

XMLmind XML Editor - Online Help

Hussein Shafie
Pixware

`<xmleditor-support+xmlmind.com>`

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Pixware

<xmlmind-support@xmlmind.com>

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Abstract

This online help contains, in addition to a short tutorial, the reference manual of all the menus, tool bars and dialog boxes of XMLmind XML Editor (XXE for short).

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Part I. Getting started

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Chapter 1. Install

1. Installing XMLmind XML Editor (XXE for short)

Requirements

- Oracle (ex Sun) or Apple Java™¹ runtime 1.6 or above. Note that Oracle Java™ 1.7 is supported on the Mac.
- At least 2Gb of memory and a 2GHz CPU.
- 200Mb of free disk space; 400Mb for the self-contained distribution which includes a private Java™ runtime.

XXE is officially supported on Windows XP/Vista/7/8, on Linux and on Mac OS X 10.6 (Snow Leopard)/10.7 (Lion)/10.8 (Mountain Lion). It is possible to use it on other Java™ 1.6+ platforms (e.g. Mac OS X 10.5 (Leopard)), but without support from XMLmind.

Install on Windows

1. Download one of the two `setup.exe` files.

Normally you should choose `xxe-edition-version-setup.exe`. However, if you have a Java™ 1.6+ runtime already installed on your machine, you may prefer `xxe-edition-version-setup-nojvm.exe`.

2. Double-click on the `setup.exe` file to launch the installer.
3. Follow the instructions of the installer.

Install on the Mac

Java on Mac OS X

- A Java™ runtime allowing to run XXE is installed by default in Mac OS X 10.6 (Snow Leopard).
- As of Mac OS X 10.7 (Lion), you'll have to install Apple Java™ on your Mac. Normally, your Mac will automatically suggest to install Java™ the first time you'll attempt to run XXE. If this is not the case, you can download Java™ for Mac OS X from various sites on the Web, for example, from <http://support.apple.com/kb/DL1572>.

1. Download the `.dmg` file.

The Web browser is supposed to automatically copy the contents of the `.dmg` file — a folder called `xxe-edition-version` — to the download directory and then to move the downloaded `.dmg` file to the Trash.

2. Copy folder `xxe-edition-version` anywhere you want. For example, drag&drop this folder to your desktop or to the `/Applications` folder.
3. Start XMLmind XML Editor by double-clicking on the icon called `XMLEditor` found in the `xxe-edition-version` folder you have just moved.

Caution

You must copy folder `xxe-edition-version` in its entirety. Copying the `XMLEditor` icon (that is, `XMLEditor.app`) alone would not give you a fully functioning XXE.

If, for any reason, the automatic “unpacking” of the `.dmg` file described above does not happen:

1. Download the `.dmg` file.

¹Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

2. Double-click on the corresponding icon to open a Finder window showing the contents of the downloaded `.dmg` file. This Finder window contains a folder called `xxe-edition-version`.
3. Copy folder `xxe-edition-version` anywhere you want. For example, drag&drop this folder to your desktop or to the `/Applications` folder.
4. The downloaded `.dmg` file is not needed anymore, so:
 - a. In the Finder window, click the Eject icon found at the right of the “device” called "XMLmind XML Editor".
 - b. Delete the downloaded `.dmg` file by dragging it to the Trash.
5. Start XMLmind XML Editor by double-clicking on the icon called XMLEditor found in the `xxe-edition-version` folder you have just copied.

Install on Linux (or *manual* install on the Mac)

Tip

On the Mac, it is strongly recommended to download and install the `.dmg` file.

1. Make sure that the Java™ `bin/` directory is referenced in the `$PATH` and, at the same time, check that the Java™ runtime in the `$PATH` has the right version:

```
~$ java -version
java version "1.7.0"
Java(TM) SE Runtime Environment (build 1.7.0-b147)
Java HotSpot(TM) 64-Bit Server VM (build 21.0-b17, mixed mode)
```

2. Unpack the XXE distribution inside any directory you want:

```
$ cd
$ tar zxvf xxe-eval-5_6_0.tar.gz
$ ls xxe-eval-5_6_0
addon/
bin/
demo/
doc/
...
```

3. XXE is intended to be used directly from the `xxe-eval-5_6_0/` directory. That is, you can start XXE by simply executing:

```
$ xxe-eval-5_6_0/bin/xxe &
```

After that, you may want to add `xxe-eval-5_6_0/bin/` to your `$PATH`.

Manual install on Windows

Tip

On Windows, it is strongly recommended to download and install one of the two auto-installable `setup.exe` files.

1. Make sure that you have a Java™ 1.6+ runtime installed on your machine. To check this, open a command window and type "`java -version`" followed by Enter. You should get something looking like this:

```
C:\>java -version
java version "1.7.0"
Java(TM) SE Runtime Environment (build 1.7.0-b147)
Java HotSpot(TM) Client VM (build 21.0-b17, mixed mode, sharing)
```

2. Use a tool like WinZip, 7-Zip or Info-Zip² to unzip the XXE distribution inside any directory you want:

```
C:\> mkdir XMLmind
C:\> cd XMLmind
C:\XMLmind> unzip xxe-eval-5_6_0.zip
C:\XMLmind> dir xxe-eval-5_6_0
... <DIR> addon
... <DIR> bin
... <DIR> demo
... <DIR> doc
...
```

3. XXE is intended to be used directly from the `xxe-eval-5_6_0/` directory. That is, you can start XXE by simply executing:

```
C:\XMLmind> xxe-eval-5_6_0\bin\xxe.exe
```

After that, you may want to add a shortcut to "`C:\XMLmind\xxe-eval-5_6_0\bin\xxe.exe`" on your desktop.

Note that the `bin` directory contains not only `xxe.exe`, but also an equivalent `xxe.bat` which may be handy if you intend to customize the way XXE is started.

2. Contents of the installation directory

File layout when you install the `.dmg` distribution on the Mac

The `bin/` subdirectory does not exist as it is not needed. Instead, you'll find an `XMLEditor` (`XMLEditor.app`, when the file extensions are not hidden by the Finder) ``application icon". You'll double-click on this icon to start XXE.

The `demo/`, `doc/`, `legal/` and `addon/` subdirectories are found nearby `XMLEditor.app`.

`addon/`

The `addon/` directory is the place where XXE finds its extensions whatever their types: configurations, plugins, translations to languages other than English, spell-checker dictionaries.

This `addon/` directory is recursively scanned by XXE at startup time. Therefore, feel free to organize it as you want.

`addon/config/`

Contains configuration files for a few document types: DocBook, DITA, XHTML, etc.

The content of a configuration file, which specifies a customization of XXE for a specific XML application, is described in detail in `XMLmind XML Editor - Configuration and Deployment`.

`bin/`

Contains XXE code (`.jar` files) and many scripts used to start XXE and its associated utilities.

`bin/xxe`, `xxe.bat`

Scripts used to start XXE. Use `xxe` on any Unix system. Use `xxe.bat` on Windows.

`bin/xxe.exe`, `xxe.jstart`

Only when installing XXE on Windows using any of the `*setup*.exe` distributions. File `xxe.exe` is XXE launcher and `xxe.jstart` is its (plain text, UTF-8 encoded) associated parameter file.

`bin/deploywebstart`, `deploywebstart.bat`

Scripts used to generate a Java™ Web Start configuration (`.jnlp` file, signed jars, etc) from a possibly customized XXE distribution. Use `deploywebstart` on any Unix system. Use `deploywebstart.bat` on Windows.

²Note that Windows XP has built-in support for `.zip` archives.

The `deploywebstart` command-line tool is documented in the Section 3.1, “The `deploywebstart` command-line tool” in *XMLmind XML Editor - Configuration and Deployment*.

`bin/xmltool, xmltool.bat`

Scripts used to run **xmltool**. See *The xmltool command-line utility* for more information about this tool.

`bin/csscheck, csscheck.bat`

Scripts allowing to check the syntax of CSS style sheets written for XXE.

`bin/convertdoc, convertdoc.bat`

Scripts used to run **convertdoc**. This tool allows to execute XXE process commands from the command line, exactly as if these process commands were executed from XXE.

See Section 3, “The **convertdoc** command-line tool” in *XMLmind XML Editor - Commands* for more information about this tool.

`bin/*.jar`

All the (non-system) Java™ class libraries needed to run XXE:

- `xxe.jar` contain the code of XXE.

`xxe_help.jar` contains the online help of XXE.

`xsc.jar` contains the code of the spell checker engine developed by XMLmind.

- `jh.jar` is the standard Java™ help engine.

`xerces.jar` contains Xerces 2.9.1 XML parser. (The version included in the Java™ runtime 1.6 has bugs which have been fixed in bundled version.)

`resolver.jar` contains Apache XML Commons Resolver which implements catalog-based entity and URI resolution.

Substantial parts of `xsdregex.jar`, James Clark's XSD to Java Regular Expression Translator, have been directly added to `xxe.jar` (which is why file `xsdregex.jar` is not included in the distribution). Download original package from <http://www.thaiopensource.com/download/>.

Package `com.jclark.xml.expr` contains the implementation of XPath 1.0 used by XT, James Clark's XSLT engine. A modified version of this package, renamed `com.xmlmind.xmledit.xpath`, has been directly added to `xxe.jar` (which is why file `xt.jar` is not included in the distribution). Download full XT from <http://www.jclark.com/xml/xt-old.html> or from <http://www.blnz.com/xt/index.html>.

`relaxng.jar` is Jing version 20030619, James Clark's RELAX NG validator, slightly modified for use in XXE. The details of the modifications are found in `relaxng.README`.

`saxon.jar` is Michael H. Kay's XSLT 1 engine. See <http://saxon.sourceforge.net/>.

`saxon9.jar` is Michael H. Kay's XSLT 2.0 engine. See <http://www.saxonica.com/>.

These *excellent* packages have *not* been developed by XMLmind. Copyright information is contained in the corresponding `.LICENSE` file. Read the corresponding `.README` file to have more details about these packages.

`bin/icons/`

Contains desktop icons for XXE.

`bin/mac/`

Contains files (e.g. `Info.plist`) used on the Mac to create `XMLEditor.app` from a `.zip` or a `.tar.gz` distribution.

demo/

Contains XML documents that can be opened in XXE to demo some of its features.

doc/

Contains XMLmind XML Editor documentation in HTML and PDF (Acrobat) formats.

legal/, legal.txt

Contains legal information about XXE and about third-party components used in XXE.

3. Acknowledgments

On Windows, XMLmind XML Editor installer (i.e. `*setup*.exe`) is built using Inno Setup™ by Jordan Russell's software. XMLmind highly recommends this excellent and free-to-use tool.

Chapter 2. Getting started with XMLmind XML Editor

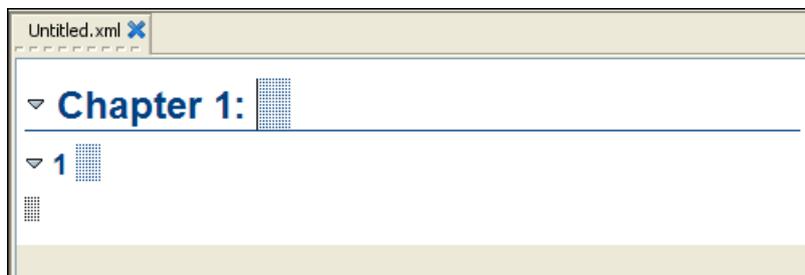
Note

Everything explained here applies not only to DocBook, but also to all the other document types (XHTML, DITA, your custom schema, etc) supported by XMLmind XML Editor.

Creating a document

Use File → New, select DocBook v5+|Chapter, then click OK.

Figure 2.1. A newly created chapter

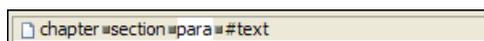


The text you see, `Chapter 1`, `1`, etc, is automatically generated and cannot be modified. The square patterns you see are *text placeholders*.

Type the title of your chapter in the first placeholder. Click on (or tab to) second placeholder and type the title of the first section. Do the same for the first paragraph of the first section.

How do you know where you are? Answer: always keep an eye at the *node path bar*.

Figure 2.2. The node path bar

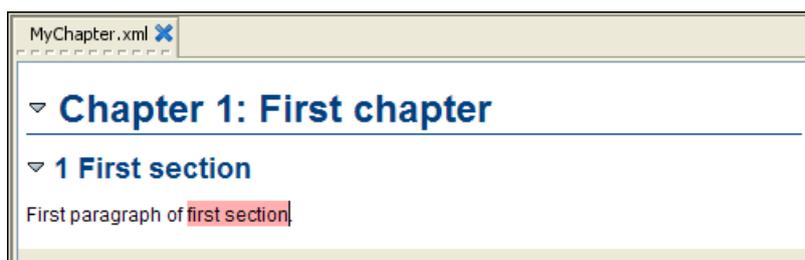


The node path bar shown above indicates that the caret¹ is located inside a text node contained in a `para` element, itself contained in a `section` element, itself contained in a `chapter` element.

The text selection

Select some text by dragging the mouse over it, as you would do it in any text editor.

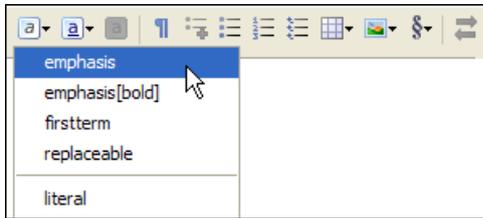
Figure 2.3. The text selection



¹The caret is also called the insertion cursor.

You can now convert this text to an `emphasis` element. For that, select the emphasis item from the menu of the toolbar button shown below.

Figure 2.4. The "Convert to emphasis" toolbar button



You'll not find all the elements you want in this menu. For example, you'll not find `citetitle` or `uri`. In the general case, you'll have to use the  Edit → Convert (**Ctrl+T**)² command to convert the selection. More on this command later.

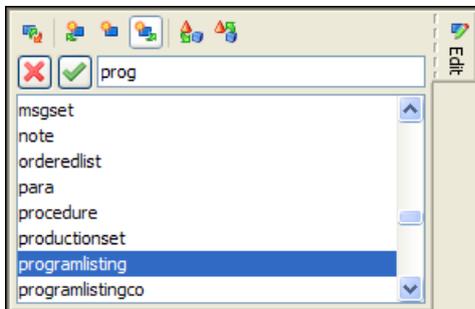
The node selection

The implicit element selection

Let's suppose you want to add a `programlisting` element after the `para` element. Click anywhere inside the `para` element, except inside its `emphasis` child element. Even if you don't see anything special about it, this `para` is now *implicitly selected*. This means that all the commands you may invoke will use this `para` as their subject.

Use  Edit → Insert After (**Ctrl+J**). Doing this activates the  *Edit tool*. Type the first few letters of the name of the element you want to insert, then press Enter.

Figure 2.5. The Edit tool



A `programlisting` element has been inserted after the `para` element. The caret is inside it. You can type some text in it right away.

Note that you have used command Insert After and not command Insert.

Table 2.1.  Edit tool commands

Command	Shortcut ²	Description
 Replace	Ctrl+R (R like Replace)	Replace the node selection by a newly created element. Example: you want to replace the <code>title</code> child element of a <code>section</code> by the more comprehensive <code>info</code> element. You cannot delete the <code>title</code> child element because the content model of a <code>section</code> specifies that a <code>section</code>

²On the Mac, use the Command key instead of the **Ctrl** key.

Command	Shortcut ²	Description
		must start with a <code>title</code> or an <code>info</code> . However you can <i>replace</i> the <code>title</code> by an <code>info</code> .
 Insert Before	Ctrl+H (I like Insert; H is before I)	Insert a newly created element before the node selection.
 Insert	Ctrl+I (I like Insert)	Insert a newly created element <i>at caret position</i> ^a .
 Insert After	Ctrl+J (I like Insert; J is after I)	Insert a newly created element after the node selection.
 Convert	Ctrl+T (T like Transform)	If a single element is selected, convert this element to another element which has a compatible content. Example: convert an <code>itemizedlist</code> to an <code>orderedlist</code> . If multiple nodes are selected, wrap a newly created parent element around this nodes. Example: wrap a <code>blockquote</code> around several selected <code>paras</code> .
 Convert [wrap]	Ctrl+Shift+T	A variant of command Convert. It always wraps a newly created parent element around the selected nodes. Example: a single <code>para</code> is selected. Convert allows to convert it to a <code>sipara</code> or a <code>programlisting</code> . Convert [wrap] allows to wrap a <code>blockquote</code> around it.

^aIf the element containing the caret is not explicitly selected. If an element is explicitly selected, this command inserts a newly created child element after last child element.

The explicit node selection

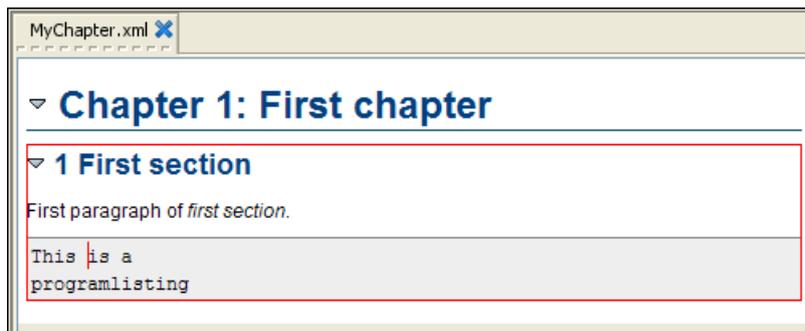
Let's suppose that you want now to insert a second section after the first one. If the `programlisting` is implicitly selected, using Insert After, you'll be able to insert a `subsection` after it, but this is not what you want to do. And if you click inside the `para` to implicitly select it and use Insert After, the Edit tool will not suggest `section` at all.

You need to *explicitly select* the first section in order to be able to insert a second section after it. There are many ways to do that.

- Repeatedly press **Ctrl+↑**, while keeping an eye on the node path bar, until you select the desired ancestor element. (Press **Ctrl+↓** if you have gone too far.)
- Repeatedly click inside an element while holding the **Ctrl** key down, without moving the mouse, until you select the desired ancestor element.
- Directly click on the label of the desired element in the node path bar.
- Click on the content generated for the element you want to select: the section number in the case of the `title` of a section, the bullet in the case of a `listitem`, etc.

Note that unlike the implicitly selected element, explicitly selected nodes have a red box drawn around them.

Figure 2.6. Explicitly selected section



Selecting multiple nodes

A number of commands, Convert, Copy, Cut, Paste, Delete, etc, can be applied to multiple sibling³ nodes.

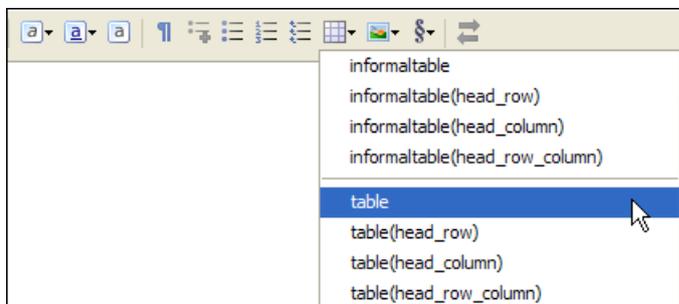
The node selection can be extended to preceding sibling using  Select → Extend Selection to Preceding Sibling (**Esc** ←) and to following sibling using  Select → Extend Selection to Following Sibling (**Esc** →). All the child nodes of an element can be selected using Select → Select All Children (**Esc** ↓).

Alternatively, you can extend the node selection using the mouse by clicking elsewhere (in the direction you want to extend the selection) while holding down the **Ctrl** and Shift keys.

Other commonly used commands

- We have already seen that the DocBook toolbar contains a number of buttons which invoke the Convert command. Most the other buttons (Add para, Add table, Add image, etc) invoke the *add command*.

Figure 2.7. The "Add table" toolbar button



The add command is very different from the three Insert commands. The add command will find out, where after the caret position, a given element may be inserted. If an insertion position is found, the add command will then insert this given element.

For example, let's suppose that you want to insert an `itemizedlist` after the first `para` of the first section. Click anywhere inside the `para`, *really anywhere, including inside any of its descendant elements* (like its `emphasis` child element), and press the Add itemizedlist button of the DocBook toolbar.

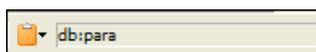
- The  Edit → Copy (**Ctrl+C**),  Edit → Cut (**Ctrl+X**),  Edit → Paste (**Ctrl+V**),  Edit → Delete (Backspace, **Del** or **Ctrl+K**) commands work as expected for both the node and the text selection.

Note that in addition to the Paste command (which replaces the explicit selection by the contents of the clipboard or which inserts the contents of the clipboard at caret position when there is no explicit selection), you also have

 Edit → Paste Before (**Ctrl+U**) and  Edit → Paste After (**Ctrl+W**) commands.

Also notice that the current content of the clipboard is displayed at the bottom/left of the main window.

Figure 2.8. The Clipboard tool



- Pressing **Ctrl+Enter** anywhere inside a list item (whatever its element type) or a paragraph allows to quickly add the same element after it.

³Nodes having the same parent element.

- Pressing **Enter** anywhere inside a paragraph splits this paragraph in two parts at caret position. This is the most common form of command  Edit → Split (**Esc Enter**).
- Pressing Backspace at the beginning of a paragraph preceded by an element of the same type, merges the two elements. Same behavior if you press **Del** at the end of paragraph followed by an element of the same type. These are the most common forms of command  Edit → Join (**Esc Backspace**).
- Pressing **Ins** allows to quickly add a text node. This is mainly useful in the following situation: you are typing some text in a `para`. You insert a `literal` at caret position and continue typing some text inside the newly inserted `literal`.

Figure 2.9. Before pressing the Ins key

This para element contains a literal child element|

Now you want to resume typing text inside the `para`. You press **Ins** to quickly add a text node after the `literal` and then type text in the newly inserted text node.

Figure 2.10. After pressing the Ins key

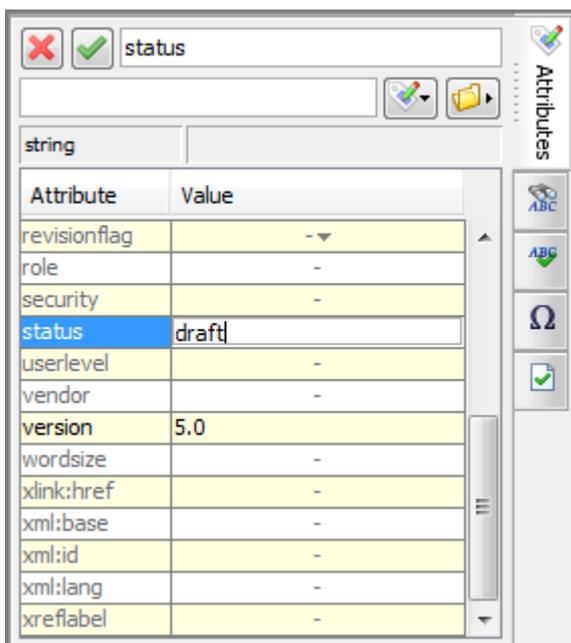
This para element contains a literal child element|

- Press **Ctrl+SPACE** to insert a non-breaking space at caret position.

Specifying element attributes

Implicitly or explicitly select an element and use the  Attributes tool to add or modify one or more of its attributes. For example, select the `chapter` root element, click in the cell containing the value of its `status` attribute (found in Value, the right column of the attribute table), type `draft` and then press Enter.

Figure 2.11. The Attributes tool



However, in most case, you'll want to use the small form found at the top of the attribute table. Example: give an ID to the first `section`:

1. Select the `section`.
2. Press  Tools → Edit Attribute (**Ctrl+E**). This activates the Attributes tool.
3. Type in the first text field (attribute name) the first few letters of the name of the attribute you want to add or modify. Example: type "`xml:id`".
4. Press **Enter** to select the name and move the keyboard focus to the second text field (attribute value).
5. Type the value of the attribute. Example: type "`introduction`".
6. Press **Enter** to apply the change and move the keyboard focus back to the document view. After that, you can resume the normal editing of your document.

Composing a modular document

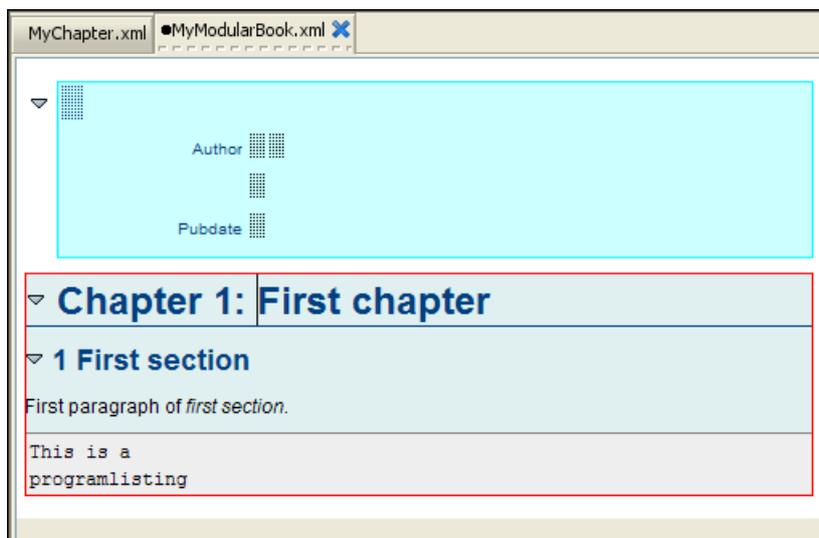
Let's suppose you are authoring a `book` but want to edit its `chapters` separately (because coworkers are working on other `chapters` of the same `book` or simply because working on small documents is more convenient). How to assemble the separate `chapters` to form the `book`?

1. Open the document containing the `chapter` in XMLmind XML Editor.
2. Use File → New, select DocBook v5+|Book, then click OK. This will create the `book master document`. Now you need to *include* your `chapter document module` in the master document.
3. Switch to the document view containing the `chapter` by clicking on its tab.
4. Select the `chapter` root element and press  Edit → Reference → Copy as Reference (**Ctrl+Shift+C**).

