the project for which the document is for;
- `subproject` is the name of the sub-project for which the document is for;
- `name` is the name of the document;
- `ref` is the reference number of the document.

### 6.2/ ABSTRACT AND KEY-WORDS

You are able to declare the abstract and the key-words for your document. Both are basically used by the back page package.

### 6.2.1/ DECLARATIONS

The macro `\setdocabstract` is for entering the document's abstract:

```
\setdocabstract[lang]{abstract_text}
```

where `abstract_text` is the text of your abstract and `lang` designates for which language the abstract text is for. If the language is not specified, this macro uses the current document language.

The macro `\setdockeywords` is for entering the document's key-words:

```
\setdockeywords[lang]{keywords}
```

where `keywords` is the list of key-words and `lang` designates for which language the key-words are for. If the language is not specified, this macro uses the current document language.

### 6.2.2/ RENDERING

The macro `\theupmdocabstract` is expanded with the abstract text:

```
\theupmdocabstract
```

The macro `\theupmdockeywords` is expanded with the key-words:

```
\theupmdockeywords
```

## 6.3/ DOCUMENT SUMMARY

You can obtain a document summary with the macro `\upmdocumentsummary[width]` which produces:

Document Summary	
Project	L <sup>A</sup> T <sub>E</sub> X Packages for Unified Process Methodology
Document	Official Documentation
Reference	UPM-2007-01
Version	17.0
Last Update	2009/11/03

### 6.4/ CHANGE ICONS

By default, this package uses the logo of *Arakhnê.ORG* as icons. You could change them with the macros:

- `\defupmsmalllogo{filename}` defines the small logo used in the headers for instance;
- `\defupmlogo{filename}` defines the logo used on the front page for instance.

The logos' filenames are accessible with the functions `\theupmsmalldoclogo` and `\theupmdoclogo`.

### 6.5/ DOCUMENT AUTHORS

An author is someone who participates to the writing of the document. You could register author identities with:

```
\addauthor[email]{firstname}{name}
```

```
\addauthor*[email]{firstname}{name}{comment}
```

```
\addauthorvalidator[email]{firstname}{name}
```

```
\addauthorvalidator*[email]{firstname}{name}{comment}
```

The list of the authors is accessible by two means:

- `\theauthorlist` is a coma-separated list of the authors' names;
- `\upmdocumentauthors` procudes an array of all the authors (see below for an example).

Authors		
<i>Names</i>	<i>Comments</i>	<i>Emails</i>
Stéphane GALLAND	Original Author	galland@arakhne.org

## 6.6/ DOCUMENT VALIDATORS

A validator is someone who participates to the validation of the document. You could register validator identities with:

```
\addvalidator[email]{firstname}{name}
\addvalidator*[email]{firstname}{name}{comment}
\addauthorvalidator[email]{firstname}{name}
\addauthorvalidator*[email]{firstname}{name}{comment}
```

The list of the validators is accessible by two means:

- `\thevalidatorlist` is a coma-separated list of the validator' names;
- `\upmdocumentvalidators` procudes an array of all the validators (see below for an example).

Validators			
<i>Names</i>	<i>Comments</i>	<i>Emails</i>	<i>Initials</i>
Stéphane GALLAND	Original Author	galland@arakhne.org	

## 6.7/ INFORMED PEOPLE

An informed people is someone who receives the document to be informed about its content. You could register informed people identities with:

```
\addinformed[email]{firstname}{name}
\addinformed*[email]{firstname}{name}{comment}
```

The list of the informed people is accessible by two means:

- `\theinformedlist` is a coma-separated list of the informed people' names;
- `\upmdocumentinformedpeople` procudes an array of all the informed people (see below for an example).

## 6.8/ COPYRIGHT AND PUBLICATION INFORMATION

Package `upmethodology-document` provides several macros to define the copyright owner and the publication informations required to generate a publication page.