Command Copy as Reference allows to copy to the clipboard a *reference* to the root element of a document or to any *element having an ID*.

5. Switch back to the document view containing the `book` by clicking on its tab.
6. Select the first, empty, `chapter` of the newly created `book`.
7. Use  Edit → Paste(**Ctrl+V**) to replace this empty `chapter` by a reference to the `chapter` contained in the separate document.

Figure 2.12. A modular `book` including a `chapter` found in a separate document



Notice how the `chapter` included in the `book` is displayed. It has a dimmed blue-gray background, which means that it cannot be edited from within the `book` document⁴.

If you open the modular `book` and want to edit one of its `chapter` modules, click anywhere in an included `chapter` and then use  `Edit` → `Reference` → `Edit Referenced Document (Ctrl+Shift+E)`. This will switch you to the (editable) document view containing the `chapter`. From here, you can switch back to the master document view by using  `Edit` → `Reference` → `Edit Referencing Document (Ctrl+Shift+B)`.

⁴The contents of the included `chapter` cannot be directly modified from within the master document view. However you can freely modify the contents of the `book`. For example, you can remove the `chapter` reference from the `book` or you can cut and paste it elsewhere in the `book`.

Part II. Reference

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Chapter 3. Menus

1. File menu

New

Creates a new document which is a copy of a named template.

This dialog box displayed by this command contains a list of named document templates (example: Article). A document template is listed below the name of the document type (example: DocBook) to which it belongs.

Use the URL Chooser

If this toggle is checked, XXE will display an URL chooser dialog box [84] rather than the standard file chooser dialog box each time the user needs to specify a file name.

Default: not checked.

Open

Opens an existing document. Displays standard file chooser dialog box or advanced URL chooser [84] dialog box depending on the state of the "Use the URL Chooser" checkbox [19].

Note that XXE cannot load non-well formed XML documents but it can load invalid documents. See Validity State [81].

Tip

- It is also possible to open a document by dropping its icon anywhere inside XXE main window (except onto "drop sites" such as images in a document view). More information in Drag and drop in XMLmind XML Editor [20].
- Shift-click on this menu item to open a document in read-only mode.

Save

Saves the current document, but only if it has been modified.

Behaves like Save As if the current document is a newly created document or if the current document has not the write permission for the user.

Tip

At least for XXE, you do not have to save XML documents with a .xml extension. You can use more meaningful extensions.

Save As

Saves the current document to a different location. Displays standard file chooser dialog box or advanced URL chooser [84] dialog box depending on the state of the "Use the URL Chooser" checkbox [19].

Save All

Saves all modified documents.

Page Setup

Selects the page size and margins used for printing. Displays standard Page Setup dialog box.

Print

Prints the current view of the current document and this, no matter what is being selected. Displays standard Print dialog box.

Print Selected Element

Allows to print a subset of current document. Requires one or more nodes to be explicitly selected (see Select menu [25]). If several nodes are selected, it is the parent element of these nodes which is printed.

Quit

Quit XXE.

Below the above menu items, a menu item is added for the last nine documents which have been opened in XXE. Selecting such menu item:

- Loads the document into XXE if it is not currently loaded.
- Reloads the document into XXE, closing all existing views, if it is currently loaded. If the document has been modified, the user will have to confirm that changes are to be discarded.

Tip

- Shift-click on a menu item to reopen the corresponding document in read-only mode.
- Right-click or Ctrl-click on a menu item to display a file chooser dialog box. This dialog box allows to quickly and easily choose a file found in the same directory as the recently opened file clicked upon.

Drag and drop in XMLmind XML Editor

It is possible to drag the text or node selection in order to drop it elsewhere, by dragging it while keeping the left button and the **Alt** key pressed.

The action associated to drop depends on the nature of the object being dropped and on the drop location:

- Dropping an URL or file onto an image element changes the source file of this image.
- Dropping an URL onto an external link element changes the target of this link.
- Dropping an URL or file outside a document view or inside a document view but on elements other than images and links opens the corresponding document in XMLmind XML Editor.
- Otherwise, dropping some text or some XML nodes inside a document view pastes that data at or after the drop location.

1.1. "Document Set" menu

 You may need to enable this submenu by checking "Enable the 'File|Document Set' Submenu" in Options → Preferences, General|Features section.

Open Document Set

Select a file specifying a document set [64]. Displays standard file chooser dialog box or advanced URL chooser [84] dialog box depending on the state of the "Use the URL Chooser" checkbox [19].

After the specification file is selected, XXE displays the "Document Set" tool [64] in order to let the user interact with this document set.

If the selected file is a DITA map then the members of the document set are the topics referenced in this map.

If the selected file is a master DocBook document (for example a modular book including a number of chapters, each chapter being found in its own XML file) then the members of the document set are the DocBook documents included in this master document.

In all other cases, the content of the selected file is not analyzed by XXE. Instead, the selected file specifies a directory and a filename extension. For example, selecting file `file:/home/john/site/buy.html` specifies

the "file:/home/john/site/*.html" *glob pattern*¹. In this example, the members of the document set are all the files found in directory file:/home/john/site/ having an "html" extension.

A glob pattern is the simplest possible specification for a document set. It is generally useful when editing the XHTML pages composing a web site. See also ".uri_list" files, another simple way to specify document sets [22] for a simple generalisation of such glob patterns.

Tip

Shift-clicking on the "Open Document Set" menu item forces XXE to open the simplest possible document set, that is, the document set specified by a glob pattern. For example, if the selected document set is file:/home/john/docs/doc.xml, a master DocBook book, Shift+click will open the simpler document set specified by "file:/home/john/docs/*.xml".

Below the above menu item, a menu item is added for the last nine document sets which have been opened in XXE. Selecting such menu item:

- Opens the document set in XXE if it is not currently opened.
- Brings the corresponding "Document Set" tool to front, if the selected document set is currently opened in XXE.

Tip

Shift-click on a menu item to open the glob pattern corresponding to selected document set. For example, if the selected document set is file:/home/john/docs/doc.xml, a master DocBook book, Shift-click will open the simpler document set specified by "file:/home/john/docs/*.xml".

¹It's called a *glob* pattern because UNIX-style wildcards which are used here. UNIX-style wildcards are more powerful than their MS-DOS/Windows counterparts. For example, when MS-DOS/Windows limits you to specifying "*.html", you can specify the "*.htm*" glob pattern to match the files having htm, html, shtml or xhtml extensions.

".uri_list" files, another simple way to specify document set [64]s

Selecting `file:/home/john/site/buy.html` to specify the `"file:/home/john/site/*.html"` glob pattern is great but what if your XHTML files are found in different directories and/or have various filename extensions?

In such case, you'll have to create by hand a text file containing a list of glob patterns. This text file must be given a `".uri_list"` extension and must be encoded in UTF-8.

Example 1:

```
*.html
*.shtml
```

Note that nothing forces you to use wildcards. A list of plain URIs works fine too.

Example 2:

```
index.html
_tutorial/add_math/index.html
_tutorial/basic_edit/index.html
...
_tutorial/set_attribute/index.html
_tutorial/setup_olinks/index.html
```

About the format of `".uri_list"` files:

- A line contains a single relative or absolute URI. A relative URI is relative to the location of the `".uri_list"` file.
- You may not mix URIs having different roots in the same `".uri_list"` file. For example, an `".uri_list"` file must not contain both `"http://www.acme.com/*.html"` and `"file:/home/john/site/*.html"`.
- You are not limited to `"file:"` URIs. Virtual drive plug-ins may be used to add support for URI schemes other than `"file:"`.
- The basename of an URI, and only the basename, may be a glob pattern. This means that something like `"*/*.xml"` is not supported.
- Open lines and lines starting with `'#'` are ignored.

1.2. Folder menu

 You may need to enable this submenu by checking "Enable the 'File|Folder' Submenu" in Options → Preferences, General|Features section.

Open Current Folder

Open the folder² containing the last opened document.

Open Home Folder

Open the Home folder of the user. For example, opens `/Users/john` on the Mac.

Open Folder

Select a folder². Displays standard file chooser dialog box or advanced URL chooser [84] dialog box depending on the state of the "Use the URL Chooser" checkbox [19].

After the folder is selected, XFE displays the "Browse Files" tool [69] in order to let the user interact with this folder.

²A folder is also called a *directory* on some platforms.

2. Select menu

2.1. The selection in XTE

There are three types of selection in XTE:

- text selection (also called character selection),
- node selection (a node is either a named element or an anonymous text node or an anonymous comment node or an anonymous processing instruction node),
- implicit element selection.

2.1.1. Text selection

The text selection is the type of selection supported by all text editors and word processors.

It is, of course, possible to select text across document nodes.

Selected text is displayed as characters drawn over a pink background.

The text selection can be seen as a way to specify a range of characters and descendant nodes contained *in a common ancestor node*. The copy, cut, delete, paste, convert commands will copy, delete or replace the specified characters and descendant nodes.

- Example 1: "`<p>This is our new logo.</p>`". Selected text starts at "This" and ends after "new" and is to be deleted.

This delete operation gives "`<p> logo.</p>`".

- Example 2: "`<p>This is great, really!</p>`". Selected text starts at "This" and ends after "great" and is to be converted to ``.

This convert operation gives "`<p>This is great, really!</p>`".

How to select text in XTE:

Using the mouse	Using the keyboard
<ul style="list-style-type: none"> • Click at the beginning of the text selection and drag the mouse to the end of selection. 	<ul style="list-style-type: none"> • Shift+Left or Shift+Right extends the text selection by one character. • Ctrl+Shift+Left or Ctrl+Shift+Right extends the text selection by one word. • Ctrl+Shift+Home extends the text selection to the beginning of the line. • Ctrl+Shift+End extends the text selection to the end of the line. • Shift+Down or Shift+Up extends the text selection by one line.

As expected, `Shift-click` may be used to extend the text selection. However if there is a node selection (see below), `Shift-click` will extend the node selection instead.

2.1.2. Node selection

The node selection is unique to the XML editor.

In XXE, you can even select several nodes at the same time if these nodes are consecutive children of the same parent (contiguous range of child nodes).

Selected nodes are displayed with a thin red border around them.

How to explicitly select a *single node* in XXE:

Using the mouse	Using the keyboard
<ul style="list-style-type: none"> • Click on the node. If some text is near the place where you have clicked, it will ``attract" the caret and the node will not be selected. In such case, you are forced to Ctrl-click instead of simply clicking. • Or Ctrl-click on the node. Ctrl-click several times (without moving the mouse) if needed to. Each Ctrl-click will select the parent of currently selected node. Do not Ctrl-click several times too fast otherwise the editor will think you are double-clicking or triple-clicking and therefore, selecting elements that way would not work. • Or click on generated content such as a list bullet or a section number. • Or Ctrl-click in the blank space found at the right of the text of a paragraph. • Or click on the name of the node you want to select in the Node Path bar [51]. 	<ul style="list-style-type: none"> • Click inside the node to move the caret there. Type Ctrl+Up until you reach the node you want to select. Keep an eye on the Node Path bar [51] while doing this. • Or use the Select menu [25] or any of the corresponding keyboard shortcuts Ctrl+Up, Ctrl+Down, Shift+Ctrl+Up or Shift+Ctrl+Down.

Procedure for selecting a *node range* using the *mouse*:

1. Select first node using any of the methods described above.

Make sure that you have selected the right node by looking at the Node Path bar [51], otherwise extending the node selection will not work.

2. **Shift-click** on the last node of the selection. If there is no ambiguity, you can even **Shift-click** *anywhere* past the last node of the selection.

Procedure for selecting a *node range* using the *keyboard*:

- **Esc+Down** selects all child nodes of explicitly or implicitly selected element.
- OR

1. Select first node using any of the methods described above.

Make sure that you have selected the right node by looking at the Node Path bar [51], otherwise extending the node selection will not work.

2. Adjust selected node range: **Esc+Right** extends node selection to following sibling and **Esc+Left** extends node selection to preceding sibling.

Note **Esc+Right** (and **Esc+Left**) will first select element containing caret if there is no explicit node selection, therefore typing **Esc+Right** several times is often the quickest way to select a node range.

2.1.3. Implicit element selection

The implicitly selected element is simply the element containing the *caret* (also called the insertion cursor).

Being implicitly selected, this element is not drawn with a red border around it but you know it because it is the element which is displayed in the Node Path bar [51].

All editing commands except the most generic form of Split [30] and Join [31] can be applied to the *implicitly selected element*.

Important

Almost all editing commands do not require you to explicitly select the element you want to act upon. *This makes XXE at the same time efficient and easy to use.*

2.2. Select menu items

Tip

Clicking anywhere in the document view or any caret movement has the side effect to cancel the selection. It is also possible to explicitly do so by typing **Esc+Esc**.



Select Parent

Selects parent of currently selected node.

If there is no currently selected node, selects the text, comment or processing instruction node containing the caret.



Select Child

Selects previously selected child of currently selected node.

If there is no such child, selects first child node of currently selected element.

If currently selected node is a text, comment or processing instruction node, cancels the selection.



Select Preceding Sibling

Selects preceding sibling of currently selected node, if any.



Select Following Sibling

Selects following sibling of currently selected node, if any.



Extend Selection to Preceding Sibling

Adds preceding sibling, if any, of currently selected node to the node selection.

If there is no currently selected node, selects the element containing the caret.

Keyboard shortcut (not displayed in menu): **Esc+Left**.



Extend Selection to Following Sibling

Adds following sibling, if any, of currently selected node to the node selection.

If there is no currently selected node, selects the element containing the caret.

Keyboard shortcut (not displayed in menu): **Esc+Right**.

Select All Children

Selects all children of currently selected element.

Keyboard shortcut (not displayed in menu): **Esc+Down**.

2.2.1. Link submenu



Select Link Target

An element acting as a link source must be implicitly or explicitly selected. Scrolls to and selects the element which is the target of this link.

DocBook example: the selected element is `<link linkend="foo">...</link>`. Scrolls to and selects the element having `foo` as its `id` attribute.



Select Link Source

An element acting as a link target must be implicitly or explicitly selected. Scrolls to and selects the element which points to this target.

DocBook example: the selected element is `<para id="foo">...</para>`. Scrolls to and selects first `<xref linkend="foo"/>` or `<link linkend="foo">...</link>`.



Select Preceding Link Source

An element acting as a link source must be implicitly or explicitly selected. Scrolls to and selects the preceding (in document order) link pointing to the same target.



Select Following Link Source

An element acting as a link source must be implicitly or explicitly selected. Scrolls to and selects the following (in document order) link pointing to the same target.

In some cases³, the above menu items allows to select an destination found in a document other than the one being edited. In such case, the user is prompted to confirm that she/he really wants to open this other document. This confirmation dialog box also allows the user to choose to open the other document in read-only mode.

2.2.2. Navigation submenu

Most commands which causes XXE to “jump” from one location to another automatically leave an invisible “back mark” behind them. Such marks, specifying a location in a document, are recorded in the navigation history. Menu items Go Back and Go Forward allow the user to navigate back and forth between the current location of the caret and these back marks.

The commands which automatically leave a back mark behind them are:

- Follow link commands such as Select → Link → Select Link Target [26], Select → Link → Select Link Source [26], etc.
- Edit → Reference → Edit Referenced Document [34] and Edit → Reference → Edit Referencing Document [34].
- Text search/replace commands such as Search → Search [34], Search → Find Next [35], etc.
- Search → Find Element [35].

The navigation history is common to all the documents opened in XXE. For example, clicking Go Back may cause XXE to jump to another document. And if this other document has been closed by the user, XXE will attempt to reopen it.

The navigation history is automatically cleared after closing all the documents opened in XXE.

³XHTML example: `link ` found in file `introduction.html`.



Go Back

Go back in the navigation history.



Go Forward

Go forward in the navigation history.



Show History

Display a dialog box containing all the entries of the navigation history. Clicking on an entry closes the dialog box and then causes XXE to jump to the corresponding location.



Remember this Location

Add the current location of the caret to the navigation history.

Clicking this menu item is rarely needed as most commands which causes XXE to jump from one location to another automatically leave an invisible back mark behind them.

3. Edit menu

Tip

A simplified, contextual, version of the Edit menu is displayed if you right-click in a document view.

Also note that a right-click may be used to select the element clicked upon prior to displaying the popup menu. More precisely:

- If you right-click outside the existing text or node selection or if there is no selection, this selects (explicitly if really needed to, otherwise implicitly) the *element* clicked upon.
- If you right-click inside the existing text or node selection, the selection is not changed.

Undo

Undo last command.

Redo

Redo last undone command.

Repeat

Repeats last repeatable command.

Commands requiring the user to specify an argument (e.g. Replace [29], Insert Before [29], Insert [29], Insert After [29], Convert [29], Convert [wrap] [30], Change Processing Instruction Target [32], etc) are repeatable.

Command History

Displays a dialog box listing last ten repeatable commands from newest to oldest.

Cut

Cuts

- text selection
- OR explicitly selected node or node range
- OR implicitly selected element

to system clipboard.

Tip

It is possible to cut and paste nodes between two instances of XXE (of course if the DTD or schema allows it).

Copy

Copies

- text selection
- OR explicitly selected node or node range
- OR implicitly selected element

to system clipboard.

Tip

Selected characters are automatically copied as system selection on platforms supporting system selection (X-Window) and automatically copied to an internal clipboard on other platforms.

Paste Before

Pastes the content of system clipboard before

- explicitly selected node or node range
- OR implicitly selected element.

The system clipboard may contain one or several XML nodes or just plain text.

Paste

Pastes the content of system clipboard replacing

- text selection
- OR explicitly selected node or node range,

OR if there is no explicit selection, pastes the content of system clipboard into

- element containing caret, at caret position.

The system clipboard may contain one or several XML nodes or just plain text.

Tip

Clicking with mouse button #2 (middle button or mouse wheel) can be used to paste the content of system selection on platforms supporting system selection and can be used to paste the content of an internal clipboard on other platforms (if allowed by grammar constraining the document, of course).

By default, this very handy feature is not enabled. You need to enable it using the Options dialog box [96].

Paste After

Pastes the content of system clipboard after

- explicitly selected node or node range
- OR implicitly selected element.

The system clipboard may contain one or several XML nodes or just plain text.

Delete

Deletes

- text selection
- OR explicitly selected node or node range
- OR implicitly selected element.

Force Deletion

Like Delete [29] except that deletion will be performed even if the grammar constraining the document forbids to do so.

Example 3.1. A use case for command Force Deletion

The content model of element <a> is child element or a sequence of child element <c> followed by child element <d>.

A new <a> is by default created with the simplest possible content model, that is . Then how to replace by the sequence <c><d>? Deleting is forbidden because it would give us an invalid <a>.

The answer is:

1. Force the deletion of using the command described here. This makes <a> temporarily invalid but also relaxes the constraints on it.
2. Insert a <c>.
3. Insert a <d>. Element <a> is now valid.

Replace

Displays the Edit tool [53]. This dialog box can be used to specify an element or a text node replacing

- explicitly selected node or node range
- OR implicitly selected element.

Insert Before

Displays the Edit tool [53]. This dialog box can be used to specify an element or a text node to be inserted before

- explicitly selected node or node range
- OR implicitly selected element.

Insert

Displays the Edit tool [53]. This dialog box can be used to specify an element or a text node to be inserted into the element containing the caret, at caret position.

Insert After

Displays the Edit tool [53]. This dialog box can be used to specify an element or a text node to be inserted after

- explicitly selected node or node range
- OR implicitly selected element.

Convert

Displays the Edit tool [53]. This dialog box can be used to specify an element or a text node replacing

- text selection

- OR explicitly selected node or node range
- OR implicitly selected element.

Unlike Replace [29] which creates an *empty* new element, Convert transfers the content of the selection to the new element which is the result of the conversion.

More precisely, in the case of the node selection:

- When a single element is selected, all its children, and also all compatible attributes, are transferred to the result of the conversion.

Example:

```
<simpara id="p1">The <emphasis>little</emphasis> lamb.</simpara>
```

converted to `para` gives

```
<para id="p1">The <emphasis>little</emphasis> lamb.</para>
```

- When several nodes or a single non-element node are selected, all these nodes are given a new parent element which is the result of the conversion.

Example:

```
<simpara>Once upon a time,</simpara>
```

plus

```
<simpara id="p1">the <emphasis>little</emphasis> girl.</simpara>
```

can be converted to `blockquote` and that gives us

```
<blockquote>
  <simpara>Once upon a time,</simpara>
  <simpara id="p1">the <emphasis>little</emphasis> girl.</simpara>
</blockquote>
```

See also Wrap [30] a variant of Convert.

Convert [wrap]

This command is a variant of Convert [29]. The unique difference between Wrap and Convert [29] is that, with Wrap, when a single element is selected, the selected element is given a new parent element.

Example, with Wrap (and not with Convert [29]), it is possible to give a `blockquote` parent to the following `simpara`, when this `simpara` is implicitly or explicitly selected:

```
<simpara id="p1">The <emphasis>little</emphasis> lamb.</simpara>
```

That is, selecting `blockquote` using the Edit tool [53] gives:

```
<blockquote>
  <simpara id="p1">The <emphasis>little</emphasis> lamb.</simpara>
</blockquote>
```

Split

Splits explicitly selected element in two parts, the split point being specified by caret position.

Unlike almost all other commands, this command requires the element to be explicitly selected.

Tip

A less generic form of the Split command is *often* bound to key Enter (for example, this is the case for XHTML, DITA and DocBook).

Typing Enter inside a paragraph or a list item will split this element in two parts.

Join

Joins explicitly selected element to its preceding sibling, an element of same type. This gives a single element containing the child nodes of the two joined elements. This command is the inverse command of Split [30].

Unlike almost all other commands, this command requires the element to be explicitly selected.

Tip

A less generic form of the Join command is *often* bound (for example, this is the case for XHTML, DITA and DocBook) to

- key Backspace when the caret is at the beginning of a paragraph or a list item
- and to key Delete when the caret is at the end of a paragraph or a list item.

Typing Backspace at the beginning of a paragraph or a list item joins this element to the preceding paragraph or a list item.

Typing Delete at the end of a paragraph or a list item joins this element to the following paragraph or a list item.

3.1. Comment menu

Insert Comment Before

Inserts comment node before

- explicitly selected node
- OR implicitly selected element.

Insert Comment

Inserts comment node into

- explicitly selected *empty* element
- OR element containing caret, at caret position.

Insert Comment After

Inserts comment node after

- explicitly selected node
- OR implicitly selected element.

3.2. Processing instruction menu

Insert Processing Instruction Before

Inserts processing instruction node before

- explicitly selected node
- OR implicitly selected element.

A newly inserted processing instruction uses the last target interactively specified using menu item "Change Processing Instruction Target". If menu item "Change Processing Instruction Target" has not yet been used, then the target of a newly inserted processing instruction is "target".

Insert Processing Instruction

Inserts processing instruction node into

- explicitly selected *empty* element
- OR element containing caret, at caret position.

Insert Processing Instruction After

Inserts processing instruction node after

- explicitly selected node
- OR implicitly selected element.

Change Processing Instruction Target

Displays a dialog box that can be used to change the target of

- explicitly selected processing instruction node
- OR implicitly selected processing instruction node (that is the processing instruction node containing the caret).

3.3. Reference menu

About the Include tool [54] feature

Some menu items are by default absent in this menu. You need to enable them by checking "Enable the Include Tool" in Options → Preferences, General|Features section.

Copy as Reference

Copies to the clipboard a *reference* to the selected nodes (i.e. a pointer to selected nodes). This reference can be later pasted into another document⁴, using any of the normal paste commands — Edit → Paste Before (**Ctrl+U**), Edit → Paste (**Ctrl+V**), Edit → Paste After (**Ctrl+W**) — in places where the grammar constraining the target document allows to do so.

This command is enabled only for documents associated to a configuration declaring a *inclusion scheme* (see Section 14, "inclusionScheme" in *XMLmind XML Editor - Configuration and Deployment*). DITA documents use the `conref` inclusion scheme. DocBook and XHTML documents use the XInclude inclusion scheme.

By default, it is possible to copy as a reference only an element having an ID attribute or the root element of a document. However, for documents using the XInclude inclusion scheme, this restriction may be relaxed by using Options → Preferences, Edit section, Allow advanced use of XInclude [98] checkbox. When this option is turned on, it becomes possible to copy as a reference any range of sibling nodes.

It is not possible to copy as reference the text selection, a reference, descendant nodes of a reference or any node selection directly containing one or more references. If you want to do so, simply use the normal Edit → Copy command, as this command preserves⁵ existing references.

Note

The pasted reference cannot be edited in place. It is displayed with a light gray background to clearly indicate this. Use menu item  Edit → Document Reference → Edit Referenced Document [34]

⁴It can also be pasted in the same document at another location.

⁵But, unlike Edit → Reference → Copy as Reference, it cannot *create* references.

(**Ctrl+Shift+E**) to open a new window allowing to edit the document containing the referenced nodes.

Replace by Reference

Replace by an element *reference*

- text selection
- OR explicitly selected node or node range.

The element reference to be inserted in the document is specified using the Include tool [54].

Insert Reference Before

Insert an element *reference* before

- explicitly selected node or node range
- OR implicitly selected element.

The element reference to be inserted in the document is specified using the Include tool [54].

Insert Reference

Insert an element *reference*

- replacing text selection if any,
- OR, if there is no text selection, insert an element reference in element containing caret, at caret position.

The element reference to be inserted in the document is specified using the Include tool [54].

Insert Reference After

Insert an element *reference* after

- explicitly selected node or node range
- OR implicitly selected element.

The element reference to be inserted in the document is specified using the Include tool [54].

Include Text

Displays a file chooser dialog box allowing to choose a text file (of any kind: XML, HTML, .bat, C/C++, etc). The content of this text file is then included in the document being edited at caret position.

This kind of inclusion is implemented by the means of an `<xi:include parse="text">` element. Therefore, this command is disabled unless the document being edited supports the XInclude inclusion scheme.

Untransclude Reference

Replaces included nodes by the inclusion directive (e.g. `xi:include element`).

Any kind of selection inside the included nodes suffices to specify the subject of this command.

Untransclude All

Replaces all the included nodes found in the document being edited by the corresponding inclusion directives.