### 6.8.1/ SETTING INFORMATION

Copyrightier is the people or the institution, or both, which is owning the copyright on the document. The following macro permits to set the identify of the copyrightier in all the parts of the documents:

`\setcopyrighter{name}`

Publisher is the people or the institution, or both, which is publishing the document. Basically it is the same the copyrighter (see above):

`\setpublisher{name}`

Some times, copyright laws depend on the location where the document is printed. The following macro permits to put a message in the publication page which is indicating where the document is printed:

`\setprintingaddress{address}`

Publications may be identifier by international identifiers. Package `upmethodology-document` supports ISBN, ISSN and DOI: `\setisbn{number}`

`\setissn{number}`

`\setdoi{number}`

### 6.8.2/ RETREIVING INFORMATION

The information set by the macros described in the previous section may be retrieved with the following macros:

`\theupmcopyrighter`

`\theupmpublisher`

`\theupmprintedin`

`\theupmisbn`

`\theupmissn`

`\theupmdoi`

### 6.8.3/ PUBLICATION PAGE

The package `upmethodology-document` provides the `\upmpublicationpage` macro which is displaying a empty page with publication informations and optionally set the page number (default value is `-1`). Figure 6.1 illustrates the publication page of this document.

## 6.9/ LOCALIZATION

The following macros defines some localized strings used by `upmethodology-document`:

- `\upm@lang@project`: Project;
- `\upm@lang@document`: Document;
- `\upm@lang@docref`: Reference;
- `\upm@lang@lastupdate`: Last Update;
- `\upm@lang@document@summary`: Document Summary;
- `\upm@lang@document@authors`: Authors;
- `\upm@lang@document@validators`: Validators;
- `\upm@lang@document@names`: Names;
- `\upm@lang@document@emails`: Emails;

This document describes the L<sup>A</sup>T<sub>E</sub>X Packages for Unified Process Methodology project.

T<sub>E</sub>X is a trademark of the American Mathematical Society.

tex-upmethodology is owned by Stéphane Galland, Arakhnê.org, France.

This document was realised with L<sup>A</sup>T<sub>E</sub>X and tex-upmethodology.

Copyright © 2006-2009 Stéphane GALLAND.

This document is published by the Arakhnê.org Group. All right reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publishers.

Reference : UPM-2007-01

Figure 6.1: Example of Publication Page generated with `\upmpublicationpage`

- \upm@lang@document@initials: Initials;
- \upm@lang@document@abstract: Abstract;
- \upm@lang@document@keywords: Key-words.

## PACKAGE UPMETHODOLOGY-FRONTPAGE

Version: 2009/10/30

The `upmethodology-frontpage` package provides an front page for the UP documents. This package does not provides any public function. It is based on all the previous packages.

### 7.1/ DISPLAY THE FRONT PAGE

The front cover is displayed by invoking one of the following macros:

`\maketitle`  
`\makefrontcover`

### 7.2/ CHANGE FRONT PAGE LAYOUT

It is possible to change the layout of the front page with the macro:

`\setfrontlayout{layout_name}`

where `layout_name` must be one of:

- `classic`: classic front page layout with title and logo;
- `modern`: front page layout with title and logo and background picture.

The figure 7.1 illustrates the differents layouts.

### 7.3/ CHANGE ILLUSTRATION PICTURE

It is possible to insert an illustration picture on the front page. You could specify the image with the macro:

`\setfrontillustration[width_factor]{filename}`

where:

- `width_factor` is the scaling factor of the picture according to the line width. If you specifies 1 the image will not be scaled, for .5 the image will be the half of its original width...
- `filename` is the name of picture to use as the illustration.



Figure 7.1: Front Page Layouts

## 7.4/ DEFINE A FRONT PAGE IN EXTENSIONS

The `upmethodology-frontpage` package is able to use a page layout defined in a document extension (see chapter 9 for details on document extension).



A L<sup>A</sup>T<sub>E</sub>X macro must be defined in the `upmext-NAME.cfg` file of the extension. The name of this macro (for example `mylayout`) must be set with the `\set` macro in the same file:

```
\set{frontpage}{mylayout}
```

## 7.5/ LOCALIZATION

The following macros defines some localized strings used by `upmethodology-frontpage`:

- `\upm@lang@front@authors`: Authors;



## PACKAGE UPMETHODOLOGY-BACKPAGE

Version: 2009/10/30

The package `upmethodology-backpage` provides an back page for the UP documents. This package does not provides any public function. It is based on all the previous packages.

### 8.1/ DISPLAY THE BACK PAGE

The back cover is displayed by invoking the following macro:  
`\makebackcover`

### 8.2/ CHANGE BACK PAGE LAYOUT

It is possible to change the layout of the back page with the macro:  
`\setbacklayout{layout_name}`  
where `layout_name` must be one of:

- `none`: no back page.

### 8.3/ DEFINE A BACK PAGE IN EXTENSIONS

The `upmethodology-backpage` package is able to use a page layout defined in a document extension (see chapter 9 for details on document extension).

A  $\text{\LaTeX}$  macro must be defined in the `upmext-NAME.cfg` file of the extension. The name of this macro (for example `mylayout`) must be set with the `\set` macro in the same file:  
`\set{backpage}{mylayout}`



# PACKAGE UPMETHODOLOGY-EXTENSION

Version: 2009/11/03

The package `upmethodology-extension` provides tools to create layout and rendering extensions. It is possible to write an extension to the `upmethodology-document` package. An extension is able to override several values from the default `upmethodology-packages` or may be used by the other suite's packages. For example, the Systems and Transport laboratory<sup>1(9)</sup> extension is providing laboratory's icons, publisher's name and page layouts.

## 9.1/ LOAD A DOCUMENT EXTENSION

To load and use a document extension, you must invoke the macro:

```
\upmuse{extension_name}
```

where `extension_name` is the identifier of the extension to load. The extension's files must be inside your  $\LaTeX$  search path.

## 9.2/ WRITE A DOCUMENT EXTENSION

An document extension must be written and described inside a file named `upmext-NAME.cfg`, where `NAME` is the name of the extension. This file must be put in your  $\LaTeX$  search path.

The `upmext-NAME.cfg` file is a  $\LaTeX$  file in which a set of definition macros are put. These macros must respect the  $\LaTeX$  syntax.

The `\DeclareCopyright` macro permits to declare several copyright information about the extension:

```
\DeclareCopyright[lang]{extension_name}{year}{copyrighter}{trademark and copyright
information}
```

This macro declares the `copyright` value which contains the copyright text (for this documentation ""). This macro also declares the `trademarks` value which contains the trademark and other related informations about the extension (for this documentation "").

Additional macros are provided to redefine the `upmethodology-document` constants:

```
\Set[lang]{variable_name}{value}
```

The `variable_name` is the name of the value to override. It must be taken in one of the names listed in table 9.1. The `lang` parameter is a language identifier. It is used to restrict the definition to a specific language. If not given, the default language is used instead. The `image_name` and `image_scale` are the name of the image file and the scaling factor respectively.

The `\Get` macro permits to retrieve the value defined by a `\Set`:

<i>Value Name</i>	<i>Description</i>
logo	the filename of the picture which must be used as a large logo.
smalllogo	the filename of the picture which must be used as a small logo.
copyrighter	the name of the authors or the institution which own the copyright on the document.
publisher	the name of the document's publisher. The lang parameter is supported.
printedin	the location/address where this document is printed.
frontillustration	the image to use as illustration. The lang parameter is ignored.
frontpage	the name of the front page style — not the L <sup>A</sup> T <sub>E</sub> X macros — to layout the front page. OR the front page illustration.
backpage	the L <sup>A</sup> T <sub>E</sub> X macros to layout the back page. OR the back page illustration.
cfrontpage	the L <sup>A</sup> T <sub>E</sub> X macros — not the name of the front page style — to layout the front page.