Retransclude Reference

Inverse action of Untransclude Reference [33]: replaces inclusion directive (e.g. `xi:include element`) by up-to-date included nodes.

The inclusion directive must be explicitly or implicitly selected.

Using untransclude allows to edit the inclusion directive by hand before retranscluding it. This is useful in the two following cases:

- This allows to add attributes (typically an ID) to the `conref` elements created using Copy As Reference then Paste.
- This allows to fine tune the `xpointer` attribute of the XIncludes created using Copy As Reference then Paste. Example: replace `xpointer="xpointer(id('disclaimer')/*[position() >= 1 and position() <= 8])"` by, simpler and more stable, `xpointer="xpointer(id('disclaimer')/*)"`.

Retransclude All

Replaces all the inclusion directives found in the document being edited by the corresponding included nodes.

Edit Referencing Document

If current document is referenced by another document already opened in XXE and displayed in another window, this command brings the window of this other document to front. If there is no such referencing document, this command is silently disabled.

Example 3.2. Example: book referencing chapters

Book `book.xml` references chapters `chap1.xml`, `chap2.xml`, `chap3.xml`, etc, created in separate documents.

Clicking anywhere inside first chapter displayed in the `book.xml` window then using menu item  Edit → Reference → Edit Referenced Document [34] (**Ctrl+Shift+E**) brings the window containing `chap1.xml` to front. (If needed, `chap1.xml` is opened in XXE.)

Now being inside the `chap1.xml` window, using menu item  Edit → Reference → Edit Referencing Document [34] (**Ctrl+Shift+B**) brings the window containing `book.xml` to front.

Edit Referenced Document

If the caret or the selection is inside a reference to an element contained in another document, this command brings the window of this other document to front. If the referenced document is not yet opened in XXE, this command will open it.

See example [34] above.

Tip

Shift-click on this menu item to open referenced document in read-only mode.

4. Search menu

Search

Displays the Search tool [59] configured for a search session from the current caret position⁶ to the end of the document.

Search Backwards

Displays the Search tool [59] configured for a search session from the current caret position⁶ to the beginning of the document.

Replace

Displays the Search tool [59] configured for a search/replace session from the current caret position⁶ to the end of the document.

Replace Backwards

Displays the Search tool [59] configured for a search/replace session from the current caret position⁶ to the beginning of the document.

⁶Turning off the "Start from current caret position" option allows to start searching from the beginning of the document (or from the end of the document depending on the Direction option).

Find Next

Search last searched string from the current caret position to the end of the document. The Search tool [59] is not displayed because it is not needed to perform this operation.

Find Previous

Search last searched string from the current caret position to the beginning of the document. The Search tool [59] is not displayed because it is not needed to perform this operation.

Find Element

Displays the Find Element dialog box [86]. This dialog box allows to select nodes specified using an XPath expression. This dialog box has a Simple tab which allows to perform most common search tasks without having to learn XPath. Arbitrarily complex XPath expressions are specified using the Advanced tab.

Keyboard shortcut: **Esc f** (**F** like **Find**).

Find Element Again

Repeat last search. The Find Element dialog box [86] is not displayed because it is not needed to perform this operation.

Keyboard shortcut: **Esc g** (**G** like **aGain**).

4.1. Web Search menu

The entries of this menu invoke the web browser in order to perform a web search on the current text selection. For example, if you select text "π" in the document view and select menu item Wikipedia, this will open a window or tab in your web browser showing the definition of π in Wikipedia.

The entries of this menu are not fixed. They may be configured using Options → Preferences, Web Search section [98].

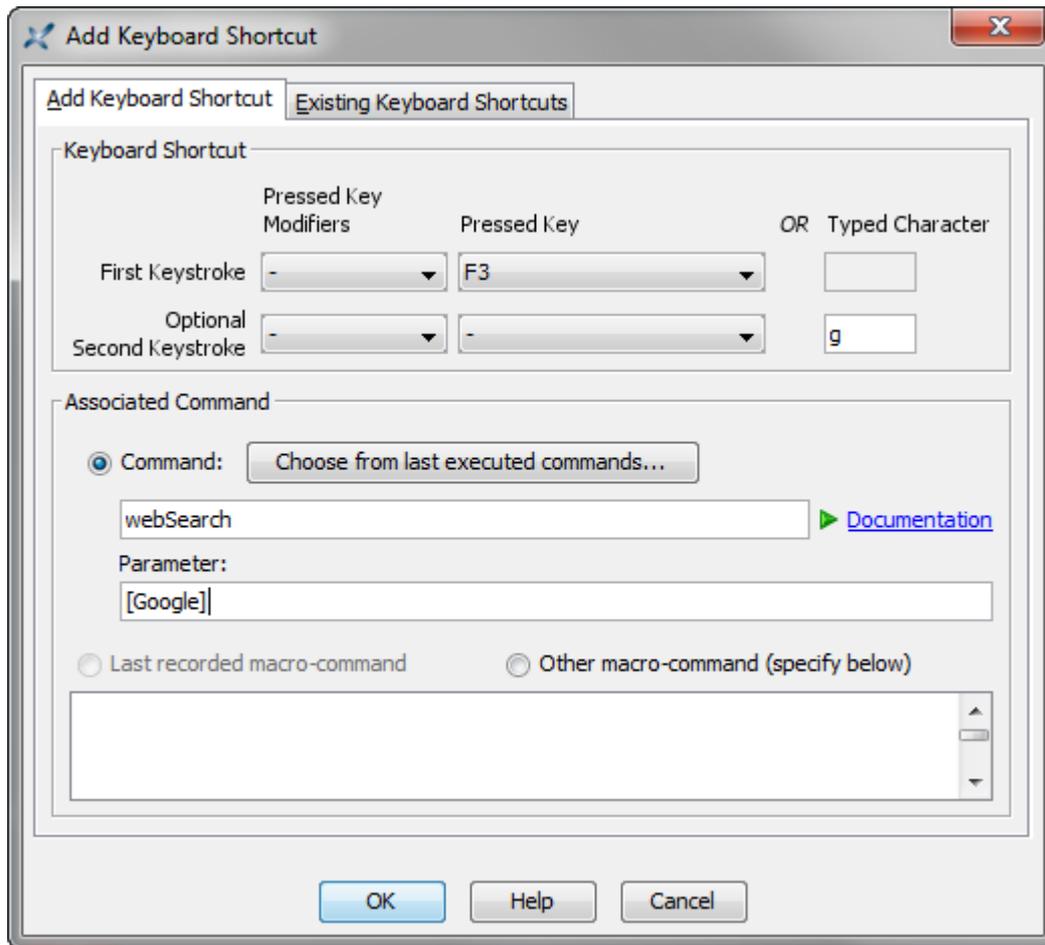
Using keyboard shortcuts for searching the web

Note that the entries of this menu have no keyboard shortcuts. Instead, you need to press the underlined character found in the title of the menu item (the “hotkey”⁷). For example, If you want to perform a web search using Google, you must press **Alt+S** (for menu Search) then **W** (for submenu Web Search) then **G**.

If you prefer to use a real keyboard shortcut, then you'll have to define it using Options → Customize Configuration → Add Keyboard Shortcut.

When you'll do this, note that the name of the command to be invoked is `webSearch` and that its parameter is the name of the web search service put between square brackets. Example: `[Google]`.

⁷Not available on the Mac.

Figure 3.1. Perform a web search using Google by pressing F3 and then g

5. View menu

Redraw

Rebuilds the view of the whole document, no matter which text or nodes are selected.

Updating the references contained in a modular document

This command has also the side-effect of automatically updating *all* the references contained in a modular document (see Copy as Reference [32]). However for a reference to be updated, the referenced document must not have been modified in XXE and not yet saved to disk.

Example: document `book.xml` references `chap1.xml`, `chap2.xml` and `chap2.xml`. File `chap1.xml`, currently opened in XXE, has been modified then saved to disk. File `chap2.xml` is not currently opened in XXE. File `chap3.xml`, currently opened in XXE, has been modified but not yet saved to disk. Using this command will update what has been included from `chap1.xml` and `chap2.xml`, but not from `chap3.xml`, before rebuilding the view of `book.xml`.

Text Size

The items of this menu make it easy changing the base font size of the active document view, whether styled or not.

Tip

Use your *mouse wheel* while pressing the **Ctrl** key (**Cmd** key on the Mac) rather than use the Larger and Smaller menu items.

Larger

Use a base font size larger by 2pt for the active document view. The largest possible base font size is 24pt.

Smaller

Use a base font size smaller by 2pt for the active document view. The smallest possible base font size is 8pt.

Normal

Use the ``normal'', default, base font size (e.g. 12pt).

Use as Default

If the active document view is a tree view, apply the current font size to all the opened tree views and from now, use it as a default. If the active document view is a styled view, apply the current font size to all the opened styled views and from now, use it as a default.

This is a handy alternative to specifying the default base font size in the Preferences dialog box. The default base font size is specified in the Preferences dialog box by "Default font size" [100] for the styled view and by "Base font size" [101] for the tree view.

Display Images

 You may need to enable this submenu by checking "Enable the View|Display Images Submenu" in Options → Preferences, General|Features section.

Specifies how images are displayed in the active styled document view.

Normally

Display the image normally, that is, possibly scaled if this has been specified using attributes such as `width` and `height`.

as Thumbnails

Show the bounding box of the (possibly scaled) image and, if there is enough room in this rectangle, also show a thumbnail (at most 128x128 pixels large).

as Bounding Boxes

Show the bounding box of the (possibly scaled) image.

Use as Default

Apply the current display mode to all styled document views and from now, use it as a default.

This is a handy alternative to specifying the default display mode in the Preferences dialog box [100].

Note

- Options "as thumbnails" and "as bounding boxes" have no effect on images having an intrinsic size smaller than 32x32 pixels. Such small images are always displayed normally.
- If the bounding box is sufficiently large, it is used to display the thumbnail (when option "as thumbnails" has been selected) and useful information about the image (file size, image size, etc).

However, when the bounding box is small, some information may be elided. Therefore do not be surprised if you have selected option "as thumbnails" and that for some images, you don't see any thumbnail. Also do not be surprised if some bounding boxes contain useful information about the image and other (smaller) bounding boxes are completely empty.

Add

Opens a dialog which allows to add a new view to current document tab. A document tab can contain up to 5 views: default central view, but also top, right, bottom, left views. A view is specified by selecting a CSS style sheet among the available ones or, on the contrary, by selecting no style sheet at all, which implies to use a tree view.

Close

Closes active view. Central view, which is supposed to be the main view, cannot be closed.

The active view is the view having the keyboard focus: the caret blinks in this view, and not in the other views of the document. To make a view the active one, simply click anywhere in it.

Below the above menu item, a menu item is added for each CSS style sheet available for current document. Selecting the name of a style sheet causes the document view to use this style sheet. If a document view already uses the selected style sheet, the style sheet is reloaded from its file (which is very handy when developing a new CSS style sheet).

6. Tools menu

Declare Namespace

Displays Declare Namespace dialog box [87].

If the current document is conforming to a DTD, the dialog box allows to view the namespaces and their prefixes but not to modify them.

Edit Attribute

Displays Attributes tool [56].

Check Validity

Displays Validity tool [64], unless no validity errors are found in current document, in which case an OK message is displayed in the status bar.

This command is disabled if current document is not constrained by a grammar.

Tip

Current document validity is automatically checked each time the document is saved, therefore unless you are fixing an invalid document you don't really need to explicitly use this command.

Check Spelling

Displays the Spell tool [61], unless no spelling errors are found in current document⁸, in which case an OK message is displayed in the status bar.

Automatic Spell Checker

Toggle used to activate and deactivate the automatic (AKA on-the-fly) spell checker. See also option "Activate if this is specified in the configuration file [102]".

Execute Command

For advanced users only. Displays a dialog box which allows to choose a command by name. This is needed when a command is not bound to a keystroke, menu item or tool bar button. Example: command `convertCase` (see Section 13, "convertCase" in *XMLmind XML Editor - Commands*). This facility is especially useful when recording a macro-command [42].

This menu item is hidden by default. You need to enable it by checking "Enable the 'Tools|Record Macro' Submenu" in Options → Preferences, General|Features section.

6.1. Remark menu

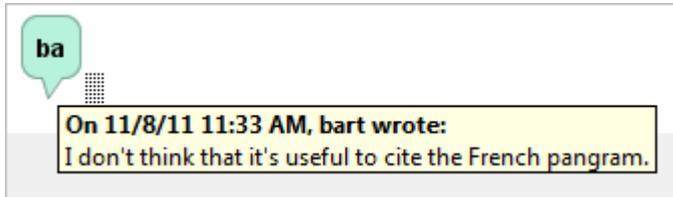
 You may need to enable this submenu by checking "Enable the 'Tools|Remark' Submenu" in Options → Preferences, General|Features section.

⁸By default, spell checking starts at the current caret position, but this can be changed by turning off the "Start from current caret position" option of the Spell tool.

What is a remark?

A remark is simply a `<?xqe-remark>` processing-instruction nicely rendered as a balloon in the styled view.

Figure 3.2. A remark made by use `bart` and its tooltip.



This balloon contains the first two letters of the username (login) of the author of the remark.

This balloon is given a random background color, which is specific to the author of the remark. For example, the color of all the remarks created by user `bart` will always be green, but there is no way for user `bart` to choose the color of his own remarks.

Hovering the mouse over this balloon displays the contents of the remark in a tooltip.

Double-clicking on this balloon displays the remark editor, a simple dialog box.

The Remark menu

Insert or Edit Remark

If a remark is explicitly selected or if the caret is contained in a remark, display the remark editor in order to edit this remark.

Otherwise display the remark editor in order to create a new remark. The new remark is inserted before the explicit selection if any, or at caret position otherwise.

Delete Remark

Delete explicitly selected remark, if any. Otherwise if the caret is contained in a remark, delete this remark.

Delete All Remarks

Delete all remarks.

Select Preceding Remark

Select preceding remark, if any.

Select Following Remark

Select following remark, if any.

6.2. Changes menu

 You may need to enable this submenu by checking "Enable the "Tools|Changes' Submenu" in Options → Preferences, General|Features section.

Activate Change Detection

Activate or deactivate change detection in the document being edited. This checkbox is disabled (grayed) if option "Automatically activate change detection" [102] has been turned on.

Activating change detection is required in order to use the Compare tool [77] to compare two revisions of the same initial document.

Appendix Appendix B, *Description of the XML differencing algorithm implemented in the Compare tool* [159] explains why activating change detection is needed in order to use the Compare tool.

Compare Revisions

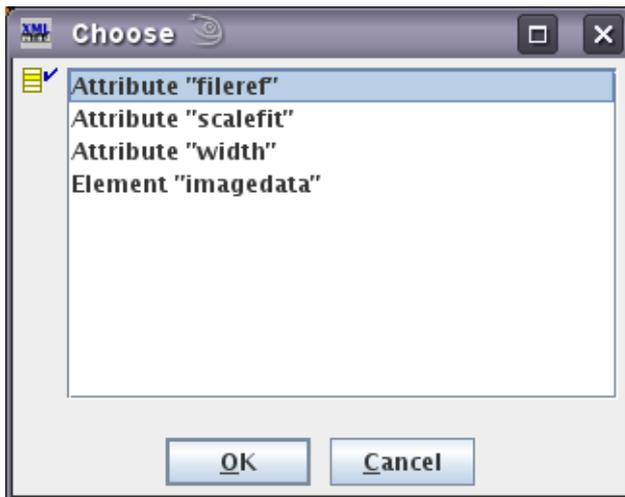
Displays the the Compare tool [77] at the left of the main window. The Compare tool will show you the differences existing between two revisions of the same initial document. It also allows to accept or reject some or all the changes.

6.3. "Helper Application" menu

This menu contains entries allowing to use third-party applications to view or edit part or all of the document being edited.

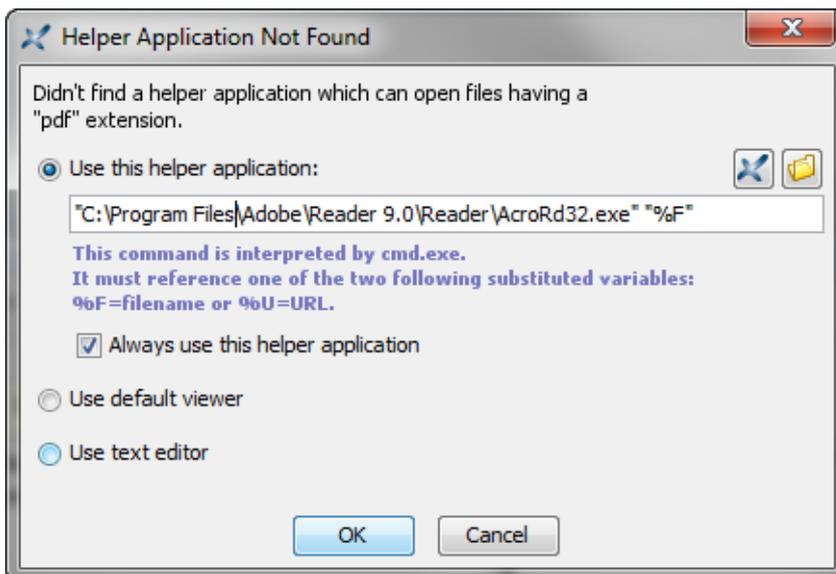
Open Element or Attribute Content in Helper Application

Requires an element to be implicitly or explicitly selected. Displays a dialog box allowing the select this element or one of its attributes from a list.



Opens specified element or attribute in a third-party "helper" application. If the helper application cannot be determined automatically (because it has not yet been registered using the Preferences dialog box, Helper Applications section), the user is prompted to specify it.

Figure 3.3. The "Helper Application Not Found" dialog box



Example of use: use your web browser to open the page referenced in the `url` attribute of the (DocBook 4) `ulink` element.

Edit Element or Attribute Content in Helper Application

Same as above except that the helper application is assumed to be an editor. If this editor is used to modify the element or attribute, then the changes are also automatically applied to the document being edited.

This command works as follows: let's suppose the element of interest contains an image encoded using base 64 (data type `xs:base64Binary`).

1. This command examines the first bytes of the image and, using this signature, determines which helper application to use.
2. If the helper application cannot be determined (because it has not yet been registered using the Preferences dialog box, Helper Applications section), the user is prompted to specify it.
3. It reads the image data from the element, decodes it and saves it to a temporary file.
4. It starts the helper application, an image editor, passing it the file containing the extracted image.
5. After the user quits the image editor, the command detects whether the extracted image has been modified and, if this is the case, reloads it in the element.

Examples of use: use GIMP to edit the image file referenced in the `src` attribute of the (XHTML) `img` element. Use Inkscape to edit the `svg:svg` element contained in an (DocBook 5) `imagedata` element.

Open Document in Helper Application

Opens the document being edited in a third-party "helper" application. If the helper application cannot be determined automatically (because it has not yet been registered using the Preferences dialog box, Helper Applications section), the user is prompted to specify it.

This entry is disabled if the document is newly created and has not yet been saved. Also note that this command is guaranteed to fail if the document is stored on the *Windows file system* and is currently write-locked by XMLmind XML Editor.

Example of use: use your web browser to preview the XHTML document being edited.

Edit Document in Helper Application

Same as above except that the helper application is assumed to be an editor. XMLmind XML Editor will automatically reload the document after the third-party editor is used to modify it.

This entry is disabled if the document is newly created and has not yet been saved. Also note that this command is guaranteed to fail if the document is currently write-locked by XMLmind XML Editor.

Example of use: use your favorite text editor to perform some low-level modifications on the XML document being edited.

6.4. Spreadsheet menu

 You may need to enable this submenu by checking "Enable the Integrated Spreadsheet Engine" in Options → Preferences, General|Features section.

Show Table Labels

Makes tables look like spreadsheets by adding A1-style labels to their columns and to their rows. This is very useful when you want to type cell references such as A1:C3 in a formula.

Insert/Edit Formula

If a formula (`xxe-formula` processing instruction) is explicitly selected, a specialized formula editor is opened to allow the user to modify the formula.

Otherwise, a specialized formula editor is opened to allow the user to insert a new formula at caret position. Inserting a new formula in an empty element works too: simply explicitly select this empty element and use this menu item.

Disable Selected Formulas, Enable Selected Formulas

Disables/enables all the formulas (`xxe-formula` processing instruction) found in the explicit node selection or in the text selection.

Disabling a formula means passivating it. That is, it is no longer used to update the document. In some cases, this is a handy alternative to removing it.

Tip

In the styled view, formulas are represented by a small F icon. Clicking on this icon with the middle button of the mouse allows to switch the state of the formula from enabled  to disabled  and vice-versa.

Remove Selected Formulas

Remove all the formulas (`xxe-formula` processing instruction) found in the explicit node selection or in the text selection.

Auto-update Mode

This toggle may be used to switch from auto-update mode to manual update mode.

In manual update mode, only newly inserted formulas are computed. To force a full calculation, the user has to explicitly use the Update command below.

In auto-update mode, a full calculation is automatically performed, if needed to, when the editing context changes. For example: type some text in a paragraph, then click in (or tab to) another paragraph to trigger a spreadsheet calculation.

Note that in both modes, a full calculation is automatically performed, if needed to, before validating or saving the document.

Using manual update mode is recommended if you have a slow computer or if you have inserted a lot of formulas in your document or if your formulas access many external documents.

See also Spreadsheet options [103].

Update

Forces a full calculation of the spreadsheet.

6.5. "Record Macro" menu

 You may need to enable this submenu by checking "Enable the 'Tools|Record Macro' Submenu" in Options → Preferences, General|Features section.

This menu allows to record a sequence of commands and to replay the recorded sequence at will.

This facility used in conjunction with Select → Find Element [25] facility or with the Search [59] tool may be seen as an advanced, versatile, yet simple to use, form of search/replace.

Start

Starts recording a sequence of commands.

Stop

Stops recording the sequence of commands.

Cancel

Cancels the recording of a sequence of commands.

View

Displays a dialog box containing recorded macro in XML form. Very handy to paste it in an XXE configuration file (see Section 3, "command" in *XMLmind XML Editor - Configuration and Deployment*).

Replay

Replays recorded sequence of commands.

Procedure 3.1. Procedure for recording a sequence of commands

1. Use the Start menu item.
2. Invoke commands as usual: use key bindings, menu items and tool bar buttons.

Typing some text is of course supported. ``Tabbing" from a text node to another is supported too.

The following tools can also be used during a recording: Edit [53], Attributes [56], Search [59], Characters [63].

If you use the Search tool during a recording, just use the search part; do not use the replace part. And after the searched string is found and selected, click on the Stop button of the Search tool to give keyboard focus back to the document view. This will allow you to continue adding more commands to the recorded sequence.

3. Use the Stop menu item.

Only *editing commands* can be recorded. That is, commands that modify the contents and/or the selection marks of the document being edited. Actions such as File → Open or View → Add cannot be recorded.

At most 20 commands can be recorded. Typing contiguous characters, no matter how many, counts as a single command.

Attempting to record the following commands will automatically cause macro recording to be canceled:

- any command triggered by a mouse click,
- Undo [27], Redo [27], Repeat [27],
- any command which fails (example: searching a string and this string is not found),
- any command which cannot be executed given current editing context (example: pasting some text to a place where the schema forbids to do so).

Recording interactive command such as Insert After [29] works as expected: it is the command *along with the element interactively chosen by the user* which is recorded, and not the interactive invocation of Edit+Insert After (i.e. which activates the Edit tool or which displays the equivalent dialog box).

Recording command Execute Command [38] is fully supported and works as expected: it is the command executed by Tools → Execute Command which is recorded, and not the invocation of Tools → Execute Command.

7. XML menu

This menu is a *placeholder* for menu specific to an XML applications, possibly defined in an XXE configuration file.

For example, such menu is defined for XHTML. When an XHTML document is loaded into XXE, the XML menu is automatically populated with items and its title changes from "XML" to the title declared in the configuration file (example: "XHTML").

8. Options menu

Preferences

Displays the Preferences dialog box [90] which allows to specify a large number of user preferences.

Reload All Configurations

Reloads all configuration files found by XXE at startup time. This command is disabled if one or more documents are opened in the editor.

Without this command, testing modifications made to an existing configuration requires you to restart the editor. Note that restarting the editor is still required to make it discover new configurations or to reload support code (i.e. .jar files).

 This menu item is hidden by default. You need to enable it by checking "Enable the Developer Tools" in Options → Preferences, General|Features section.

Install Add-ons

Displays the Install Add-ons dialog box [141], which allows to download and install, upgrade and uninstall all sorts of add-ons. This dialog box is not available if XXE has been deployed using Java™ Web Start.

Tip

If you hold the Shift key and click on Options → Install Add-ons, you'll be able to *automatically* upgrade all the installed add-ons (of course, if any and if needed to).

Note

This menu item is absent when XMLmind XML Editor has been started using Java™ Web Start.

8.1. "Customize Configuration" menu

This menu allows end-users (i.e. non-experts) to customize the configuration associated to the document being edited.

End-user customization of configurations by the means of this menu also works when XMLmind XML Editor is deployed using Java™ Web Start.

The following menu items have an effect on a *single* configuration: the configuration of the document being edited. For example, if you specify DocBook XSL stylesheet parameter `paper.type=USLetter` when you are editing a DocBook document, this will have no effect on the DocBook 5 and Simplified DocBook configurations, even if these configurations share their Convert Document menu with the DocBook configuration.

Using any of the following menu items has an immediate effect on all the opened documents associated to the customized configuration. That is, no need to restart XXE to benefit from the customization.

Save Document As Template

Save the document being edited as a named template. This named template is then displayed in the File → New dialog box.

This menu item is disabled (grayed) if the document being edited has been modified and thus, needs to be saved. Therefore you need to save the document being edited to disk prior to using this facility.

Arbitrarily complex documents may be used as templates: a document may be modular, may reference graphics files, etc. This is needed for example to create a document template including the logo of a company.

User-defined document templates are added and removed using the "Save Document As Template" dialog box [115].

Save Selected Element As Template

Save the selected element as a named template. This named template may then be suggested by the Edit tool, depending on the operation to be performed and if this is allowed by the schema.

This menu item is disabled (grayed) unless an element is explicitly selected.

User-defined elements templates are added and removed using the "Save Selected Element As Template" dialog box [117].

Save Views As Default

Save the current layout of views as the default one. Displays a simple confirmation dialog box.

Example 1: you want the CSS stylesheet called "Show info about included elements" to be used by default for all your DocBook documents.

1. Open a DocBook document.
2. Select CSS stylesheet called "Show info about included elements" in the View menu.
3. Use Options → Customize Configuration → Save Views As Default.
4. Open another DocBook document (or use File → New to create a new one) to check that your customization has worked.

Example 2: when you open a DocBook document, you want to see the styled view in the middle, the tree view at the left and the structure view (i.e. CSS stylesheet called "Document Structure") at the bottom.

1. Open a DocBook document.
2. Use View → Add. Select "(no style sheet)" for the Left pane. Select "Document structure" for the Bottom pane.
3. Use Options → Customize Configuration → Save Views As Default.
4. Open another DocBook document (or use File → New to create a new one) to check that your customization has worked.

Add Keyboard Shortcut

Add keyboard shortcuts. In other terms, bind up to two keystrokes (example: "F2 u" to a command (example: "moveElement up[implicitElement]").

User-defined keyboard shortcuts are added and removed using the "Add Keyboard Shortcut" dialog box [120].

Customize Document Conversion Stylesheets

Using this menu item is a relatively simple way to influence the layout and style of the deliverable (PDF, RTF, HTML, etc) which results from the document conversion.

The document being edited is converted to other formats by the means of *XSLT stylesheets*. This menu item allows to:

- select an XSLT stylesheet other the default one,
- create a custom XSLT stylesheet on the fly,
- invoke a specialized editor—XMLmind XSL Customizer [131]—to modify a user-created XSLT stylesheet.

However, when the document being edited is converted to an *HTML-based format* (Web Help, EPUB, HTML Help, etc)⁹, the HTML pages which are automatically generated by the aforementioned XSLT stylesheets are styled mainly by *CSS stylesheets*. When this is the case, this menu item allows additionally to:

- select a CSS stylesheet other the default one,
- create a custom CSS stylesheet on the fly,
- invoke a helper application [102] (generally, a text editor) to modify a user-created CSS stylesheet.

This menu item displays the "Customize Document Conversion Stylesheets" dialog box [125].

Change Document Conversion Parameters

Using this menu item is the most basic way to influence the layout and style of the deliverable (PDF, RTF, HTML, etc) which results from the document conversion.

⁹As opposed to XSL-FO based formats (PDF, RTF, .docx, .odt, etc).

The document being edited is converted to other formats by the means of *XSLT stylesheets*. This menu item allows to change the parameters of these *XSLT* stylesheets (e.g. `paper.type=USLetter`).

This menu item displays the "Change Document Conversion Parameters" dialog box [137].

9. Window menu

Split Windows Vertically

Clicking on the dashed line found at the bottom of the tab of a document view causes the window area to be split in two parts. This allows to see two documents side by side.

If this option is turned on, the window area is split vertically. If this option is turned off (the default), the window area is split horizontally.

Note that turning this option on and off has an immediate effect on the window area, if this area has already been split in two parts.

Default: not checked.

Close

Closes active document.

Close All

Closes all opened documents.

Show Preceding

Displays preceding (in the order the documents have been opened or created) document tab.

Show Following

Displays following (in the order the documents have been opened or created) document tab.

Below the above menu items, a menu item is added for each document opened in *XXE*. Selecting the name of a document in this list causes this document to become the active one and thus, causes the corresponding tab to be displayed.

10. Help menu

Getting Started

Displays a short tutorial in the help browser.

Full Tutorial

Displays the Tutorial page, which is part of the XMLmind XML Editor web site, in the web browser.

Help

Displays the help browser.

Help About

In order to display the help section related to a specific GUI component of *XXE*, first execute this command (the cursor changes signaling that you are now in contextual help mode) and then click on that component.

Full Documentation Set

Displays the Documentation page, which is part of the XMLmind XML Editor web site, in the web browser.

Show Content Model

Opens a window containing an hypertext reference manual listing all elements and attributes specified in the DTD, W3C XML Schema or RELAX NG schema of the document being edited.

This manual, which is organized like "DocBook: The Definitive Guide" by Norman Walsh and al., is intended to help content authors understand the DTD or schema of the document being edited.

Mouse and Key Bindings

Displays a dialog box containing the mouse and key *bindings* (that is, the mouse or keyboard user interaction used to trigger a command) that can be used in current document view.

 This menu item is hidden by default. You need to enable it by checking "Enable the Developer Tools" in Options → Preferences, General|Features section.

Plug-ins

Displays a dialog box containing information about all plug-ins currently loaded into XXE.

 This menu item is hidden by default. You need to enable it by checking "Enable the Developer Tools" in Options → Preferences, General|Features section.

Check for Updates

Displays a dialog box informing you about the availability of a version of XXE which is newer than the one you are currently using.

This dialog box contains check box "Automatically check for updates". This option is turned on by default. It allows to automatically check for updates¹⁰. This automated check is performed behind the scene, every 24 hours, once per editing session, 2 minutes after XXE has been started.

About XMLmind XML Editor

Displays the customary About dialog box.

Shift-clicking on this menu item adds more information (system properties, environment variables) to the About dialog box and at the same time, copies the contents of the dialog box to the clipboard. Doing this is recommended before sending a bug report to xmleditor-support@xmlmind.com.

¹⁰This feature is really unobtrusive and does not transmit *any* data to our servers.

Chapter 4. The document view area

Figure 4.1. Tab corresponding to the active document

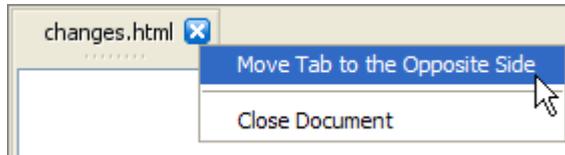
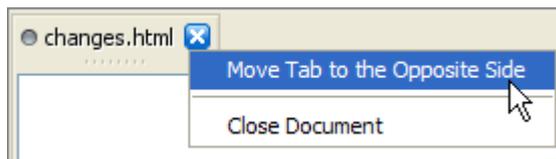


Figure 4.2. Tab corresponding to the active document when it is in read-only mode



Notice that the tab of a read-only document has a permanent *dark gray* indicator at its left. This contrasts with the tab of an editable, read-write, document which is given a *green* indicator when this document has been modified and the changes need to be saved to disk.

Tip

There are several ways to directly open a document in read-only mode. Example: Shift+click on File → Open [19] menu item or on the Open button of the main tool bar [49].

The tabs of documents belonging to the same document set [64] are all given the same background color as the corresponding "Document Set" tool [64].

Items of the right-click popup menu:

Move Tab to the Opposite Side

Moves this tab to the opposite side of the document view area. When several documents are opened in XMLmind XML Editor, this has the effect to split the document view area in two parts. See also Window → Split Windows Vertically [46].

This is equivalent to clicking on the dashed line found at the bottom of a tab.

Close Document

Closes the active document and switches to the next document opened in XMLmind XML Editor, if any.

This is equivalent to clicking on the blue cross found at the right of the tab.

Chapter 5. Main tool bar



New

See File → New [19].



Open

See File → Open [19].

Tip

Shift-click on this button to open a document in read-only mode.



Save

See File → Save [19].



Save All

See File → Save All [19].



Undo

See Edit → Undo [27].



Redo

See Edit → Redo [27].



Repeat

See Edit → Repeat [27].



Command History

See Edit → Command History [27].



Cut

See Edit → Cut [27].



Copy

See Edit → Copy [28].



Paste Before

See Edit → Paste Before [28].



Paste

See Edit → Paste [28].



Paste After

See Edit → Paste After [28].



Delete

See Edit → Delete [29].



Split

See Edit → Split [30].



Join

See Edit → Join [31].

Chapter 6. The node selection bar

1. The node path bar

The node path bar displays the *path* of

- selected node if a single node has been selected
- OR first selected node if a node range has been selected
- OR node containing the caret otherwise (even if there is a text selection).

The path of a node is

- the name of the element if the node is an element,
- #text for a text node,
- #comment for a comment node,
- #processing-instruction for a processing instruction node,

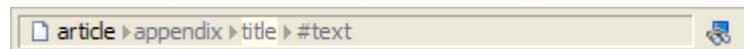
preceded by the path of its parent element.

The node path bar is a very convenient tool for selecting and acting on nodes:

User interaction in the node path bar	Effect
Click on a node name.	Select this node.
Right-click on a node name.	Select this node then display a simplified, contextual, version of the Edit menu [27].
Drag the file icon  .	Drag and drop in another application, the <i>location</i> of the document being edited in XXE. Do not forget to save the document being edited in XXE before dropping its location in a viewer application. See also Drag and drop in XMLmind XML Editor [20].

1.1. Non-editable nodes

The path of a non-editable node is displayed using a dimmed color. A non-editable node has been pasted in the document being edited after using command Copy as Reference [32].



In order to modify such node, one must edit the document containing it in a separate window. Use menu item  Edit → Document Reference → Edit Referenced Document [34] (**Ctrl+Shift+E**) for that.

1.2. Elements which are in non-validating mode

Normally, XMLmind XML Editor works in validating mode. In such mode, the author can only do the editing operations which are allowed by the DTD or schema. For example, the author cannot remove required attributes (unless he/she uses Force Removal).

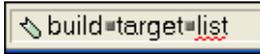
When an element is found to be invalid, XMLmind XML Editor automatically switches to a lenient editing mode for this element and all its descendants.

After the invalid element is fixed by the author, XMLmind XML Editor automatically switches back to its normal, validating, mode.

- An element underlined in *orange* means that this element is in *non-validating mode 1*. In this mode, XMLmind XML Editor still suggests the right attributes and child elements to the author. But these are only suggestions: the author may add and remove any attributes and child elements he/she wants, and this, at any place and in any number.



- An element underlined in *red* means that this element is in *non-validating mode 2*. In this mode, XMLmind XML Editor is not able to suggest the right attributes and the right child elements to the author. The author may add and remove any attributes and child elements he/she wants, at any place and in any number.



Note that, in the case of certain RELAX NG schemas, XMLmind XML Editor may automatically switch to a lenient editing mode, *even if the underlined element is perfectly valid*. This behavior is explained in great details in *XMLmind XML Editor - Support of RELAX NG Schemas*.

2. Navigation tool bar



Find Element

See Search → Find Element [35].



Go Back

See Select → Navigation → Go Back [27]



Go Forward

See Select → Navigation → Go Forward [27]

Chapter 7. Tools

It is possible to display two tools at the same time. By default, XMLmind XML Editor displays both the Edit tool and the Attributes tool. If you don't like this layout or if your screen resolution is too low to allow this, simply click on the "tear-off" dashed line found in the Edit tab. This will move the Edit tool back to the pane containing all the other tools.

More generally, clicking on the "tear-off" dashed line found in a tab may be used to split the tabbed pane in two parts and/or move a tab from one part to the other. Of course, the divider used to separate the two parts may be dragged to resize these parts.

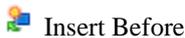
1. Edit tool

This tool works in two steps:

1. Click on one of the following buttons:



(See Edit → Replace [29] for a complete description of the command.)



(See Edit → Insert Before [29] for a complete description of the command.)



(See Edit → Insert [29] for a complete description of the command.)



(See Edit → Insert After [29] for a complete description of the command.)



(See Edit → Convert [29] for a complete description of the command.)



(See Edit → Convert [wrap] [30] for a complete description of the command.)

This first action just fills the list below these buttons with all the allowed arguments (element name or text node) for the selected command.

2. Choose an element name from the list or type its name in the text field. It is this second action which actually triggers the command.

Procedure for specifying an argument for one of the editing commands described above:

- An element is specified by clicking on its name in the list. A single click is sufficient.

If the selected operation allows to specify a text node as its argument, the list contains not only element names but also a "(text)" item.

- Alternatively, the element name can be specified using the text field above the list:

1. Type the element name in the field (or type "(text)" if this item is found in the list).

2. Press Enter or click on the  OK button.

Tip

The text field supports auto-completion.

This auto-completion feature can be configured using the Options dialog box [97].

- Type **Esc** or click on the  Cancel button to cancel current command and to clear the form.

Procedure for specifying an element argument when the command is applied to an element of the *unconstrained type*:

1. Type any element name in the text field.

Note

If the namespace of the element name has not been declared, you will have to declare it using Tools → Declare Namespace [38] before being allowed to specify this name.

2. Press Enter or click on the  OK button.

The type of an element is unconstrained if

- the element is contained in a document which is not constrained by a grammar,
- OR the content of the element is invalid according to the grammar used to constrain the document.
- OR the content of an ancestor of the element is invalid according to the grammar used to constrain the document.

In all cases, XXE allows the user to add or remove any child element or text node.

In the second case, fixing the invalid element will automatically make it recover its actual, constrained, type.

Procedure for specifying an element argument that matches an *element wildcard*:

1. Type an element name that matches the wildcard in the text field.

Note

If the namespace of the element name has not been declared, you will have to declare it using Tools → Declare Namespace [38] before being allowed to specify this name.

2. Press Enter or click on the  OK button.

XXE will of course check that the name you have typed conforms to the element wildcard.

Using a W3C XML Schema or a RELAX NG schema (but not a DTD), it is possible to specify an element type which constrains some of its child elements just to belong to a certain set of namespaces and nothing more.

The set of allowed namespaces is called a wildcard.

2. Include tool

 You may need to enable this tool by checking "Enable the Include Tool" in Options → Preferences, General|Features section.

2.1. Working with ``XML variables''

The Include tool is designed to make it quick and easy inserting ``XML variables'' in your documents.

XML variables are often-used contents: product names, product versions, copyright information, addresses, phone numbers, etc, you need to reference in almost all your documents.

XML variables are best modelled by elements having a weak semantic and which may be inserted almost anywhere in a document. In the case of XHTML, this element is `span`. In the case of DocBook, this element is `phrase`.

XML variables are generally collected in a single, centralized, ``pseudo-document'', created for this sole purpose.

You'll insert *references* to XML variables, and *not copies*, in your actual documents.

By working this way, if one day, the value of an ``XML variable'' changes, you don't need to manually update all the documents making use of this value.

Unlike the Copy As Reference/Paste (**Ctrl+Shift+C/Ctrl+V**) approach described in the tutorial, which is a generic way to compose any kind of modular documents, the Include tool is specialized in XML variables. For example, do not attempt to use this tool to insert in a modular book the references to its chapters.

2.2. Using the Include tool

First of all, specify the filename or URL of the document containing all your XML variables.

This is done once for all. Up to 5 documents may be added to the list displayed by the "Contained in document" combobox. Specified documents are remembered in order to be reused in subsequent editing sessions.

- Use the  button to add a filename or URL to the list displayed by the "Contained in document" combobox.
- Use the "Contained in document" combobox to select the document containing your XML variables.
- Use the  button to remove currently selected document from this list.

If you attempt to add an invalid (non-XML or non well-formed) or useless (contains no elements having an ID) document to the list, you'll be informed of this fact just once and the document will nevertheless be added to the list. In such case you'll have to use the  button to explicitly remove it from the list.

After that, the tool works in two steps:

1. Click on one of the following buttons:

 Replace by Reference
(See Edit → Reference → Replace by Reference [33] for a complete description of the command.)

 Insert Reference Before
(See Edit → Reference → Insert Reference Before [33] for a complete description of the command.)

 Insert Reference
(See Edit → Reference → Insert Reference [33] for a complete description of the command.)

 Insert Reference After
(See Edit → Reference → Insert Reference After [33] for a complete description of the command.)

This first action just fills the list below these buttons with all the allowed arguments (element ``identifiers'' and/or "-") for the selected command.

This list will only show elements:

- directly contained (that is, not themselves included) in the document selected by the "Contained in document" combobox,
- AND which may be copied as reference (generally this means that such element has an ID),
- AND allowed by the schema given the chosen command and the current selection.

The root element, when listed, is specified as "-".

2. Choose the identifier of the element (or "-") from the list or type it in the text field. It is this second action which actually triggers the command.

Procedure for specifying an argument for one of the commands described above:

- The identifier of the element (or "-") is selected by clicking on it in the list. A single click is sufficient.
- Alternatively, the identifier of the element (or "-") can be specified using the text field above the list:
 1. Type the identifier of the element (or "-") in the field.
 2. Press Enter or click on the  OK button.

Tip

This text field supports auto-completion.

The auto-completion feature can be configured using the Options dialog box [97].

- Type **Esc** or click on the  Cancel button to cancel current command and to clear the form.

3. Attributes tool

- There are two methods for adding or changing the attributes of the (explicitly or implicitly) selected element:
 1. Using the attribute form (the upper side of the attribute tool). This should be the method of choice for persons who prefer to use the keyboard.
 2. Using the attribute table (the lower side of the attribute tool). This should be the method of choice for persons who prefer to use the mouse.
- Adding an attribute for an element of the *unconstrained type* must be done using the attribute form. Simply type the name and value of the attribute in the attribute form and click on the  OK button (or press **Enter** in the value field).

The type of an element is unconstrained if

- the element is contained in a document which is not constrained by a grammar,
- OR the content of the element is invalid according to the grammar used to constrain the document.

In both cases, XXE allows the user to add or remove any attribute, the value allowed for these attributes being any string.

In the latter case, fixing the invalid element will automatically make it recover its actual, constrained, type.

- Adding an attribute that matches an *attribute wildcard* must be done using the attribute form. Simply type the name and value of the attribute using the attribute form and click on the  OK button (or press **Enter** in the value field). XXE will of course check that the name you have typed conforms to the attribute wildcard.

Using a W3C XML Schema or a RELAX NG schema (but not a DTD), it is possible to specify an element type which, for example, has 3 "ordinary" attributes a1, a2, a3 but also any number of other attributes if the name of these extra attributes belong to certain namespaces, for example, the "http://www.w3.org/1999/xlink" namespace.

The set of allowed namespaces is called an attribute wildcard.

3.1. Using the attribute table

The content of the attribute table can be described as follows:

- All attributes set for the selected element are displayed by the table.
- All possible attributes for the selected element, *even those not set*, are also displayed by the table.

Attributes which have not been set are displayed in gray. Attributes which have been set are displayed in black.

- Attributes are listed sorted in alphabetical order.
- The names of required attributes are displayed using a bold font.
- The names of fixed attributes are displayed using an italic font.

Procedure for adding an attribute or changing its value:

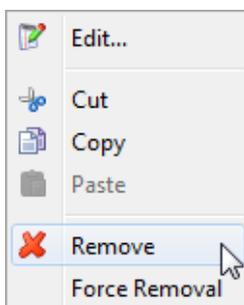
1. Click on the field at the right of the attribute name. This field is editable.
2. Type the value of the attribute.

If the attribute type is enumerated, this field is a menu rather than a text field, so you can directly choose the value of the attribute without having to type anything.

3. Press **Enter** to commit the change.

Procedure for removing an attribute:

1. Right-click on the row of the attribute to be removed.
2. Select the Remove item in the displayed popup menu.



3.2. Using the attribute form

Procedure for adding an attribute or changing its value:

1. Type the name of the attribute in the name field (first field of the form).
2. Press **Enter** or **Tab** to move to the value field (second field of the form).
3. Type the value of the attribute in the value field.
4. Press **Enter** in the value field to commit the change. This also gives the keyboard focus back to the document view.

Tip

Both the name and value fields support auto-completion. However auto-completion in the value field only works for attributes having certain types, for example, any enumerated type, ID, IDREF, IDREFS.

This auto-completion feature can be configured using the Preferences dialog box [97].

Procedure for removing an attribute:

1. Select the attribute by either clicking on it in the attribute table or by typing its name in the name field (first field of the form).
2. Press **Enter** to move to the value field (second field of the form).
3. Click on the right part — the down arrow — of the  Edit button.
4. Click the Remove item in the displayed menu.

Procedure for adding an attribute to an element of the unconstrained type:

1. Type any attribute name in the name field (first field of the form).

Note

If the namespace of the attribute name has not been declared, you will have to declare it using Tools → Declare Namespace [38] before being allowed to add the attribute.

2. Type the value of the attribute in the value field (second field of the form).
3. Press **Enter** in the value field to commit the change. This also gives the keyboard focus back to the document view.

Procedure for adding an attribute that matches an attribute wildcard:

1. Type an attribute name that matches the wildcard in the name field (first field of the form).

Note

If the namespace of the attribute name has not been declared, you will have to declare it using Tools → Declare Namespace [38] before being allowed to add the attribute.

2. Type the value of the attribute in the value field (second field of the form).
3. Press Enter in the value field to commit the change. This also gives the keyboard focus back to the document view.

XXE will of course check that the name you have typed conforms to the attribute wildcard.

The attribute form contains the following buttons:

**Add or change attribute**

Commits the changes. Analogous to pressing **Enter** in the value field.

**Cancel**

Cancels the non-committed changes and clears the attribute form. Analogous to typing **Esc** in the name or value field.

**Edit**

The right part — the down arrow — of this button displays a menu, similar to the popup menu which is displayed when you right-click on a row of the attributes table.

The left part of this button displays a dialog box which can be used to easily specify a value for the attribute being edited. The value specified using this dialog box is directly assigned to the attribute.

Specialized helper dialog boxes are displayed for attributes having certain types, among these types:

- any enumerated type,
- ID, IDREF, IDREFS types,
- hexBinary and base64Binary types.

For all other types of attributes, a very simple multi-line editor is displayed. This may be useful to view or edit attribute values which are too long to be comfortably viewed or edited using the value field.

Note that in the case of the dialog box displayed for enumerated types and ID or IDREF types, a *single click* is sufficient to select a value from the displayed list. Also note that the text field above the list supports *auto-completion*.

**Browse Files**

Displays a file chooser dialog box. The URL or filename specified using this dialog box is directly assigned to the attribute.

Clicking on the right part — the down arrow — of this button displays a menu with 8 radio buttons allowing to choose between:

- Open or save files.
- File or directories.
- Absolute or relative paths (relative paths are relative to the location of the element being edited).
- URL or plain file names.

The choices made using these radio buttons are persistent during the editing session (but not across editing sessions like, for example, user preferences specified using the Preferences dialog box [90]).

4. Search tool

Procedure for performing a text search:

1. Type text to be searched in Search field or choose it from the menu of the combobox.
2. Change the search options as needed (see below).
3. Type Enter in the Search field or click on the Start button.
4. During the search session
 - click Skip on to skip found text,
 - OR click on Skip Element to skip the element containing the found text.
5. The search session can be stopped by

- clicking on Stop,
- OR typing **Esc** (this also gives back the keyboard focus to the document view),
- OR by simply clicking anywhere in the document view.

Procedure for performing a text search/replace:

1. Type text to be searched in Search field or choose it from combo box menu.
2. Check the Replace toggle
3. Type replacement text in Replace field or choose it from combo box menu.
4. Change the search options as needed (see below).
5. Type Enter in the Search or Replace fields or click on the Start button.
6. During the search/replace session
 - click Skip on to skip found text,
 - OR click on Skip Element to skip the element containing the found text.
 - OR click Replace on to replace found text.
 - OR click Replace All on to replace all occurrences of searched text.
7. The search/replace session can be stopped by
 - clicking on Stop,
 - OR typing **Esc** (this also gives the keyboard focus back to the document view),
 - OR by simply clicking anywhere in the document view.

Search options:

Ignore case

The search is case-insensitive. Example: "foo" matches both "foo" and "Foo".

Tip

When "Ignore case" has been checked, "Regular expression" has not been checked and both the searched string and the replacement string contain only lower-case letters or the hyphen character ('-'), the replacement string actually used is capitalized exactly like the found string it will replace.

Example: if you specify "editor" as the search string and "modeller" as the replacement string, the Search tool will replace "editor" by "modeller", "Editor" by "Modeller" and "EDITOR" by "MODELLER".

Counterexample: if you specify "IBM" as the search string and "Lenovo" as the replacement string, the Search tool will replace "IBM", "Ibm" and "ibm" by "Lenovo".

Whole word

The found string must be a word, that is, the found string must be surrounded by white spaces. Example: "foo" matches "foo" but not "foobar".

Regular expression

The searched string must be a valid regular expression. A regular expression is specified in a syntax similar to that used by Perl. See also <http://docs.oracle.com/javase/6/docs/api/java/util/regex/Pattern.html>.

In such case, \$1, \$2, ..., \$9 may be used in the replacement string to refer to the substrings matching the parenthesized groups of the regular expression.

\$0 is replaced by the string matching the regular expression in its entirety. "\$\$" may be used to quote character '\$'.

Examples:

- "f(o+)" matching "foo", replaced by "g\$1", gives "goo".
- "f(o+)" matching "foo", replaced by "\$0bar", gives "foobar".
- "f(o+)" matching "foo", replaced by "g\$\$1", gives "g\$1".

Smart text boundaries

Searching string "Hello world!" in an XML document is not as obvious as it seems: for example, is "Hello world!" with word "Hello" contained in an emphasis element followed by text node " world!" supposed to be found by XXE?

- If this toggle is checked, the answer is yes. "Hello world!" is found within "Hello world!" but not within "<p>Hello </p><p>world!</p>".

This mode uses the grammar constraining current document to recognize logically contiguous text across different types of elements.

- If this toggle is not checked, the answer is no. Each text node is separated from other text nodes whatever the type of the element containing it.

Direction

Up

Search from the current caret position to the beginning of the document.

Down

Search from the current caret position to the end of the document.

Wrap search

Restart the search from the beginning of the document when the end of the document has been reached. (If Direction is Down, restart the search from the end of the document when the beginning of the document has been reached.)

5. Spell tool

Procedure for checking current document for spelling errors:

1. Click on the Start button or use Tools → Check Spelling [61].
2. During the check spelling session, use any of the buttons described below.
3. The check spelling session can be stopped by
 - clicking on Stop,
 - OR typing **Esc** (this also gives the keyboard focus back to the document view),
 - OR simply clicking anywhere in the document view.