Table 9.1: List of overridable value names

`\Get{variable_name}`

The `\Unset` macro permits to remove the definition of a value:

`\Unset{variable_name}`

The `\Ifnotempty` macro permits to expand the L<sup>A</sup>T<sub>E</sub>X macros if the given text is not empty:

`\Ifnotempty{text}{latex_code}`

The `\Ifempty` macro permits to expand the L<sup>A</sup>T<sub>E</sub>X macros if the given text is empty:

`\Ifempty{text}{latex_code}`

The `\Ifelsedefined` macro permits to expand the L<sup>A</sup>T<sub>E</sub>X macros in `then_code` if a value with the given name was defined, or to expand the L<sup>A</sup>T<sub>E</sub>X macros in `else_code` if no value with the given name was defined:

`\Ifelsedefined{value_name}{then_code}{else_code}`

The `\Put` macro is an extension of the standard picture `\put` macro. It takes into account the joint margin applied in two sided documents when it is used on page's backside (eg. the back page of the document):

`\Put(x,y){macros}`

This macro must be used inside a `picture` environment in place of the standard `\put` macro.

# 10

## PACKAGE UPMETHODOLOGY-TASK

Version: 2009/10/30

The  $\LaTeX$  package `upmethodology-task` provides a set of macros to define project's tasks.

During  $\LaTeX$  compilation this package could log the message "Project Task(s) may have changed. Rerun to get cross-references right" when some task information was not found or due to cross-references on them.

### 10.1/ TASK DEFINITION

The definition of a task could be made only inside one of the following environments:

```
\begin{taskdescription}{id}...\end{taskdescription}
\begin{taskdescription*}{id}...\end{taskdescription*}
```

where `id` is the identifier of the task.

The environment `taskdefinition` displays the task's description with a call to `\thetaskdescription{id}`. In the opposite `taskdefinition*` never displays the task's description.

Inside one of the task's definition environment above, you could use one of the following macros to define the task's attributes:

- `\taskname{name}`  
permits to defines the name of the task;
- `\tasksuper{id}`  
indicates that the current task is a sub-task of the task identified by the given identifier;
- `\taskcomment{text}`  
permits to describe the task's purposes and goals (will be shown in the description box of the task's description);
- `\taskprogress{percent}`  
defines the percent for the task's achieving;
- `\taskstart{date}`  
permits to set the starting date of the task (real or predicted);
- `\taskend{date}`  
permits to set the finished date of the task (real or predicted);
- `\taskmanager{name}`  
adds a task's manager into the list of the managers;
- `\taskmember{name}`  
adds a task's member into the list of the members;
- `\taskmilestone{date}{comment}`  
add a milestone into the task for the given date and described by the given comment.

## 10.2/ TASK REFERENCE

You could reference any information about the defined tasks in your document. In case you used cross-references this package could log the message "Project Task(s) may have changed. Rerun to get cross-references right" to complain about rebuilding of our document.

The following macros are available:

- `\thetasksuper{id}`  
replies the identifier of the parent task corresponding to the task identified by `id`;
- `\thetaskname{id}`  
replies the name of the the task identified by `id`;
- `\thetaskcomment{id}`  
replies the description for the the task identified by `id`;
- `\thetaskprogress{id}`  
replies the archieving percent for the the task identified by `id`;
- `\thetaskstart{id}`  
replies the starting date for the the task identified by `id`;
- `\thetaskend{id}`  
replies the ending date for the the task identified by `id`;
- `\thetaskmanagers{id}`  
replies the managers' list for the the task identified by `id`;
- `\thetaskmembers{id}`  
replies the members' list for the the task identified by `id`;
- `\thetaskmilestones{id}`  
replies the list of milestone's dates for the the task identified by `id`;
- `\thetaskmilestonecomment{id}{date}`  
replies the comment of the given milestone for the the task identified by `id`;
- `\thetaskdescription[width]{id}`  
replies the complete description of the the task identified by `id`.