Default language

Selects the language of the dictionary used by the spell checker *when such language is not specified in the element being checked for spelling* (typically through the use of an attribute such as lang or xml:lang).

It is possible to switch from a default language to another at any time. In such case, when the default language is actually used (that is, when `lang` or `xml:lang` attributes have not been specified), the spell checker is automatically restarted with the other dictionary, beginning at the last word for which the spell checker has found an error.

The last selected default language is recorded in the user preference file in order to be automatically chosen in subsequent XXE sessions.

Example 7.1. Default language versus actual language example

In this example,

- `Test.html` does not have `xml:lang` attributes set on its elements, which means that the default language, English, is used to spell check this document.
- Except, in `span` containing "le petit cha est mort" where attribute `xml:lang` has been set to `fr`. This means that for that element only, the default language, English, is ignored and that a French dictionary will be used.



In the above screen shot, notice that the actual language of `span` "le petit cha est mort", `fr`, is displayed at the top/right of the Spell tool.

Start from caret

If this option is turned on, spell checking starts from the current caret position. If this option is turned off, spell checking starts from the beginning of the document.

Replace

Replaces the erroneous word by the content of the Replace with text field.

An empty text field may be used to delete the erroneous word.

Replace All

Replaces all occurrences of the erroneous word by the content of the Replace with text field.

This button is disabled for errors other than "Unknown word" or "Improperly capitalized word".

Ignore

Skips the word for which the spell checker has found an error.

Ignore All

Skips all occurrences of the word for which the spell checker has found an error.

This button is disabled for errors other than "Unknown word" or "Improperly capitalized word".

Skip Element

Skips the element containing the word for which the spell checker has found an error.

Learn

Records the word in the personal dictionary for currently selected language.

This button is disabled for errors other than "Unknown word" or "Improperly capitalized word".

About learned words

When a spell checking session is started, it automatically knows all the words learned during past and current spell checking sessions.

A "spell checking session" is started each time:

- You click the Start button of the Spell tool.
- You open a document and auto spell checking is turned on for this document.
- Auto spell checking was turned off and you manually turn it on for the document being edited. This is done for example, by clicking the "Automatic Spell Checker" button found at the left of the status bar.

Limitations:

- Words learned during past and current spell checking sessions are acquired when a new session is started, and never in the middle of a session.

Example: let's suppose auto spell checking is turned on for all documents. Document A and document B are both opened in XE. You use the popup menu of the automatic spell checker to force XE to learn word "foo" in document A. You switch to document B which also contains word "foo". Word "foo" is still underlined in document B.

- "Ignore All" words and "Replace All" words are not shared by spell checking sessions.

6. Character tool

Click on a character to insert it at caret position in current document view.

The form above the character table can be used to select the range displayed by the character table.

The size of this range is 256 characters.

A range is identified by the Unicode code of its first character. This code is displayed in hexadecimal notation (example: "0x2700" for the dingbats range) but can be input in decimal notation (example: "9984") or in octal notation (example: "023400").

6.1. The "Favorites" palette

The last item of the combobox found above the character table is called Favorites. It can be used to select a custom palette of up to 256 characters.

This palette is populated by right-clicking on a character and by choosing the "Add to Favorites" item in the popup menu.

This contextual popup menu contains the following entries:

Copy

Copy to the clipboard the character upon which the user has right-clicked.

Add to Favorites

Add to the Favorites palette the character upon which the user has right-clicked.

Remove from Favorites

Remove from the Favorites palette the character in which the user has right-clicked.

Show Favorites

The quickest way to switch to the Favorites palette.

Change Font

Change the font used by the Character tool. This menu item displays a dialog box allowing to choose any font present on your system. The chosen font is automatically saved as a user preference.

Revert to Default Font

Revert to the font used by default by the Character tool (which is generally `Serif-14`).

7. Validity tool

This tool displays the list of validity error messages (if any) found by XXE when opening a document or after the last use of

- Tools → Check Validity [38] or Validity State [81],
- OR File → Save [19] or File → Save As [19] (validity is automatically checked each time a document is saved).

The color of the message reflects the severity of the error. See icons used by Validity State [81].

Clicking on the number of an error message selects the element where the validity error was found.

If the document is edited after its validity is checked (typically to fix some of the validity errors), clicking on some of the error messages may have no effect because the corresponding erroneous element no longer exists.

8. The "Document Set" tool

8.1. What is a document set?

A *document set* is simply a set of related XML documents. These documents are related because they all contribute to the content of the *same deliverable*: PDF file, EPUB file, Web site, etc.

When XMLmind XML Editor knows that some opened documents are members of the same set:

- it will more thoroughly check the links which may exist between these documents,
- it will make it easier creating links between these documents.

Modular documents, for example a DITA map referencing a number of topics or a modular DocBook book including a number of chapters, implicitly specify a document set. When you author such modular documents, it is strongly recommended to first open their document set in XXE.

About document sets and the DITA key-reference mechanism

If your DITA topics make use of attributes `conkeyref` and `keyref`, then opening it as a document set becomes near mandatory. As a matter of fact, when a DITA map contains key definitions, then the corresponding document set acts not only as a link creation/validation context for its member topics, but it also acts as a *key space*.

When this is the case, please also take the time to review the options of document sets. See Section 5.2.1, "Document Set options" [92].

8.2. How to open a document set in XXE?

Use File → Document Set → Open Document Set [20] to let XXE know about a given document set. This menu item displays a dialog box allowing to choose the file specifying the document set.

- If the selected file is a DITA map, then the members of the document set are the topics referenced in this map. See Figure 7.1, “A document set specified by a DITA map and 3 topic members opened in XXE” [65] below.
- If the selected file is a master DocBook document (for example a modular book including a number of chapters, each chapter being found in its own XML file), then the members of the document set are the DocBook documents included in this master document. See Figure 7.2, “A document set specified by a modular DocBook book and 3 chapter or section members opened in XXE” [65] below.
- In all other cases, the content of the selected file is not analyzed by XXE. Instead, the selected file specifies a directory and a filename extension. For example, selecting file `file:/home/john/site/buy.html` specifies the `"file:/home/john/site/*.html"` *glob pattern*. In this example, the members of the document set are all the files found in directory `file:/home/john/site/` having an `"html"` extension. See Figure 7.3, “A document set specified by a glob pattern and 3 XHTML page members opened in XXE” [66] below.

Figure 7.1. A document set specified by a DITA map and 3 topic members opened in XXE

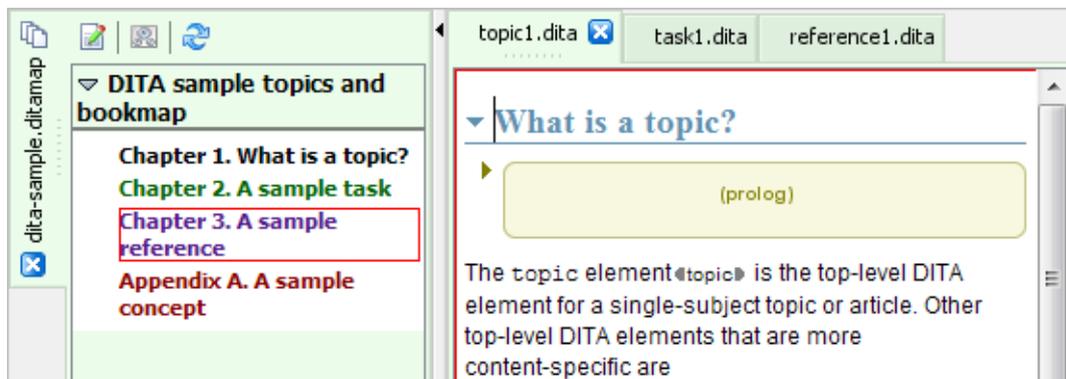


Figure 7.2. A document set specified by a modular DocBook book and 3 chapter or section members opened in XXE

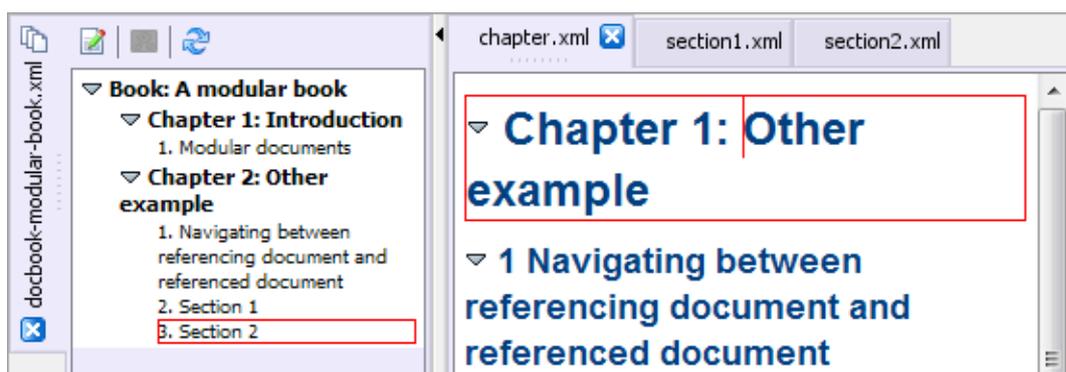
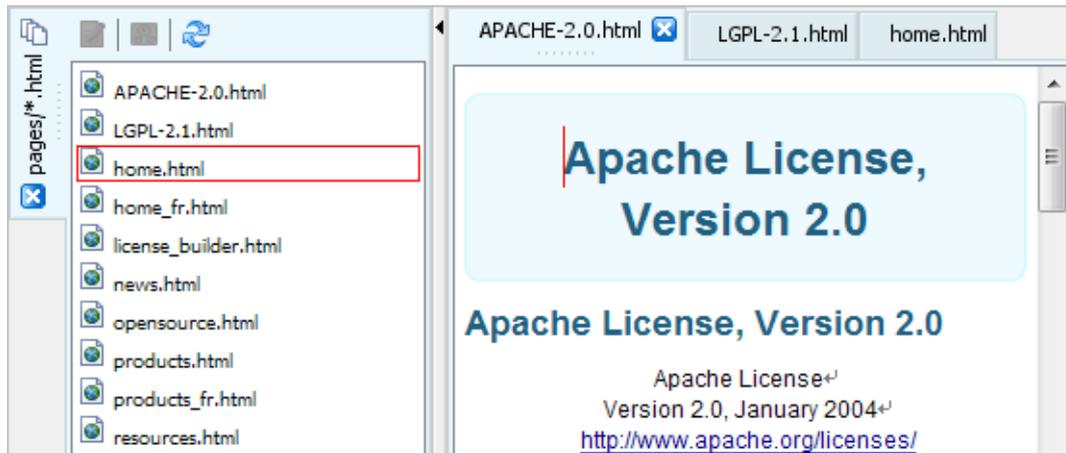


Figure 7.3. A document set specified by a glob pattern and 3 XHTML page members opened in XXE



8.3. The "Document Set" tool

As you can see it in the 3 above screenshots, a document set is represented by a special tool added to the left of XXE's main window: the "Document Set" tool. Each instance of this tool is given a specific, random, background color. This specific background color is also given to the tabs of all the opened documents which are members of the set.

As you will see it in next section [67], the "Document Set" tool is a convenient, interactive, navigational tool. However the most important part of its job is done behind the scene, because opening a document set in XXE automatically modifies the behavior of the Validity tool [64] and the Attributes tool [56]¹:

- The diagnostics issued by the Validity tool about cross-reference errors will take into account the fact that the document being checked is a member of a set.
- The target of a link is almost always specified as an attribute value (XHTML example: the href attribute of the a element). That's why the Attributes tool, through its auto-completion feature, will suggest, not only link targets found within the document being edited, but also link targets found in the other members of the set.

Example 7.2. A simple use case

Modular book mybook.xml includes 3 chapters. Each chapter is found in its own file: chapterA.xml, chapterB.xml and chapterC.xml.

File chapterA.xml contains:

```
<chapter id="chapterA">
  <title>Chapter A</title>

  <para>Link to <link linkend="nowhere">nowhere</link>. Link to <link
linkend="sectionB1">Section B1</link>.</para>

  <section id="sectionA1">
    <title>Section A1</title>

    <para>TODO.</para>
  </section>

  <section id="sectionA2">
    <title>Section A2</title>
```

¹More precisely, the opened document set is used as a *context* by the linkType in *XMLmind XML Editor - Configuration and Deployment* and the attributeEditor in *XMLmind XML Editor - Configuration and Deployment* configuration elements introduced by XMLmind XML Editor v4.9.

```
<para>TODO.</para>
</section>
</chapter>
```

In the above file, the first `link` element points to a non-existent target and the second `link` points to the first section of `chapterB.xml`.

The user wants to check the links found in `chapterA.xml` and also to add an `xref` element pointing to the first section of `chapterC.xml`. In order to do that, she/he opens `chapterA.xml` in XXE.

Before opening `mybook.xml` as a document set:

- The Validity tool reports 2 cross-reference warnings: reference to non-existent ID "nowhere" and reference to non-existent ID "sectionB1".
- When the user inserts an `xref` element and specifies its `linkend` attribute, the Attributes tool suggests: `chapterA`, `sectionA1`, `sectionA2`.

After opening `mybook.xml` as a document set:

- The Validity tool reports 1 cross-reference warning: reference to non-existent ID "nowhere".
- When the user inserts an `xref` element and specifies its `linkend` attribute, the Attributes tool suggests: `chapterA`, `sectionA1`, `sectionA2`, `chapterB`, `sectionB1`, `sectionB2`, `chapterC`, `sectionC1`, `sectionC2`.

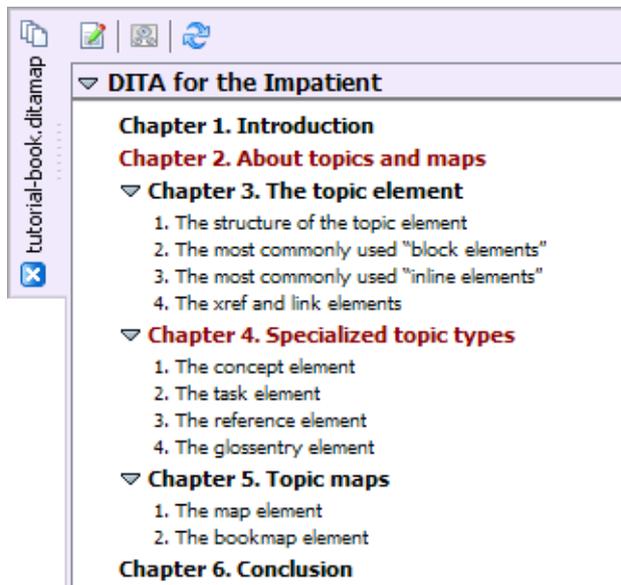
8.4. Using the "Document Set" tool

This tool is displayed after you select a file specifying a document set using `File → Document Set → Open Document Set [20]`.



You may need to enable the `File → Document Set` submenu by checking "Enable the 'File|Document Set' Submenu" in `Options → Preferences, General|Features` section.

Figure 7.4. The "Document Set" tool showing the document set corresponding to the map of our DITA tutorial



Toolbar buttons:



Edit document set specification

Edit in XXE the XML document used to specify this document set. This XML document is typically a DITA map or a DocBook master document.

This button is disabled when the document set is specified by a glob pattern (e.g. "file:/home/john/site/*.html").

Document set options

Display a dialog box allowing to change the options, if any, of this document set.

Changing the options of a document set automatically brings this document set up-to-date.

This button is disabled for all kinds of document set, except when the document set is specified by a DITA map. In such case, this button displays a dialog box allowing to associate a conditional processing profile (a .ditaval file) and a target medium (print or screen) to the underlying DITA map. These settings also have a direct effect on the list of member documents and on the visual representation of the document set².

Update document set

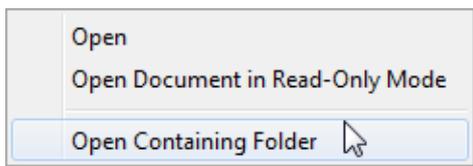
Update the list of member documents belonging to this document set and at the same time rebuild its visual representation.

This button must be clicked after the XML document used to specify this document set (typically a DITA map or a DocBook master document) has been modified.

There is no need to click this button after modifying member documents in XXE. When a member document is modified and the changes are saved to disk, the visual representation of the document set is automatically updated.

Below the toolbar is found an interactive pane containing a visual representation of the document set:

- Press Up to select the preceding element. Press Down to select the following element.
- Press Enter to open in XXE the member document corresponding to selected element.
- Click on an element to select it.
- Double-click on an element to open in XXE the member document corresponding to this element.
- Right-click on an element to first select it and then display the following popup menu:



Open

Open in XXE the member document corresponding to selected element.

Open Document in Read-only Mode

Same as above, but the member document is opened in read-only mode.

Open Containing Folder

Open the folder containing the member document corresponding to selected element. This menu item displays the "Browse Files" tool [69].

- Dragging the selected element will drag the corresponding member document inside or outside XXE.

Note that when a document is dragged and dropped onto XXE, this document is always opened *or reopened* in XXE. This is not the case of all the "open document" facilities described above. Such facilities have been designed for *navigation* and thus, will not reopen a document if it's already opened in XXE. Instead, the opened document will automatically scroll to display the element of interest.

²And also on the key space, when the DITA map contains key definitions. See About document sets and the DITA key-reference mechanism [64].

Notice that the tabs of documents [48] belonging to the same document set are all given the same background color as the corresponding "Document Set" tool.

9. The "Browse Files" tool

This tool is displayed after you select any of the menu items of the File → Folder [22] submenu.

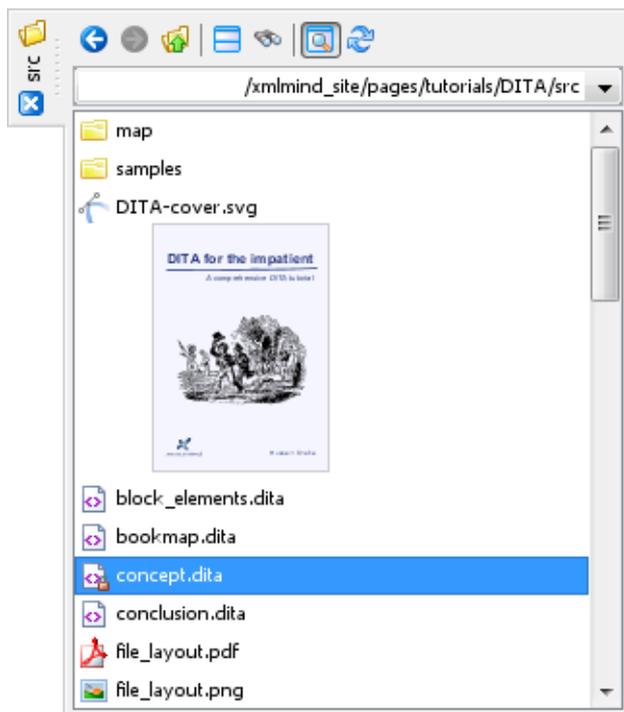


You may need to enable the File → Folder submenu by checking "Enable the 'File|Folder' Submenu" in Options → Preferences, General|Features section.

This tool is similar to the file manager applications which are native to all operating systems: Windows Explorer, Mac OS X Finder, Linux/KDE Nautilus, etc. The main advantages of using one or more "Browse Files" tools over the native counterparts are:

- Tightly integrated in XMLmind XML Editor.
- Does not use much screen real estate.
- Makes use of all XXE plug-ins. For example, if you install the "*JEuclid image toolkit plug-in*" add-on, you'll be able to preview MathML equations.
- Last but not least, if you have the "*WebDAV virtual drive plug-in*" add-on and/or the "*FTP virtual drive plug-in*" add-on installed, you'll be able to manage files *stored on all sorts of remote servers*. Installing such add-ons is done simply by using Options → Install Add-ons [44].

Figure 7.5. The "Browse Files" tool showing the source files of our DITA tutorial



Notice in the above screenshot that the "Show image thumbnails" option (see below [70]) is turned on and that the icon next to "concept.dita" has a small lock, meaning that is file is currently locked³.

Toolbar buttons:



Back

Browse previously visited folder.

³Details about the lock are given by the tooltip of the file icon.



Forward

Browse previously visited folder by undoing the Back action [69].



Go up one level

Browse parent folder.



Split

Split the "Browse Files" tool in two parts, making it easy to drag/drop or to copy/paste files between these tools.



Search

Open a "Search Files" tool [72] allowing to search by their contents the XML files found in this folder.



Show image thumbnails

This checkbox adds a thumbnail after each list item corresponding an image file.

This facility makes use of all the *image toolkit plug-ins* currently installed in XXE. If you are missing an image format (e.g. *SVG*), please install the corresponding image toolkit plug-in (e.g. "*Apache Batik image toolkit plug-in*") using Options → Install Add-ons [44].

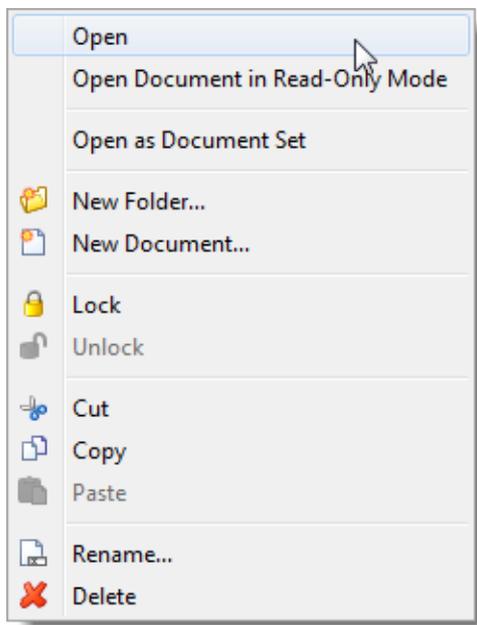


Refresh

Update what is displayed by the "Browse Files" tool. Clicking this button is needed when the content of the folder is modified outside XMLmind XML Editor.

Below the toolbar is found an interactive pane containing a visual representation of the folder:

- Up, Down, Shift+Up, Shift+Down may used to select one or more files. These shortcuts work as expected in any multi-selection list.
- Press Enter to open the selected file. If the selected file is an XML file, it is opened in XXE. If the selected file is not an XML file, a dialog box [40] is displayed allowing the user to choose a helper application.
- Click, Shift+Click, Ctrl+Click may used to select one or more files. These actions work as expected in any multi-selection list.
- Double-click on a file to open it. If the selected file is an XML file, it is opened in XXE. If the selected file is not an XML file, a dialog box [40] is displayed allowing the user to choose a helper application.
- Right-click on a file to first select it and then to display the following popup menu:



Open

Open the selected file. If the selected file is an XML file, it is opened in XXE. If the selected file is not an XML file, a dialog box [40] is displayed allowing the user to choose a helper application.

Open Document in Read-only Mode

Same as above, but the document is opened in read-only mode.

Open as Document Set

Open selected XML file — typically a DITA map or a DocBook master document — as a *document set* [64]. This button displays the "Document Set" tool [64].

New Folder

Create a subfolder in current folder.

New Document

Create an XML file using the same dialog box as the one displayed by File → New [19].

Lock

Lock selected file.

If the current folder is stored on a WebDAV server, it is also possible to lock a subfolder of the current folder.

Unlock

Unlock selected file.

In principle, the file must have been locked by you. However, this menu item will attempt to unlock it in all cases and depending on your privileges, this action may succeed or fail.

Cut

Cut selected files.

Copy

Copy selected files.

Paste

Paste files cut or copied using the above menu items.

Rename

Rename selected file.

Delete

Delete selected files.

- The customary keyboard shortcuts **Ctrl+A**, **Ctrl+X**, **Ctrl+C**, **Ctrl+V**, **Del**, Backspace work as expected in any file manager.
- The "Browse Files" tool is fully drag and drop enabled. It supports the copy and move operations. It does not support the link operation.

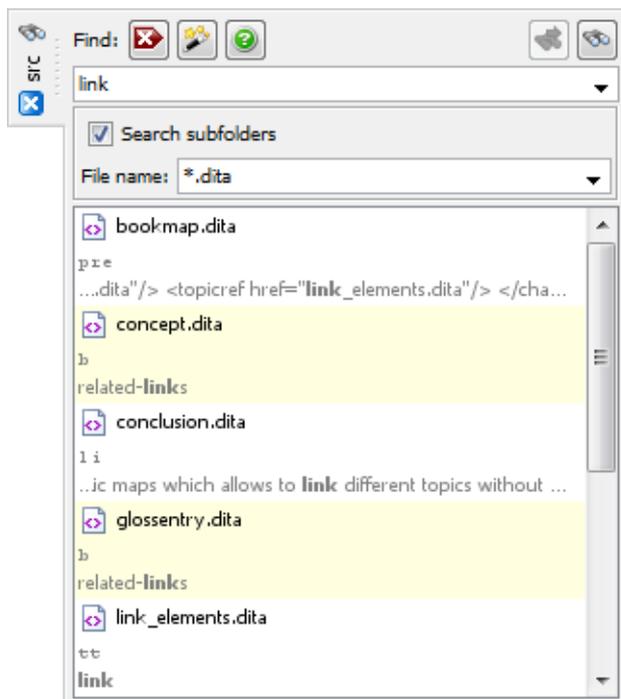
Note that when an XML file is dragged and dropped onto XXE, the document is always opened *or reopened* in XXE.

10. The "Search Files" tool

This tool is displayed after you click the  Search [70] button in the "Browse Files" tool. The "Browse Files" tool is itself displayed after you select any of the menu items of the File → Folder [22] submenu.

 You may need to enable the File → Folder submenu by checking "Enable the 'File|Folder' Submenu" in Options → Preferences, General|Features section.

Figure 7.6. Search our DITA tutorial for topic files (*.dita) containing substring "link"



Toolbar buttons

-  Clear
Clear the query text field (see below), the "File name:" text field and the "search results" pane.
-  Create or edit an advanced query
Display a query editor dialog box allowing to create an advanced query or to edit the current query (that is, the one specified in the query text field).
-  Help
Displays an online help for "Search Files" tool.
-  Search next
Displays up to 20 more results for the current search.
-  Search
Start searching or restart current search . Display at most the first 20 results.

When a search is being performed, the Search and Search next buttons are given a special Stop icon . Clicking this icon allows to stop the search.

The query text field

Below the toolbar is found a text field where you can type a query. It's possible to type simple or advanced queries in this text field.

Advanced queries are documented in Section 10.1, "The "Create or edit an advanced query" dialog box" [74].

A simple query such as "Hello world!" (without the quotes) means: find all XML files containing an *element* whose *direct textual content* contains *substring* "hello world!" (case-insensitive).

This is very different from web search engines such as Google™ where query "Hello world!" (without the quotes) means: find all pages containing *word* "hello" *and word* "world" (case-insensitive).

Note that this simple text search facility is always case-insensitive. Also note that the whitespace in the textual content of elements, attributes, comments and processing-instruction is always normalized while traversing the content of an XML file. That is, the possible indentation of the XML file will not affect the results of the search.

The query text field may be left empty, in which case the search will be performed on the basenames of the files. See below.

The "search files by name" form

The "Search subfolders" checkbox allows to perform the search, not only in the current folder, but also recursively in all its subfolders.

Below the "Search subfolders" checkbox is found a "File name:" text field where you can type a *glob pattern*. This glob pattern is used to match the basename of the files being searched.

When this field is left empty, XXE will search all the files known to be XML (the union of *.xml, *.dita, *.ditamap, *.dbk, *.xsl, *.xsd, *.fo, etc).

Tip

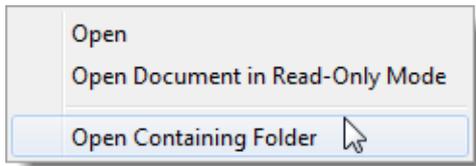
Note that, by default, .htm, .html and .shtml files are *not* considered to be XML files. Only .xhtml files are considered to be XML files. Therefore, if you always create XHTML files and nevertheless give your files extensions such as .htm, .html or .shtml, do not forget to specify "*.xhtml*" in the "File name:" text field.

Note that the query text field may be left empty, in which case the search will be performed on the basenames of the files. For example, specify "*. {svg, png}" in the "File name:" field and leave blank the query field in order to list all SVG and all PNG files.

The "search results" pane

Below the above toolbar and text fields, is found an interactive pane containing the results of a search:

- Press Up to select the preceding result. Press Down to select the following result.
- Press Enter to open in XXE the document corresponding to selected result.
- Click on a result to select it.
- Double-click on result to open in XXE the document corresponding to this result.
- Right-click on a result to first select it and then to display the following popup menu:



Open

Open in XXE the document corresponding to selected result.

Open Document in Read-only Mode

Same as above, but the document is opened in read-only mode.

Open Containing Folder

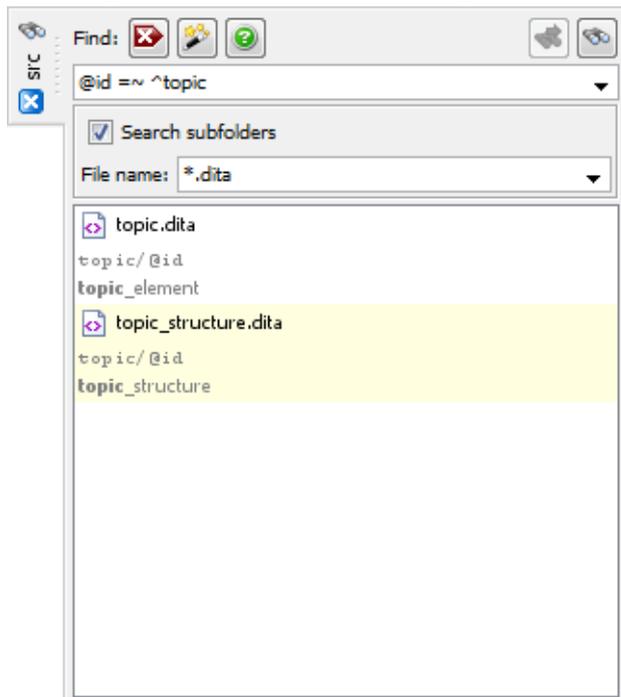
Open the folder containing the document corresponding to selected result. This menu item displays the "Browse Files" tool [69].

- Dragging the selected result will drag the corresponding document inside or outside XXE.

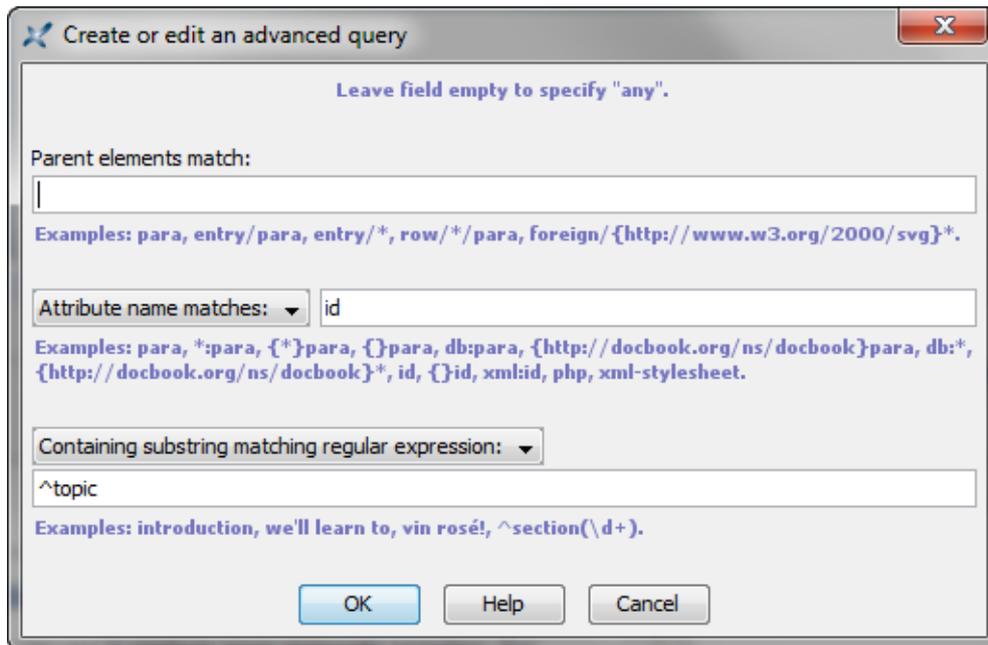
Note that when a document is dragged and dropped onto XXE, this document is always opened *or reopened* in XXE. This is not the case of all the "open document" facilities described above. Such facilities have been designed for *navigation* and thus, will not reopen a document if it's already opened in XXE. Instead, the opened document will automatically scroll to display the element of interest.

10.1. The "Create or edit an advanced query" dialog box

The "Search Files" tool is not limited to simple text searches. You can use it to perform more elaborate searches. For example: find all documents containing an element whose `id` attribute starts with `"topic"`:



In the above screenshot, notice the query being used: `"@id =~ ^topic"`. The syntax of this query [76] is easy to remember. However, fortunately, you don't even need to do this effort. Suffice to click on  "Create or edit an advanced query" to display a query editor dialog box.

Figure 7.7. The "Create or edit an advanced query" dialog box

Description of the text fields and comboboxes from top to bottom and left to right:

Text field "Parent elements match:"

Specifies the parent element and also possibly the ancestors of the subject of the search.

An empty "Parent elements match:" text field means: whatever the parent or ancestors.

Subject type combobox

Specifies the node type of the subject of the search: element, attribute, processing-instruction or comment.

Subject name text field

Specifies the name of the subject of the search when this subject is an element or attribute. Specifies the target of a processing-instruction when the subject of the search is a processing-instruction.

- A non-qualified name such as "para" matches any name having "para" as its local part . That is, the namespace and the prefix of a name are not considered.
- A qualified name such as "db:para" matches any name having "db" as its prefix and "para" as its local part. The namespace of a name is not considered.
- A name specified using Clark's notation such as "{http://docbook.org/ns/docbook}para" matches any name have "http://docbook.org/ns/docbook" as its namespace and "para" as its local part. The prefix of a name is not considered.

Use "{}" to specify the absence of namespace. Example: "{}para".

- In a name specification, an "*" wildcard may be used in the local part, the prefix or the namespace. Examples: "db:*", "*:para", "{*}para".

An empty subject name text field means: whatever the name of the element or attribute or whatever the target of the processing-instruction.

Match operation combobox

Specifies how the textual content of the subject is matched with the searched value:

- the textual content contains the searched value,
- OR the textual content is equal to the searched value,

- OR the textual content contains a substring matching the searched value, which is a regular expression.

All these operations are case-insensitive.

Searched value

Specifies the searched value, some plain text or a regular expression, depending on the chosen the match operation.

The supported syntax for regular expressions is documented here.

An empty searched value text field means: whatever the textual content of the subject.

Examples:

- Find documents containing `literal` elements containing a text equal to "XXE": Element name matches: `literal`; Searched value: `XXE`.
- Find documents containing `table` elements having an `xml:id` attribute: Parent elements match: `table`; Attribute name matches: `xml:id`.
- Find documents containing comments: simply select "Comment" in the Subject type combobox.
- Find documents containing the `<?xxe-relaxng-schema>` processing-instruction: PI target equals: `xxe-relaxng-schema`.
- Find documents containing absolute HTML links: Parent elements match: `a`; Attribute name matches: `href`; Containing substring matching regular expression: `^http://`.

10.2. Syntax of search queries

```

query -> [ subject ]? [ op ]? [ value ]?
subject -> [ ancestors ]? simple_subject
ancestors -> [ name '/' ]+
simple_subject -> element | attribute |
                processing-instruction | comment
element -> name
attribute -> '@'name
processing-instruction -> 'processing-instruction(' target ') '
comment -> 'comment()'
name -> local_name |
        prefix ':' local_name |
        '{' [ namespace ]? '}' local_name
local_name -> NCName | '*'
prefix -> NCName | '*'
namespace -> anyURI | '*'
target -> NCName | '*'
op -> '=' | '=' | '=~'
value -> plain_text_or_regular_expression

```

The default *subject* is: any element.

The default *op* is: =*.

The default value is: any value.

<i>op</i>	Description
=*	The textual content of the subject contains the searched value.
=	The textual content of the subject is equal to the searched value.
=~	The textual content of the subject contains a substring matching the searched value, which is a regular expression. The supported syntax for regular expressions is documented here.

Examples:

- Find documents containing elements containing substring "XXE": =* XXE or more simply XXE
- Find documents containing attributes containing substring "XXE": @* =* XXE
- Find documents containing `literal` elements containing a text equal to "XXE": `literal = XXE`
- Find documents containing `table` elements having an `xml:id` attribute: `table/@xml:id =`
- Find documents containing comments: `comment() =`
- Find documents containing the `<?xxe-relaxng-schema>` processing-instruction: `processing-instruction(xxe-relaxng-schema) =`
- Find documents containing absolute HTML links: `a/@href =~ ^http://`

11. The Compare tool

 You need to enable this tool by checking "Enable the 'Tools|Changes' Submenu" in Options → Preferences, General|Features section.

11.1. Why use the Compare tool?

The Compare tool allows to compare two revisions of the same initial document.

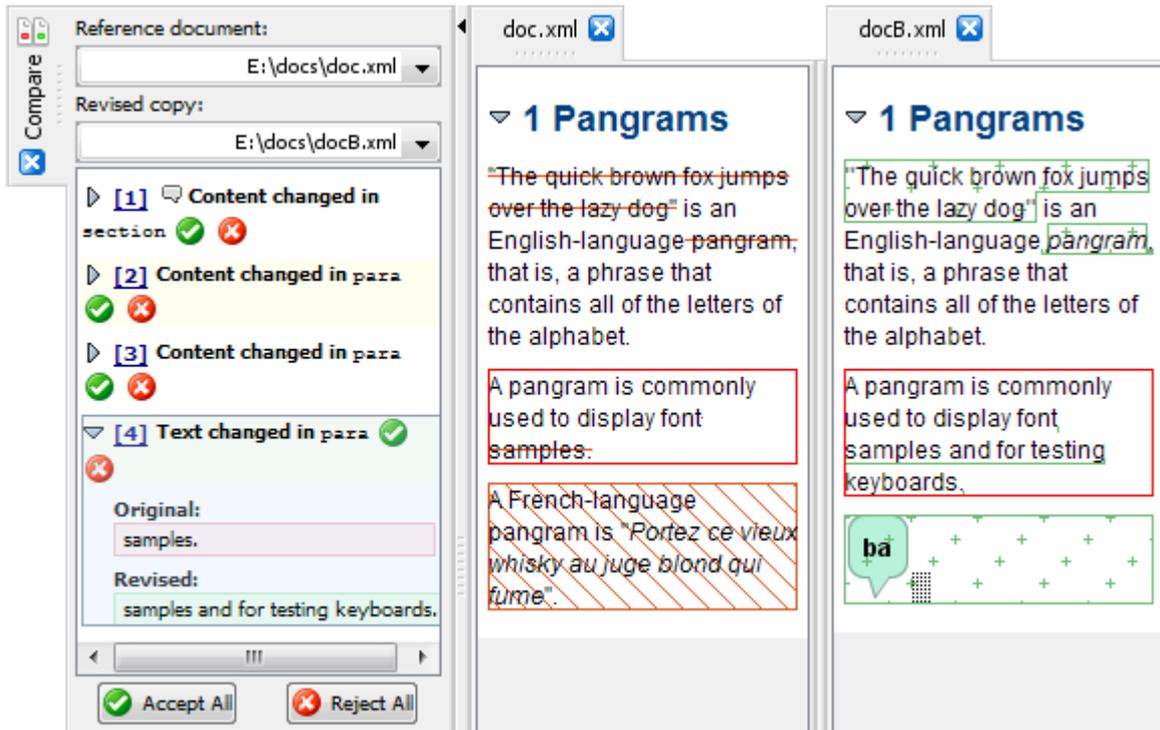
Unlike generic XML comparison tools such as DeltaXML or Altova DiffDog,

- you must explicitly activate the *change detection*⁴ in the initial document if you want to be able to compare two revisions using the Compare tool. This activation is made by selecting menu item Tools → Changes → Activate Change Detection [39].
- Moreover, adding or deleting elements using a text or XML editor other than XXE will cause the change detection to be automatically deactivated the next time you'll reopen the document in XXE. Any other kind of change, for example text or attribute changes, poses no problem.

After selecting menu item Tools → Changes → Compare Revisions [40] in order to display it, the Compare tool will show you the differences existing between two revisions. It also allows to accept or reject some or all the changes.

⁴Appendix B, *Description of the XML differencing algorithm implemented in the Compare tool* [159] will explain you why.

Figure 7.8. The Compare tool showing the differences existing between `doc.xml` (the initial document) and `docB.xml` (a revision of `doc.xml`), displayed side by side



11.1.1. A common use case

This tool is typically used by an author after her/his draft document has been reviewed and possibly modified by other authors. For example, let's suppose that John has finished writing `doc.xml`.

John activates the change detection in `doc.xml` using Tools → Changes → Activate Change Detection [39], saves the document to disk and then sends a copy to Bart and to Charles.

Bart modifies his copy. He also adds a *remark* explaining some of his changes using Tools → Remark → Insert or Edit Remark [39]. This results in creating `docB.xml`, a revision of `doc.xml`.

Note that Bart didn't even notice that the change detection has been activated in the copy of `doc.xml` he has received. The use of this facility should be completely transparent to the user of XXE, even in terms of perceived performances.

Charles modifies his copy. This results in creating `docC.xml`, another revision of `doc.xml`. Charles sends `docC.xml` to Dana, who also modifies the document. This results in creating revision `docCD.xml`.

The Compare tool allows to compare two by two any revision of `doc.xml` (`doc.xml`, `docB.xml`, `docC.xml`, `docCD.xml`) to another and this, regardless of the order of creation of a revision. For example, the Compare tool allows to compare `docB.xml` (here considered to be the reference document) to `doc.xml` (here considered to be the revised copy). Other example, it allows to compare `docCD.xml` (here considered to be the reference document) to `docB.xml` (here considered to be the revised copy).

After the review of the document by Bart, Charles and Dana is finished, John receives `docB.xml` and `docCD.xml`.

John first compares `doc.xml` to `docB.xml`, accepts some changes and reject other changes, then saves `docB.xml` to disk.

Then he compares the “approved” `docB.xml` to `docCD.xml`. Here too, he accepts some changes and reject other changes, then saves `docCD.xml` to disk.

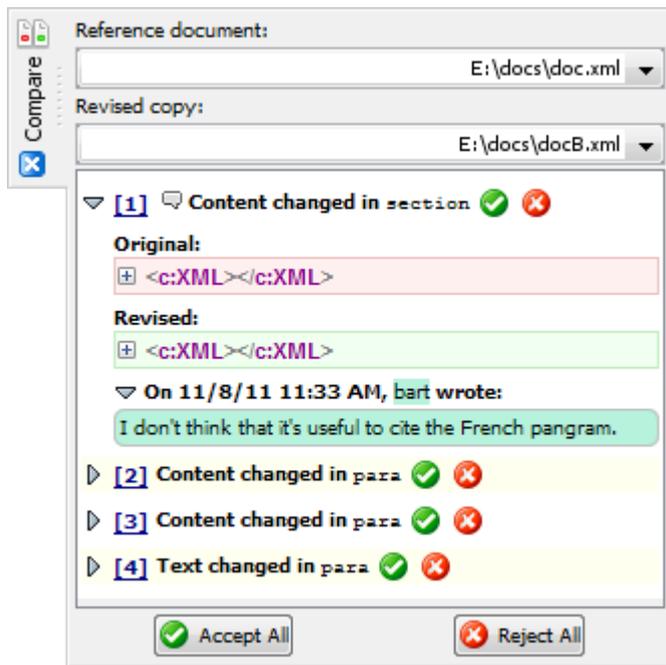
Finally John renames the “approved” `docCD.xml` to `doc.xml` and deletes all his other working copies⁵.

11.2. Using the Compare tool

The Compare tool is displayed at the left of the main window after selecting menu item `Tools → Changes → Compare Revisions` [40].

In order to compare two documents using the Compare tool, you must select these documents using the comboboxes found at the top of the tool. These comboboxes list all the documents opened in XMLmind XML Editor. However you can only choose two revisions of the same initial document (see Section 11.1, “Why use the Compare tool?” [77]). Moreover the chosen documents must have been both saved to disk.

Figure 7.9. The Compare tool showing change #1 (involving a remark made by user `bart`) expanded



In the above screenshot, notice the  icon which indicates that a change contains one or more remarks [38].

Below the comboboxes is found an interactive pane containing the list of changes made in the revised copy to the reference document:

- Click on a change to select it.

Doing this gives the keyboard focus to the interactive pane and thus allows to use keyboard shortcuts (see below) rather than the mouse.

- Click on the number of a change or double-click anywhere in a change first to explicitly select the changed elements in the document views and second to center the changed contents in these views. Doing this allows to clearly see what happened.

⁵Alternatively, John could have compared `docB.xml` (here considered to be the reference document) to `doc.xml` (here considered to be the revised copy), inverting the logic of accepting and rejecting the changes. Then John would have compared `docCD.xml` (here considered to be the reference document) to the now modified `doc.xml` (here considered to be the revised copy), also inverting the logic of accepting and rejecting the changes.

Tip

It is strongly recommended to display the view of the reference document and the view of the revised copy side by side. This is done by:

1. Turning on option Window → Split Windows Vertically [46].
2. Right-clicking in the tab of the revised copy and selecting "Move Tab to the Opposite Side" [48] from the popup menu.

- Click on the triangle icon to expand/collapse the corresponding change.
- Click on  to accept the selected change. However, if there are changes which are similar to the selected change, the  button displays a popup menu letting the user choose between "Accept this change" and "Accept this change and n similar changes". The second menu item is especially handy if for example, you have used "Replace All" in the revised document.

Click the  Accept All button to accept all the remaining changes.

Accepting a change means approving the contents found in the revised copy.

Once a change has been accepted, it is removed from the list and the corresponding marks are removed from the document views.

- Click on  to reject the selected change. However, if there are changes which are similar to the selected change, the  button displays a popup menu letting the user choose between "Reject this change" and "Reject this change and n similar changes". The second menu item is especially handy if for example, you have used "Replace All" in the revised document.

Click the  Reject All button to reject all the remaining changes.

Rejecting a change means restoring in the revised copy the original contents found in the reference document.

Once a change has been rejected, it is removed from the list and the corresponding marks are removed from the document views.

- Press Up to select the preceding change. Press Down to select the following change.
- Press Enter first to explicitly select the changed elements in the document views and second to center the changed contents in these views. Doing this allows to clearly see what happened.
- Press Space to expand/collapse the selected change.
- Press **F3** to accept the selected change. Press **F5** to accept all the remaining changes.
- Press **F4** to reject the selected change. Press **F6** to reject all the remaining changes.

Chapter 8. Status bar

1. Validity state

Clicking on this button displays Validity tool [64], unless no validity errors are found in current document, in which case an OK message is displayed in the status bar.

This button is disabled if current document is not constrained by a grammar.

Tip

Current document validity is automatically checked each time the document is saved, therefore, unless you are fixing an invalid document, you don't really need to explicitly use this button.

The icon contained in this button shows the validity state of current document:

Icon	Meaning
	The document is valid and has no semantic errors.
	The document is valid but has semantic warnings. This happens when the document being edited is itself a W3C XML Schema or a RELAX NG schema or when a user-defined <code>validateHook</code> reports such warnings (See Section 32, “ <code>validateHook</code> ” in <i>XMLmind XML Editor - Configuration and Deployment</i>).
	The document is valid but has semantic errors. This happens when the document being edited is itself a W3C XML Schema or a RELAX NG schema or when a user-defined <code>validateHook</code> reports such errors (See Section 32, “ <code>validateHook</code> ” in <i>XMLmind XML Editor - Configuration and Deployment</i>).
	The document has minor validity errors such as bad cross-references. Tip Working on a document which has bad cross-references is very common so you should not be alarmed by this situation.
	The document has validity errors signaling bad values for attributes or for elements. Note With a DTD, this can only happen for attribute values because the text contained in an element cannot be constrained by this type of grammar.
	This document has severe validity errors such an invalid child sequence inside an element. <i>It is not a good idea to keep working on a document with such severe validity errors because XXE has not been designed to be convenient to use in such situation.</i> Tip After fixing some structure errors using XXE, save and then reload the document. This will automatically discard superfluous white space which was not detected at first because of the validity errors. This trick is much faster that trying to remove invalid white space text nodes by hand.

2. Document cache indicator

 The document cache indicator is hidden by default. You need to enable it by checking "Enable the Document Cache Indicator" in Options → Preferences, General|Features section.

 Document cache

As of v4.9, XXE makes a heavy use of its document cache. This indicator allows to have a feedback while the document cache is caching documents. Its tool tip shows the number of documents currently cached as well as the capacity of the cache. The number of cached documents is also rendered visually.

This indicator is not a button. You'll have to use Options → Preferences, Advanced, "Cached data" section to configure or clear the document cache.

3. Status messages

 Show Message Log

Displays a dialog box containing last messages reported by XXE.

These messages are sorted by category. One of the most useful category is "Command Execution" which contains the messages reported during the execution of the last command. Commands such as DocBook → Convert Document → Convert to PDF are really verbose, that's why this category is so useful.

Tip

It is also possible to display the same dialog box by right-clicking in the message area of the status bar.

4. Automatic spell checker

 Automatic Spell Checker

See Tools → Automatic Spell Checker [38].

5. Overwrite mode

INS/OVR

INS indicates *Insert Mode*: typing a character inserts it at caret position.

OVR indicates *Overwrite Mode*: typing a character *replaces* the character found at caret position by the typed character. If the caret is positioned at the very end of a text (or comment or processing-instruction) node, then typed characters are simply inserted there.

Pressing the INS/OVR button allows to switch from Insert Mode to Overwrite Mode and vice versa. The shortcut associated to this button is by default **Esc Insert** (press **Esc**, release **Esc**, then press **Insert**).

6. Clipboard utilities

Clicking on this button  (or right-clicking in the text field next to it) displays a dialog box showing the contents of system clipboard.

This tool supports the following formats: plain text, XML and image. However if both the plain text and image formats are available (e.g. MS-Word does this), this tool only displays the plain text.

6.1. Clipboard content

Next to the above button, a read-only text field permanently shows a short description of current clipboard content:

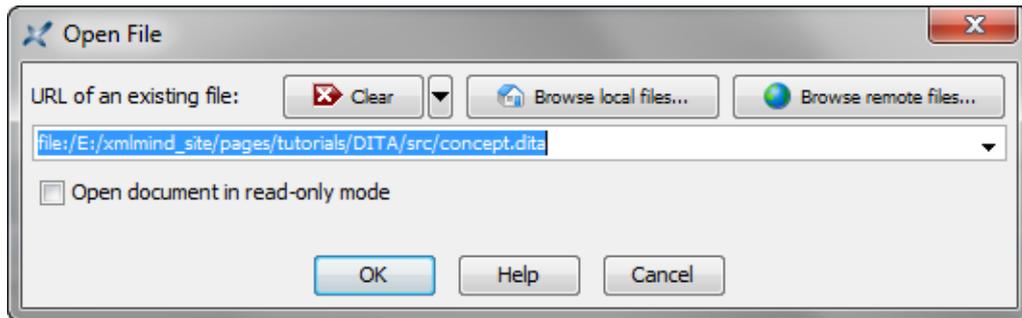
- an element name if a single element has been copied or cut to the clipboard,
- OR `#text` for a text node or for a sequence of characters,
- OR `#comment` for a comment node.
- OR `#processing-instruction` for a processing instruction node,
- OR the number of nodes (between square brackets) if more than one node have been copied or cut to the clipboard . Example "[5]" if the five list items of this itemized list have been copied to the clipboard.

Chapter 9. Dialog boxes

1. The URL chooser dialog box

The URL chooser dialog box allows to specify the location of a file or directory on the local file system and, if *virtual drive plug-ins have been installed*¹, on remote (e.g. HTTP, FTP) file systems. This file or directory may be an existing one or a file or directory to be created; it depends on the command displaying this dialog box.