## 10.3/ LOCALIZATION

The following macros defines some localized strings used by `upmethodology-task`:

- `\upm@task@lang@task`: Task;
- `\upm@task@lang@escription`: Description;
- `\upm@task@lang@startat`: Start at;
- `\upm@task@lang@endat`: End at;
- `\upm@task@lang@archieved`: Archieved;
- `\upm@task@lang@managers`: Managers;
- `\upm@task@lang@members`: Members;
- `\upm@task@lang@Milestones`: Milestones;
- `\upm@task@lang@subtask`: Sub-task of.



# 11

## PACKAGE UPMETHODOLOGY-CODE

Version: 2009/10/30

The L<sup>A</sup>T<sub>E</sub>X package `upmethodology-code` provides a set of macros for source code formatting. The supported source codes are UML, Java and C++.

You could load the package with the following options:

<code>uml</code>	use the UML notation (default value)
<code>java</code>	use the Java notation
<code>cpp</code>	use the C++ notation

You could also change the notation language with the macro:

`\upmcode lang{upm| java| cpp}`

The provided macros are listed in the following table:

macro	UML	Java	C++
Prototypes			
<code>\jclass{TheClass}</code>	<code>THECLASS</code>	<code>THECLASS</code>	<code>THECLASS</code>
<code>\jinterface{TheInterface}</code>	<i>TheInterface</i>	<i>TheInterface</i>	<i>TheInterface</i>
<code>\jpackage{ThePackage}</code>	<code>THEPACKAGE</code>	<code>THEPACKAGE</code>	<code>THEPACKAGE</code>
<code>\jfunc{FunctionName}</code>	<code>FunctionName</code>	<code>FunctionName</code>	<code>FunctionName</code>
Types			
<code>\jclazz</code>	<b>class</b>	<b>Class</b>	<b>class</b>
<code>\jvoid</code>	<b>void</b>	<b>void</b>	<b>void</b>
<code>\jboolean</code>	<b>boolean</b>	<b>boolean</b>	<b>bool</b>
<code>\jint</code>	<b>integer</b>	<b>int</b>	<b>int</b>
<code>\jlong</code>	<b>long integer</b>	<b>long</b>	<b>long</b>
<code>\jfloat</code>	<b>float</b>	<b>float</b>	<b>float</b>
<code>\jdouble</code>	<b>double</b>	<b>double</b>	<b>double</b>
<code>\jchar</code>	<b>character</b>	<b>char</b>	<b>char</b>
<code>\jstring</code>	<b>string</b>	<code>STRING</code>	<code>STD::STRING</code>
<code>\jarray{T}</code>	<b>array of Ts</b>	<code>T[]</code>	<code>T[]</code>
<code>\jcollection{T}</code>	<b>collection of Ts</b>	<code>COLLECTION &lt;T&gt;</code>	<code>STD::VECTOR &lt;T&gt;</code>
<code>\jset{T}</code>	<b>set of Ts</b>	<code>SET &lt;T&gt;</code>	<code>STD::SET &lt;T&gt;</code>

macro	UML	Java	C++
Constants			
<code>\jtrue</code>	TRUE	TRUE	TRUE
<code>\jfalse</code>	FALSE	FALSE	FALSE
Operations			
<code>\jcode{source code}</code>	source code	source code	source code
<code>\jcall{fct}{params}</code>	fct(params)	fct(params)	fct(params)
<code>\jop{operator}</code>	operator	operator	operator

# 12

## AUTHORS AND LICENSE

Copyright © 2006-2009 Stéphane GALLAND

This program is free library; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 3 of the License, or any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; see the file COPYING. If not, write to the Free Software Foundation, Inc., 59 Temple Place - Suite 330, Boston, MA 02111-1307, USA.