This dialog box is similar to the "Open Web Location" dialog box found in many Web browsers. To use it, simply type in its text field the URL (Uniform Resource Locator — see syntax [86] below) of a file or directory.



Now rather than typing an URL, you can *select it* using a file chooser dialog box:

Browse local files

Allows to choose a local file or directory using the standard file chooser dialog box.

Always works, whatever is specified in the text field.

Browse remote files

Allows to choose a file or directory found on the local file system and, if *virtual drive plug-ins have been installed*, on remote (e.g. HTTP, FTP) file systems.

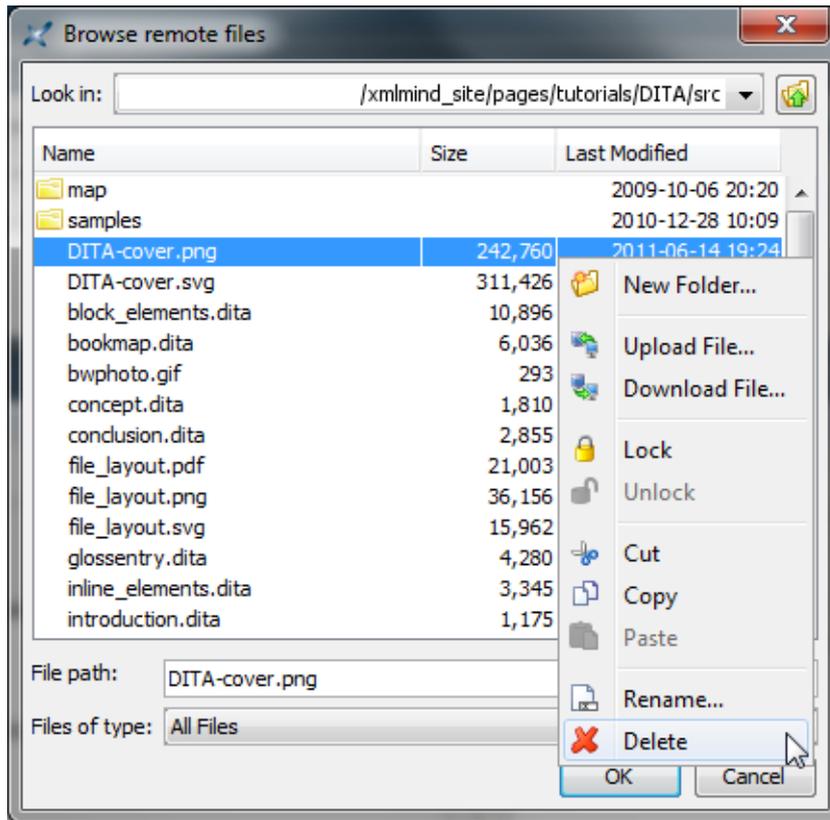
Cannot work if the text field is totally blank. You have to type² at least the URL of the initial directory you would like to browse.

Note that the special chooser dialog box displayed after clicking on this button has a simple yet handy, integrated file manager (similar, albeit simpler, to the "Browse Files" tool [69]). To use it, simply right-click anywhere on the file list:

¹A virtual drive plug-in allows XMLmind XML Editor to edit documents stored in places other than the local file system. This is done by emulating a hierarchical file system.

All sorts of add-ons, including virtual drive plug-ins, can be downloaded and installed using Options → Install Add-ons [44].

²Or choose an item from the dropdown menu next to the text field. This menu lists last recently visited URLs.



Clear

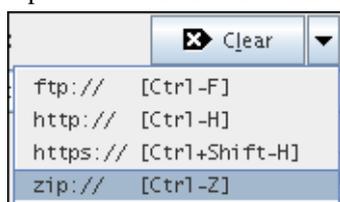
Erases the contents of the text field where the URL is typed.

The dropdown menu next to the Clear button

(Disabled unless virtual drive plug-ins have been installed.)

Instead of erasing the text field, this menu allows to replace its contents by the protocol part of an URL, e.g. "http://", "ftp://", etc. The list of these prefixes depend on which virtual drive plug-ins have been installed.

Moreover, keyboard shortcuts are automatically associated with the prefixes. For example, press **Ctrl+H** to replace the contents of the text field by "http://".



Specifying the "http://" URL of a document found on a WebDAV server

Assumes that WebDAV virtual drive plug-in has been installed and that the option "Use URL chooser rather than file chooser" has been selected.

Before using the Browse remote files button, make sure to type in the text field the URL of an initial directory *which is WebDAV enabled*.

Example: you have typed "http://www.acme.com/" as an initial URL. After clicking on the Browse remote files button, you get the following error message: "Cannot connect to http://www.acme.com/: http://www.acme.com/ does not support webdav". Try to type the URL of a subdirectory such as "http://www.acme.com/publish/" because, may be in the "www.acme.com" server, directory "/" is not WebDAV enabled, while directory "/publish/" is.

Syntax of Uniform Resource Locators

An *URL* (Uniform Resource Locator), often called *Internet Address* in Web browsers, has (to make it simple) three parts:

1. The protocol part. Example: "http://" in URL "http://www.xmlmind.com/xmleditor/download.shtml".

Unlike Web browsers, XMLmind XML Editor requires you to specify the protocol.

2. The authority part, often a server, sometimes empty. Example: "www.xmlmind.com" in URL "http://www.xmlmind.com/xmleditor/download.shtml".

Example of URL with an empty authority: `file:///C:/temp/documentation.zip`. Because the authority is empty, this URL could be specified as `file:/C:/temp/documentation.zip`.

3. The file path part. Example: "/xmleditor/download.shtml" in URL "http://www.xmlmind.com/xmleditor/download.shtml".

File path components, that is, directories, are separated by forward slashes ('/'), whatever is the platform running XMLmind XML Editor.

The file path of a directory must end with a '/'. Example: "http://www.xmlmind.com/xmleditor/" is the URL of directory `/xmleditor/`.

More examples:

- `http://www.xmlmind.com/store/buy.php`
- `http://lupo.pixware.fr/~john/`
- `https://www.acme.com:8080/registry/customers.xml` (8080 is the port number of the `www.acme.com` Web server)
- `ftp://zenda.prisoner.tv/pub/docs/refman.zip`
- `ftp://john:sesame@zenda.prisoner.tv/pub/docs/refman.zip` (same as above with a username "john" and password "sesame").
- `file:///home/john/documentation.zip`
- `file:/home/john/`
- `file:///C:/Documents%20and%20Settings/john/documentation.zip` (spaces must be escaped as "%20")

2. The "Find Element" dialog box

This dialog box allows to select nodes specified using an XPath expression. This dialog box has a Simple tab [86] which allows to perform most common search tasks without having to learn XPath. Arbitrarily complex XPath expressions are specified using the Advanced tab [87].

The search starts at explicitly selected node, if any, and at implicitly selected element otherwise.

2.1. The "Simple" tab

Example 1: find element having attribute `id` equals to `introduction`:

1. Select "First in document". Make sure the Element field is empty.

2. Check Having attribute. Type "id" in the text field. Select "Equals to". Type "introduction" in the next text field.
3. Make sure Containing text is not checked.
4. Click OK.

Example 2: navigate from element `para` to next element `para`:

1. Click at the very beginning of your document.
2. Select "Following current node". Type "para" in the Element field.
3. Make sure Having attribute is not checked.
4. Make sure Containing text is not checked.
5. Click OK.
6. Type **Esc g** (that is, invoke Find Element Again [35]) to move to next `para`, if any.

Example 3: find element `html:pre` having a `class` attribute and containing some text matching regular expression `"print\\w+\\("`:

1. Select "First in document". Type "html:pre" in the Element field.

If the namespace corresponding to prefix "html" is the default namespace of the document, it is also possible to simply type "pre".
2. Check Having attribute. Type "class" in the text field. Make sure the next text field is empty.
3. Check Containing text. Select "Matching RE". Type "print\\w+\\(" in the text field.
4. Click OK.

2.2. The "Advanced" tab

Specify an XPath expression in the corresponding text field.

This expression is evaluated in the context of the explicitly selected node, if any, and in the context of the implicitly selected element otherwise.

The evaluation of the XPath expression must return a *nodeset*. If this nodeset exclusively contains *contiguous siblings*, all the nodes in the nodeset are selected. Otherwise, first node (in document order) of the nodeset is selected.

If the evaluation of the expression returns attributes, the corresponding elements are selected.

It is not possible to select the document node or sibling nodes of the root element.

3. The "Declare Namespace" dialog box

This dialog box can be used

- To declare a namespace used by the name of an attribute or an element (it is required to do so before adding the element or the attribute) or used in the value of the attribute or in the textual content of the element (for example, when the document being edited is a schema).

In practice, this is very rarely needed because document templates generally contain declarations for all the namespaces they might use.

- To change the ``prefix" of a namespace.

What is called a ``prefix" here should be called the *nickname* or the *mnemonic* of the namespace. Without nickname "xsi" for namespace "http://www.w3.org/2001/XMLSchema-instance", an attribute name such as "xsi:schemaLocation" would be displayed as "{http://www.w3.org/2001/XMLSchema-instance}schemaLocation" by the GUI of XXE, which is quite unreadable.

Real namespace prefixes only exist while the document is being loaded and while the document is being saved. Do not try to add an `xmlns` attribute to elements to specify an namespace and its prefix. XXE does this automatically each time the document is saved, the nicknames declared using this dialog box being used preferably to automatically generated prefixes such as `ns`, `ns2`, `ns3`, etc.

- To make a namespace the ``default" namespace, that is the namespace for which no prefix is displayed (for element names, not for attribute names).

It is not recommended to mark a namespace as being ``default" if some elements in the document have names without a namespace. In such case, it would be impossible to tell if name "title" is "title" with no namespace or is in fact "{http://www.foo.com/namespace}title", where "http://www.foo.com/namespace" has been marked as being the default namespace.

However, when the current document is conforming to a DTD, this dialog box can only be used to view the namespaces and their prefixes and not to edit them.

Procedure for declaring a namespace:

1. You may have to clear the form by clicking on the  Cancel button
2. Specify the URI of the namespace in the Namespace field.
3. Specify the ``prefix" of the namespace in the Prefix field.

Specifying a prefix is mandatory even if the namespace is to be marked as ``default".

4. Optionally mark it as being the `default" namespace by checking the Default toggle.
5. Type Enter in any field or click on the  OK button.

Procedure for changing the declaration of a namespace:

1. Select the namespace declaration to be edited by clicking on its row in the table.
2. Specify the ``prefix" of the namespace in the Prefix field.

Specifying a prefix is mandatory even if the namespace is to be marked as ``default".

3. Optionally mark it as being the ``default" namespace by checking the Default toggle.
4. Type Enter in any field or click on the  OK button.

4. The spreadsheet formula editor

Formula

Type a formula in this text area.

Unlike in most spreadsheet software,

- A formula can contain spaces.
- Use of local variables and intermediate formulas is allowed.
- Comment lines are allowed and must start with '#'.

- Use newlines to separate intermediate formulas and comment lines.

Example:

```
vat = `document("tutorial/VATrates.html#france_vat", .)`
# Trim the '%' sign at the end of vat.
= left(vat, len(vat) - 1)
```

Warning

Do not use names for your local variables that look like cell references. Example: 'x' will work, but not 'x1'. That is, `[a-zA-Z][a-zA-Z]*[1-9][1-9]*` (as well as `true/TRUE/false/FALSE` — the formula language is case insensitive) are reserved identifiers.



Help about selected function

Select a function name in the Formula text area and click on this button to switch to the other tab and display online help about the selected function. Shortcut: F1.



Evaluate selected text

Select an expression in the Formula text area and click on this button to evaluate it and display a dialog box containing the result of this evaluation. Shortcut: F2.

This is handy if you want to experiment with a predefined function you don't really understand.



Evaluate formula

Click on this button to evaluate the whole formula and display a dialog box containing the result of this evaluation. Shortcut: F3.

Format

The format fields are useful to separate calculation from formatting.

Use case: let's suppose your formula computes an amount of money. You need to insert in the document this amount nicely formatted, preceded by string "Total: " and followed by string " (excluding taxes)".

Of course, this can be done like this:

```
amount = ...
= "Total: " & numbervalue(amount, "0.00") & " (excluding taxes)"
```

An alternative is to use the Format fields. First field contains a prefix which is prepended to the formatted result. Second field contains a date or number format used to format the raw result. A combobox allows to specify the locale used to interpret this format. Third field contains a suffix which is appended to the formatted result.

Therefore, specify "Total: " in the first field. Choose "#,##0.00" from the combobox. Specify " (excluding taxes)" in the third field.

Change value of attribute

A formula computes a value. This value can be used to add/replace the text node immediately after the formula or this value can be used to add/replace an attribute of the element containing the formula.

If you want to use a formula to change an attribute, check this toggle and use the associated combobox to specify the name of this attribute.

Disabled

Check this toggle to disable the formula being edited.

Disabling a formula means passivating it. That is, it is no longer used to update the document. In some cases, this may be a handy alternative to removing it.

Tip

In the styled view, formulas are represented by a small F icon. Clicking on this icon with the middle button of the mouse allows to switch the state of the formula from enabled  to disabled  and vice-versa.

5. The "Preferences" dialog box

The preferences specified in this dialog box are stored in `XXE_user_preferences_dir/preferences.properties`, a Java™ property file (an ISO-8859-1 text file using a very simply `key:value` format).

XXE user preferences directory is:

- `$HOME/.xxe5/` on Linux.
- `$HOME/Library/Application Support/XMLmind/XMLEditor5/` on the Mac.
- `%APPDATA%\XMLmind\xmlEditor5\` on Windows XP, Vista, 7 and 8.

Example: `C:\Documents and Settings\john\Application Data\xmlmind\xmlEditor5\` on Windows XP.
`C:\Users\john\AppData\Roaming\xmlmind\xmlEditor5\` on Windows Vista, 7 and 8.

If you cannot see the "Application Data" directory using Microsoft Windows File Manager, turn on Tools>Folder Options>View>File and Folders>Show hidden files and folders.

5.1. New options

Immediately save newly created document

When a new document is created using File → New, File → Open as Template or File → Open Copy and this toggle is checked, XXE will immediately prompt the user for a save file name. This save file name is used to actually create on disk the file corresponding to the new document.

Note that even when this toggle is *not* checked, XXE may immediately prompt the user for a save file name. This will happen for *composite document templates*, that is, document templates referencing graphics files and/or including document modules.

Default: not checked.

5.2. Open options

Use the native file chooser in preference to the multi-platform file chooser

If this toggle is checked, the native file chooser will be used in preference to Java's multi-platform file chooser.

Note that automatically appending the proper extension to the selected save filename (see option "Ensure that a save filename has an extension" [94]) is not possible when this option has been turned on.

Default: checked on the Mac, not checked on Windows, disabled (grayed out) on the other platforms.

When no DTD or schema, guess ignorable white space

If this toggle is checked, when opening a document not constrained by a DTD or a schema, white space characters are stripped from elements containing child elements separated by white space.

This heuristic is generally a good one for XML data.

Default: checked.

When no DTD or schema, simulate a DTD

If this toggle is checked, a dynamic, non constraining, pseudo DTD is used for documents not conforming to a DTD or schema.

The pseudo DTD simply remembers all attributes and child elements added to each element during the editing session. Thanks to this pseudo DTD, the pick lists of the Edit and Attributes tools are always filled with sensible values.

Default: checked.

Ignore `<?xml-stylesheet?>`

If this toggle is checked, `xml-stylesheet` processing instructions specifying which style sheets to use for the newly loaded document are ignored. If the XXE configuration associated to the newly loaded document specifies CSS style sheets, these style sheets are used instead.

Using this option is useful if `<?xml-stylesheet?>` specifies a style sheet for use by a Web browser such as Mozilla and not a style sheet for use by XXE.

Default: not checked.

Inform about non-editable document parts

If this toggle is checked and if the document being opened is modular (that is, contains references to nodes coming from other documents), XXE display a dialog box informing the user that included nodes have been marked as non-editable.

Default: checked.

Lock documents stored on the local filesystem

If this toggle is checked, the file containing the document being opened in the editor is automatically locked using an *advisory, application-level, lock*.

In practice, this means that:

- Applications other XXE can open and modify the document being edited in an instance of XXE.
- If you try to open in XXE a document being edited in another instance of XXE (run by you or by one of your coworkers), XXE will inform you that the file is locked and will tell you who is locking it. After that you'll be able to open the document but, if you modify it, you'll have to save it to another location.

Caveat: In order to use this facility, you and *all* your coworkers possibly editing the same files, need to turn this option on. If one of your coworkers forgets to do it, XXE will not be able to detect that the file being opened is locked, and in such case, your coworker may overwrite a document being edited by another person.

How to forcibly remove a lock

A lock is implemented by the means of a hidden text file containing information about who has locked the corresponding document.

On Windows, the lock file corresponding to document `C:\doc\doc.xml` is `C:\doc\doc.xml.LOCK` (with the hidden attribute set on this file).

On the other platforms, the lock file corresponding to document `/home/john/doc/doc.xml` is `/home/john/doc/.doc.xml.LOCK`.

Manually deleting the lock file forcibly removes the lock set on the corresponding document. Note that it is harmless to delete such lock files and this, at any time.

Default: not checked.

When possible, lock documents stored on remote filesystems

Unlike the above toggle, this form applies only to files stored on filesystems other than the local one (WebDAV, FTP, Zip, etc).

Preferred lock mode

Specifies the type of lock [92] used for the document being edited, *when the underlying document store supports locking*. Currently, only WebDAV supports document locking.

Note that the mode specified here is just a wish. XXE will adapt the lock mode to what is actually supported by the underlying document store. For example, if the Shared mode has been chosen by the user and the underlying document store only supports Exclusive locking, the document being edited will be locked using an Exclusive lock.

Default: Exclusive

Identifier as a lock owner

Specifies a free form string identifying you as the person locking a document. This string is presented to other users wishing to know who is locking a document. It is recommended to specify your email address (example: `jd@acme.com`).

Default: empty string which implies `user_name@host_name` (example: `jd@fast.acme.com`)

Table 9.1. Lock Types

Lock type	Description
None	The document being edited is not locked.
Shared	The document being edited is locked using a <i>shared</i> lock. A shared lock does not prevent you from overwriting a document shared-locked by another author but at least, you are informed that the document is being "used" by this other author. (In such case, you'll generally want to contact him to decide what to do.)
Exclusive	The document being edited is locked using an <i>exclusive</i> lock. An exclusive lock prevents you from overwriting a document exclusively-locked by another author.

5.2.1. Document Set options



You may need to enable this group of options by checking "Enable the 'File|Document Set' Submenu" in Options → Preferences, General|Features section.

The following options specify which actions are to be automatically performed by XXE after a document set [64] is opened using File → Document Set → Open Document Set [20] and/or after a document set is explicitly refreshed using  Refresh [68].

Automatically update all inclusions in member documents

Turning on this option is useful only if your DITA topics make use of attribute `conkeyref`.

Default: not checked.

Automatically redraw member documents

Turning on this option is useful only if your DITA topics make use of attribute `keyref` and when some of the `keyrefs` point to image files.

Default: not checked.

Automatically validate member documents

Turning on this option is generally recommended.

Default: checked.

5.3. Save options

Encoding

Specifies the encoding used for XML files saved by XXE (if save options have not been specified in an XXE configuration file — see below).

Default: the original encoding of the file.

Save characters outside encoding as entity references

If this toggle is checked, all characters not supported by the encoding are saved as entity references.

Example: the Euro sign is not supported by the ISO-8859-1 encoding. If this toggle is checked, the Euro sign is saved as "€". If this toggle is not checked, the Euro sign is saved as "€".

Of course, for a character to be saved as an entity reference, the corresponding entity must have been defined in the DTD.

Example: the Euro sign is not supported by the ISO-8859-1 encoding. If there is no entity defined for this currency symbol, the Euro sign is saved as "€" whether the toggle is checked or not.

Default: checked.

Always save these characters as entity references

Specifies which characters, even if they are supported by the encoding, are always saved as entity references.

Example: the Copyright sign is supported by the ISO-8859-1 encoding but you may prefer to see it saved as "©". In such case, specify "169" in this text field.

This attribute contains a list of character ranges. A character range is either a single character or an actual range *char1:char2*.

A character may be specified using its Unicode character number, in decimal (example: 233 for e acute), in hexadecimal (example: 0xE9) or in octal (example: 0351).

Because names are easier to remember than numbers, a character may also be specified using its entity name as defined in the DocBook 4.2 DTD (example: *eacute*). Note these symbolic specifications are supported whatever is the DTD or schema of the document being saved.

Examples: `nbsp 160 0xA0 0240 reg 174 0x00ae 0256 pound:yen 163:165 0xA3:0xA5 0243:0245`

Default: empty.

Ignored if toggle "Save characters outside encoding as entity references [93]" is not checked.

Indent

If this toggle is checked, XML files saved by XXE are indented (if save options have not been specified in an XXE configuration file -- see below).

The fields and toggles that follows in the Indent frame may be used to parametrize indentation.

Default: checked.

Indentation

Specifies the number of space characters used to indent a child element relatively to its parent element.

Default: 2.

Max. line length

Specifies the maximum line length for elements containing text interspersed with child elements.

Default: 78.

This value is only used as a hint: XML files created by XXE may contain lines much longer than the specified length.

Add open lines

If this toggle is checked, an open line is added between the child elements of a parent element (if the content model of the parent only allows child elements).

Default: checked.

Do not indent unconstrained documents

If this toggle is checked, XML files generated by XXE when saving documents not constrained by a DTD, W3C XML Schema or RELAX NG schema, are not indented, even if the Indent toggle is checked.

Note that when this toggle is not checked, XXE uses very simple heuristics to indent unconstrained documents. Indenting such documents this way may add white space to places where it is significant.

Default: not checked.

Override settings specified in config. files

The above options can also be specified in a configuration file customizing XXE for a specific XML application.

If this is the case, when the configuration is in use, *what has been specified in the Options dialog box is completely ignored*, unless this toggle is checked.

Default: not checked.

Automatically save modified documents

If this toggle is checked, XXE will automatically save modified documents.

Default: not checked.

Max. modifications before saving

A modified document will be automatically saved after specified number of modifications. Typing a character counts as a modification.

Default: 300.

Idle time (seconds) before saving

If a modified document is no longer edited during specified number of seconds, this document is automatically saved, even if the "Max. modifications before saving" count has not yet been reached.

This option allows to make the auto-save feature as non-intrusive as possible.

Default: 30.

Ensure that a save filename has an extension

If this toggle is checked, XXE automatically appends an extension to the save filenames (File → Save As, File → Save Copy, etc) having no extension at all.

The extension is guessed based on the current filename of the document to be saved. For example, if you save `/tmp/page.html` as `/home/john/index`, XXE automatically appends `.html`. When the extension cannot be guessed this way, XXE fallbacks to `.xml`.

Note that automatically appending the proper extension to the selected save filename is not possible when option "Use the native file chooser in preference to the multi-platform file chooser" [90] has been turned on.

Default: checked.

Before saving, make a backup copy of the file

If this toggle is checked, a copy of the original file is made (same name but ending with '~') before saving the modified copy.

Note that backup files are created at the beginning of the editing session and not each time a file is saved. This makes the backup files much more useful. For example a **diff** between `foo.xml~` and `foo.xml` will show you what you did during last editing session.

Also note that this feature is supported only for save files stored on the local file system. For example, backup files will never be created on a WebDAV server.

Default: checked.

Automatically update references in modular documents

If this toggle is checked, references found in modular documents are automatically updated each time a referenced document is saved to disk.

Example: document `book.xml` references `chapter1.xml` and `chapter2.xml`. File `chapter2.xml` is modified and saved to disk using XXE. Nodes included in `book.xml` coming from `chapter2.xml` are automatically updated.

Counter-example: document `book.xml` references `chapter1.xml` and `chapter2.xml`. File `chapter2.xml` references `section1.xml` and `section2.xml`. File `section2.xml` is modified then saved to disk using XXE. Nodes included in `book.xml` *indirectly* coming from `section2.xml` are *not* automatically updated. In such case, if you really want to update `book.xml`, you'll have to use View+Redraw (**Ctrl+L**) See note about Updating the references contained in a modular document [36].

Default: checked.

5.4. Print options

Note

The options for the page footer are not described here because they are identical to those used for the page header (described below).

Screen resolution

Specifies the screen resolution in DPI (Dot Per Inch) used when printing. This resolution directly determines the amount of text a printed page can contain.

Default: 100dpi.

Begin

The page header has 3 areas: begin (the left for left-to-right languages), middle, end (right). This field specifies the text printed at the left of the page header.

Default: empty.

Each area can contain a mix of text and variables [96]

Middle

Specifies the text printed at the center of the page header.

Default: empty.

End

Specifies the text printed at the right of the page header.

Default: empty.

Color

Specifies the color of the text of the page header.

Default: gray.

Note that the font used for the page header is the default font of the style sheet (see the View options [99] below).

Underline [Overline]

Specifies if a thin line is to be printed below the page header [above the page footer].

Default: checked.

Table 9.2. Substituted Variables

Variable	Description
%F	File name of the document being edited
%f	Same as %F but shortened to approximately 30 characters
%B	Base name of the document being edited
%D	Current date
%T	Current time
%P	Equivalent to localized "page %I of %C"
%I	Current page number
%C	Total page count

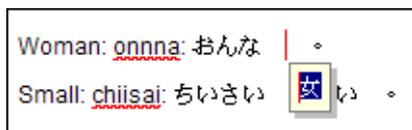
5.5. Edit options

Use integrated input method support

When an input method (e.g. Japanese Romaji Input) has been selected by the user,

- If this toggle is checked, a composition area, managed by the XML editor, is displayed inside the document view, below the caret.
- If this toggle is not checked, a composition window, managed by the operating system, is displayed outside the main window of the XML editor.

Figure 9.1. Composition area displayed below the caret



Default: not checked. (Slightly more efficient if you never use input methods.)

Note

This feature cannot be made to work on Linux. It should work fine only on Windows and on the Mac.

Clicking with middle button pastes system selection

If this toggle is checked, clicking with the middle button (or with the mouse wheel) pastes the characters copied to the ``system selection''.

On platforms not supporting system selection (all but generic Unix/Linux), this action pastes the content of an internal clipboard.

Default: not checked.

Append mode

Specifies how to quickly complete what is being typed in an autocompletion-enabled text field.

None

There is no quick way to complete what is being typed (other than using Up and Down arrows).

Automatic

What is being typed is automatically completed to compose first possible suggestion.

Manual

The user needs to explicitly press on the space bar (or on **Ctrl+Space**, if some of the choices contain whitespaces) to complete as much as possible what has been typed.

Example: the list of choices is "aaz aaa bbz bbb ccz ccc". The user types "b".

None

Nothing happens and pressing on the space bar has no effect.

Automatic

The text field is automatically updated to contain "bbz".

Manual

Nothing happens, but pressing on the space bar will add a "b" to what has been typed (which gives "bb").

Default: Manual.

In the choice list, only show suggestions

If this toggle is checked, the list which displays possible choices (e.g. elements to be inserted in the document) is kept as short as possible.

Default: not checked.

By default, such list displays all possible choices, whether matching what has been typed in the autocompletion-enabled text field or not.

Example: the list of choices is "aaz aaa bbz bbb ccz ccc". The user types "b".

If this toggle is not checked, the list contains "aaz aaa bbz bbb ccz ccc" and item "bbz" is highlighted.

If this toggle is checked, the list contains "bbz bbb" and item "bbz" is highlighted.

Automatically select an attribute

When toggle Never is not checked, Tools → Edit Attribute (**Ctrl+E**) automatically selects an attribute of the element. The selected attribute is determined as follows, in this order:

1. First required attribute containing the "???" placeholder value.
2. First attribute, required or not, containing the "???" placeholder value.
3. If toggle Unique required attribute is checked, *unique* required attribute, whatever its value.

Default: First attribute containing a placeholder value.

Max. undo actions

Specifies the maximum number of undo (redo) actions a user will be able to perform. Limited to 100 because a single undo action may consume a great deal of memory.

Default: 20.

Allow advanced use of XInclude

By default, command Edit → Reference → Copy as Reference [32] allows to copy as a reference only the root element of a document or an element having an ID. If this toggle is checked, it becomes possible to copy as a reference any range of sibling nodes.

Default: not checked.

Warn about advanced use of XInclude

This checkbox is disabled unless "Allow advanced use of XInclude [98]" has been checked.

If this toggle is checked, you'll be informed when what you are copying as a reference qualifies as "an advanced use of XInclude". Typically you'll be informed that the element you are copying as a reference has no ID attribute.

If you check Allow advanced use of XInclude [98], it is also strongly recommended to also turn this option on.

Default: not checked.

5.6. Web search options

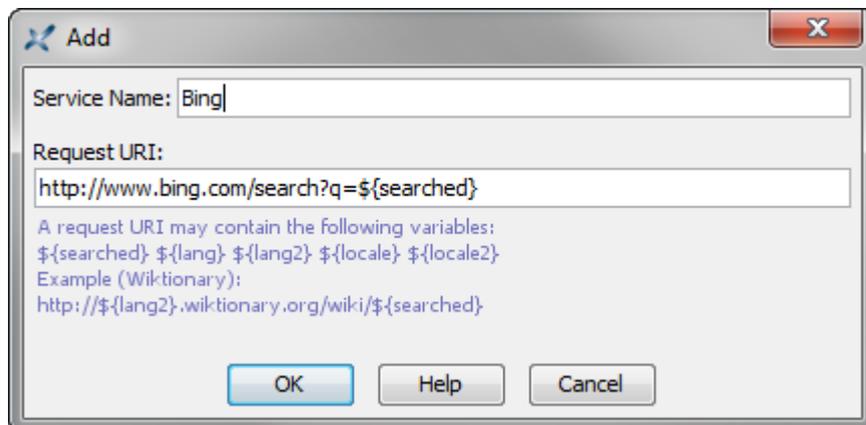
This pane allows to configure the entries of the Web Search menu [35].

Clicking Add or Edit displays a dialog box (see below) allowing to add or modify a *web search service specification*.

Clicking Remove removes the web search service specification selected in the list.

Clicking Reset restores the stock list³ of web search service specifications.

Figure 9.2. Dialog box allowing to add or edit a web search service specification



A web search service is specified by:

- A (case-insensitive) symbolic name. Example: Google.
- A request URI containing variables. Example: `http://www.google.com/search?q=${searched}&hl=${locale}&lr=lang_${lang2}`.

The following variables are substituted with their values when the web browser is invoked by XXE to open the URI:

³This list is specified in system property `WebSearch.services` in *XMLmind XML Editor - Commands*. When this system property has not been defined, a default list comprising Google, Wikipedia, etc, is used.

Display images

Specifies how by default, images are displayed in styled views:

normally

Display the image normally, that is, possibly scaled if this has been specified using attributes such as `width` and `height`.

as thumbnails

Show the bounding box of the (possibly scaled) image and, if there is enough room in this rectangle, also show a thumbnail (at most 128x128 pixels large).

This option allows to avoid out of memory errors when opening documents containing a large number of high-resolution images.

as bounding boxes

Show the bounding box of the (possibly scaled) image.

This option allows to speed up opening documents containing a large number of high-resolution images.

Note that options "as thumbnails" and "as bounding boxes" have no effect on images having an intrinsic size smaller than 32x32 pixels. Such small images are always displayed normally.

Default: normally.

5.7.1. "CSS stylesheet defaults" subsection

The following options parameterize the CSS style sheet used to visualize the document or to print it.

Setting some of these preferences will have no visible effect if the style sheet author has specified the corresponding properties in the style sheet. For example, if the user's preferred background is specified in the CSS stylesheet defaults subsection as being light yellow and if the style sheet author has specified the root element `background-color` as being white, the document will be rendered with a white background.

Serif font family

Specifies the font family used for property value `font-family:serif`.

Default: Serif (the Java™ default serif font family).

SansSerif font family

Specifies the font family used for property value `font-family:sans-serif`.

Default: SansSerif (the Java™ default sans-serif font family).

Monospaced font family

Specifies the font family used for property value `font-family:monospace`.

Default: Monospaced (the Java™ default monospaced font family).

Default font family

Specifies the default value for property `font-family`.

Default: SansSerif.

Default font size

Specifies the default value for property `font-size`. See also View → Text Size [36].

Default: 12pt.

Default background

Specifies the default value for property `background-color`. (Displays standard color chooser dialog box.)

Default: white.

Default text color

Specifies the default value for property `color`. (Displays standard color chooser dialog box.)

Default: black.

5.7.2. "Tree view settings" subsection

The following options allow to configure the fonts, colors and level of details of the tree view.

Except for "Fonts and colors", the following options apply only to the ``stand-alone" tree views. That is, they do not apply to the ``mini" tree views embedded in a styled view (e.g. DocBook `colspec` and `spanspec` elements are rendered as ``mini" tree views within the styled view).

Base font size

The sizes of all the fonts used to render a tree view are computed relatively to this font size. See also View → Text Size [36].

Default: 12pt.

Fonts and colors

Displays a dialog box [111] allowing to specify the fonts⁴ and colors used to render a tree view.

Show attributes

Toggles the display of the attributes in the tree view.

Default: checked.

Show characters in text nodes

Toggles the display of text node characters in the tree view.

Default: checked.

Show characters in comment nodes

Toggles the display of comment node characters in the tree view.

Default: checked.

Show characters in processing-instruction nodes

Toggles the display of processing-instruction node characters in the tree view.

Default: checked.

5.8. Tools options

5.8.1. Validate options

Filter duplicate ID errors found in modular documents

Pasting in a document two references to the same element will cause the Validity tool to display duplicate ID errors. This is a problem because the author didn't do any mistake by pasting these two references and because too many of these ``false" duplicate ID errors may hide real duplicate ID errors. That's why turning on this option will discard such ``false" duplicate ID errors from the Validity tool.

Default: checked.

⁴Font family and font style, but not the font size which is computed using "Base font size" [101].

Automatically show Validity tool

Document validity is automatically checked each time the document is saved to disk. If this toggle is checked, when validity errors are found, the Validity tool ``tab" is automatically selected in order to display the error messages.

Default: not checked.

5.8.2. Spell options

Activation of the automatic (AKA on-the-fly) spell checker:

Never activate the automatic spell checker

When a document is opened, never activate the automatic spell checker, even if this is specified in the configuration file associated to the opened document.

Default: not checked.

Always activate the automatic spell checker

When a document is opened, always activate the automatic spell checker, even if this is *not* specified in the configuration file associated to the opened document.

Default: not checked.

Activate if this is specified in the configuration file

When a document is opened, activate the automatic spell checker if this is specified in the configuration file associated to the opened document (using the `spellCheckOptions` configuration element, see Section 26, "spellCheckOptions" in *XMLmind XML Editor - Configuration and Deployment*).

Default: checked.

5.8.3. Changes options

 You may need to enable this group of options by checking "Enable the 'Tools|Changes' Submenu" in Options → Preferences, General|Features section.

Automatically activate change detection

Turning on this option allows to automatically activate the change detection [39] when you save a newly created document to disk and when you open a document for which change detection has not yet been activated and then save this document to disk.

Default: not checked.

5.8.4. Helper applications options

File types

List of file types. Each file type has an associated helper application. This helper application is assumed to be able to open files detected as having this type. A helper application may be a viewer or an editor.

Default: the "text/plain" file type:

- On Windows: `text/plain:txt:::notepad "%F"`
- On the Mac:
 - for a version older than Mac OS X 10.5 (e.g. Tiger): `open -t "%F"`,
 - starting from Mac OS X 10.5 (Leopard): `open -W -n -t "%F"`.

See also Helper applications on the Mac [115].

- On Unix: `text/plain:txt:::xterm -e vi "%F"`

Buttons acting on this list:

Add

Displays the "Helper Application Editor" dialog box [113] in order to add a new file type to the list.

Edit

Displays the "Helper Application Editor" dialog box [113] in order to view or modify selected file type.

Remove

Removes selected file type from the list.

Default viewer

Specifies which default viewer to use in case the type of the file to be opened has not been detected. In practice, commands making use of the default viewer typically assumes that it is in fact *a Web browser*. This implies that these commands assume that a default viewer can open URLs as well as filenames and that it can open text, HTML, GIF, PNG and JPEG files.

This field must contain a command line interpreted by the native shell of the platform: `cmd.exe` on Windows and `/bin/sh` on the Mac and on Unix.

This command line must reference one of these two substituted variables: `%U` and `%F`. In principle, `%U` is replaced by the URL of the file to be opened by the helper application and `%F` is replaced by a filename. In practice, `%U` is just a *hint* meaning: the helper application can open URLs as well as filenames.

Default: depends on the platform:

- On Windows: `start "" "%U"`
- On the Mac: `open "%U"`
- On Unix: dynamically detected. By default: `firefox "%U"`

Buttons acting on this field:

Reset

Resets the field to its default value (see above).

Choose

Displays the standard file chooser in order to specify an application (e.g. a `.exe` or a `.bat` file on Windows). String `" "%F"` is automatically appended to the chosen application.

See also Helper applications on the Mac [115].

5.8.5. Spreadsheet options

 You may need to enable this group of options by checking "Enable the Integrated Spreadsheet Engine" in Options → Preferences, General|Features section.

Open spreadsheets in auto-update mode

Specifies that spreadsheets are to be opened in auto-update mode.

In manual update mode, only newly inserted formulas are computed. To force a full calculation, the user has to explicitly use Tools → Spreadsheet → Update [42].

In auto-update mode, a full calculation is automatically performed, if needed to, when the editing context changes. For example: type some text in a paragraph, then click in (or tab to) another paragraph to trigger a spreadsheet calculation.

Note that in both modes, a full calculation is automatically performed, if needed to, before validating or saving the document.

Using manual update mode is recommended if you have a slow computer or if you have inserted a lot of formulas in your document or if your formulas access many external documents.

Default: checked.

Maximum number of iterations allowed for calculations in spreadsheet

Specifies the maximum number of iterations allowed for calculations in spreadsheet. This limit is used to prevent the spreadsheet engine from looping in case of cycles in formulas.

Default: 20.

5.9. Window options

Show both tree and styled views

If this toggle is checked, XXE will automatically create two views for a newly opened or newly created document. That is, by default, a document tab will contain a tree view and a styled view side by side.

This option has of course no effect on documents for which no CSS style sheet is available.

Default: not checked.

Place tree view at right

If this toggle is checked, the tree view is to be placed at the right of the styled view.

Default: not checked.

Tree view width

Specifies the width of the tree view in percentage of the available window area.

Default: 33%.

5.10. Install add-ons options

Note

This preference sheet is absent when XMLmind XML Editor has been started using Java™ Web Start.

Download add-ons from these servers

Add-ons available for download are listed in `.xxe_addon` files. The list of "servers" below this checkbox contains the URLs of these `.xxe_addon` files.

- Use button Add to add an URL to the list.
- Use button Edit to modify the selected URL.
- Use button Remove to remove the selected URL from the list.
- Use button Reset to reset the list to a standard value. Clicking this button displays a dialog box allowing to choose between three different strategies:

Use the primary add-on server

Recommended choice if you are running one of the two most recent versions of XMLmind XML Editor.

Use the secondary add-on server

Use this server when the primary add-on server is temporarily down.

Use the add-on archive

Use the archive if you are running a version older than the two most recent versions of XMLmind XML Editor.

Default: checked. The default value of the list of ``servers" is:

- http://www.xmlmind.com/xmleditor/_usercontrib/list.xxe_addon
- [http://www.xmlmind.net/xmleditor/_download/list- \$\{XXE_VERSION\}\$.xxe_addon](http://www.xmlmind.net/xmleditor/_download/list-$\{XXE_VERSION\}$.xxe_addon) (for example, variable $\{XXE_VERSION\}$ is replaced by "3_5_2" if the version of the running XML Editor is v3.5.2)
- http://www.xmlmind.net/xmleditor/_download/list.xxe_addon

Search add-ons in this directory

Zip files containing add-ons may have been downloaded using a Web browser and then copied to a local directory (for example, because you have problems downloading add-ons directly from XXE). In such case, check this box and specify in the text field below it this local directory.

Note that this directory may also contain unzipped add-ons (not recommended though). This is useful because sometimes Web browsers have the bad habit of automatically unzipping the downloaded Zip files.

Default: not checked. No local directory containing Zip files.

Install add-ons in the user's preferences directory

Install all types of add-ons in $XXE_user_preferences_dir/addon/$, where $XXE_user_preferences_dir$ is:

- $\$HOME/.xxe5/$ on Linux.
- $\$HOME/Library/Application\ Support/XMLmind/XMLEditor5/$ on the Mac.
- $\%APPDATA%\XMLmind\xMLEditor5\$ on Windows XP, Vista, 7 and 8.

Example: $C:\Documents\ and\ Settings\john\Application\ Data\xMLmind\xMLEditor5\$ on Windows XP. $C:\Users\john\AppData\Roaming\xMLmind\xMLEditor5\$ on Windows Vista, 7 and 8.

If you cannot see the "Application Data" directory using Microsoft Windows File Manager, turn on Tools>Folder Options>View>File and Folders>Show hidden files and folders.

This radiobutton is disabled (grayed) if you have insufficient privileges to create files in this directory.

Default: not checked.

Install add-ons in XXE installation directory

Install all types of add-ons in $XXE_install_dir/addon/$, where $XXE_install_dir$ is, for example, on Windows, $C:\Program\ Files\xMLmind_XML_Editor$.

This radiobutton is disabled (grayed) if you have insufficient privileges to create files in this directory.

Default: not checked.

Installation directory depends on the add-on

Add-ons which depend on a specific version of XXE are installed in $XXE_install_dir/addon/$, other add-ons are installed in $XXE_user_preferences_dir/addon/$.

This way, the add-ons which depend on a specific version of XXE, are *automatically uninstalled* when, in the future, you'll upgrade the application. The other add-ons, which do not on a specific version of XXE, are *not uninstalled* when, in the future, you'll upgrade the application.

In practice, the following add-ons are installed in $XXE_install_dir/addon/$:

- XSL-FO processor plug-ins.

- Image toolkit plug-ins.
- Virtual drive plug-ins.
- Configurations, customizing XXE for a given document type, which include custom commands written in Java™.

On the other hand, the following add-ons are installed in *XXE_user_preferences_dir/addon/*:

- Translations of XXE to languages other than English.
- Spell checker dictionaries other than the English one.
- Configurations, customizing XXE for a given document type, which don't include custom commands written in Java™.

Note that this radiobutton is disabled (grayed) if you have insufficient privileges to create files in the *XXE_user_preferences_dir/addon/* directory or in the *XXE_install_dir/addon/* directory, that is, when there is no possible choice for the installation directory.

Default: checked.

5.11. General options

Use a unique instance of XMLmind XML Editor

If this toggle is checked, a unique instance of XMLmind XML Editor is used to open all your XML documents. For example, if you double-click on the icon of an XML document in the file ``explorer'', the running instance is used to open this XML document. When this toggle is not checked, a new instance of XXE is started in order to load the document clicked upon.

If there is no running instance of XXE, a new instance is started. If the running instance is hidden by other windows or is iconified, it is made visible before opening the requested document.

This feature also works fine from the command line. For example, on Linux, if this toggle is checked, executing `"xxe mydoc.xml &"` will cause the running instance to be used to open `mydoc.xml`.

If you need to change this option, make sure to close all running instances except one. Then change the option in the last instance and close it. Then restart XXE.

Default: not checked.

Port

Specifies the TCP/IP port used by different instances of XXE to communicate with each other. It is highly recommended to use a port in the dynamic/private range: 49152 to 65535.

Default: 49987

Automatically reopen last opened document

This option is examined just after XXE is started, when no documents to be opened have been explicitly specified (e.g. by double-clicking on an XML file or by using command line options). When turned on, this option forces XXE to reopen the last document opened during the preceding editing session.

See also the `-last [146]` command line option for a handy alternative.

Font size

May be used to change the base font size of XXE menus and dialog boxes.

Default: default base font size of Java™ applications.

Locale

May be used to force the language used in XXE menus and dialog boxes. For example, may be used to force the use of English on a machine where the default locale is German.

Default: default locale of the machine running XXE.

Style

May be used to change the look and feel of XXE user interface.

Default: the system look and feel, except on Linux/Unix, where the cross-platform look and feel (Metal) is used.

5.11.1. Features Options

Tip

Most features are preselected by default. If you don't need a feature, it's strongly recommended to uncheck the corresponding toggle and then restart XXE. Doing this simplifies the user interface and slightly improves XXE startup time.

Enable the "File|Document Set" Submenu

Check this toggle to enable the File → Document Set submenu [20] and the Options → Preferences, Open|Document Set group of options.

Enabling this feature is recommended if you author modular documents.

Feature name: `OpenDocumentSet`.

Enable the "File|Folder" Submenu

Check this toggle to enable the File → Folder submenu [22].

Enabling this feature is recommended if you routinely have to manipulate many files or if you need to search files by their names and/or by their XML contents or if your files are stored on remote servers.

Feature name: `OpenFolder`.

Enable the Include Tool

Check this toggle to enable Edit → Reference → Replace By Reference, Edit → Reference → Insert Reference Before, Edit → Reference → Insert Reference, Edit → Reference → Insert Reference After and the Include tool.

Enabling this feature is recommended if you need to insert boilerplate content in your documents.

Feature name: `IncludeTool`.

Enable the "View|Display Images" Submenu

Check this toggle to enable the View → Display Images submenu [37].

Enabling this feature is recommended if your documents include many high-resolution images.

Feature name: `ImageViewportMode`.

Enable the "Tools|Remark" Submenu

Check this toggle to enable the Tools → Remark submenu [38].

Enabling this feature is recommended if you need to comment documents written by others.

Feature name: `Remark`.

Enable the "Tools|Changes" Submenu

Check this toggle to enable the Tools → Changes submenu [39] and the Options → Preferences, Tools|Changes group of options.

Enabling this feature is recommended if you need to review the changes made to your documents by others.

Feature name: `Changes`.

Enable the Integrated Spreadsheet Engine

Check this toggle to enable Tools → Spreadsheet and the Options → Preferences, Tools|Spreadsheet group of options.

Enabling this feature is recommended if you need to insert computed content in your documents.

Feature name: `Spreadsheet`.

Enable the "Tools|Record Macro" Submenu

Check this toggle to enable the Tools → Record Macro submenu [42] and the Tools → Execute Command menu item [38].

Enabling this feature is recommended if you are a power user who wants to automate sequences of actions.

Feature name: `Macro`.

Enable the Developer Tools

Check this toggle to enable Options → Reload All Configurations and Help → Mouse and Key Bindings.

Enabling this feature is recommended if you are developing an XXE configuration and want to reload it without having to restart the application.

Feature name: `DeveloperTools`.

Enable the Document Cache Indicator

Check this toggle to display in the status bar an indicator allowing to monitor the activity of the document cache of XMLmind XML Editor. More information about this indicator in  Document cache [82].

Enabling this feature is recommended if you author modular documents and experience some unexplained slowness during validation.

Feature name: `DocumentCacheTool`.

5.12. Advanced options

5.12.1. Cached data options

Uncheck the checkbox to disable the corresponding cache.

Click the Clear button to make the corresponding cache empty. Note that all the following caches are automatically cleared each time you install a new version of XXE.

Caution

If you are a consultant developing an XXE configuration on the behalf of a group of writers, you'll almost certainly need to disable all the following caches.

Quick Start cache

This cache exists only when XMLmind XML Editor is run as a desktop application. It does not exist when XXE is run as an applet or when it has been started using Java™ Web Start.

The lists of configuration objects discovered by XXE during its startup (.xxe configuration files, XML catalogs, translations of XXE messages, spell-checker dictionaries, all kinds of plug-ins, `customize.xxe_gui` files, etc) are compiled and cached for slightly faster subsequent startups.

Once these lists have been compiled and cached in directory `XXE_user_preferences_dir [90]/cache/start/`, a configuration file such as `docbook.xxe` is loaded only when this is really needed, that is, when you open a DocBook document. In other words, if you never open a DocBook document (and if you never use File → New) during your editing session, then the `docbook.xxe` configuration file will not be loaded at all.

Default state: checked.

Caution

This cache is automatically cleared when you install add-ons using Options → Install Add-ons and also when you upgrade XXE. If, for any reason you cannot install an add-on using Options → Install Add-ons and have to install this add-on manually by unzipping it in one of the two `addon/` directories, do not forget to clear the quick start cache before restarting XXE.

Password cache

XXE allows to open documents stored on WebDAV, FTP, SFTP, etc, servers. Such servers generally require the user to authenticate himself.

In order to do this, XXE prompts the user for his username and password. Once this is done, the credentials are always cached for subsequent use within the same editing session.

Moreover, if the user check the "Remember these username and password" checkbox of the authentication dialog box, the credentials are saved to the user preferences file for use in subsequent editing sessions.

The password cache cannot be disabled.

Tip

If you typed an incorrect username and/or password, you'll probably want to click the Clear button of this Password cache. Doing this forces XXE to prompt you again for your credentials.

Document cache

This document cache is needed because some of the components of XXE (e.g. the XPath `document()` function in *XMLmind XML Editor - Commands*) have to quickly access the contents of documents which have not been explicitly opened in the XML editor by the user.

Default state: checked. Default size: 100.

Schema cache

When an instance document conforming to a grammar (DTD, W3C XML Schema or RELAX NG Schema) is opened in XXE, the grammar is checked for validity, then the instance document is checked for validity.

Checking a grammar for validity may be a lengthy operation for a medium-size W3C XML schema and for a large DTD such as DocBook. (This implies that this cache is not useful if you exclusively use small or medium size DTDs such as XHTML.)

Therefore, if the cache is enabled, XXE checks the grammar the first time it is used by an instance document and then caches it for subsequent uses. The grammar is cached

1. in memory,
2. on disk using a fast loading binary format (DTD, W3C XML Schema, but not RELAX NG Schema).

The directory used to store the fast loading binary files is `XXE_user_preferences_dir [90]/cache/schema/`.

The cache records the location and date of the source files of the grammar. If these source files are removed or modified, the cache will automatically discard the obsolete cached grammar. Of course, this forces XXE to load an up-to-date grammar from the source files.

Note that the existence and date of remote source files (that is, grammar files located on a HTTP or FTP server) are *not* checked by the schema cache.

Default state: checked. Default size: 10.

5.12.2. Proxies options

Note

This preference sheet is absent when XMLmind XML Editor has been started using Java™ Web Start. In such case, proxy servers must be configured using the Java™ Control Panel.

A proxy server is a service which allows clients such Web browsers or XMLmind XML Editor to make indirect network connections to other HTTP, FTP, etc, servers. A common proxy server is a caching Web proxy. This proxy provides a nearby cache of Web pages and files available on remote Web servers, allowing clients to access them quickly and reliably.

That's why, if you have problems listing or downloading available add-ons using Options → Install Add-ons, may be your organization uses a proxy server to make connections to the Internet and in such case, this proxy server needs to be declared using this preference sheet.

Direct connection to the Internet

Do not use the services of proxy servers, if any. Make direct connections to the Internet.

Default: not checked.

Use system settings

Use what has been specified in the "control panel" of your desktop/operating system. For example, on Windows, you'll find these settings in Control Panel > Internet Options > Connections tab > LAN Settings.

Default: checked.

Manual proxy configuration

Specify which proxy server to use for which network protocol. Please ask your network administrator to help you fill this form.

Default: not checked.

HTTP proxy

Specifies the host name of the proxy server to use when HTTP connections are made.

Default: none.

(HTTP proxy) Port

Specifies the port number of the proxy server to use when HTTP connections are made.

Default: 80.

HTTPS proxy

Specifies the host name of the proxy server to use when HTTPS connections are made.

Default: none.

(HTTPS proxy) Port

Specifies the port number of the proxy server to use when HTTPS connections are made.

Default: 443.

FTP proxy

Specifies the host name of the proxy server to use when FTP connections are made.

Default: none.

(FTP proxy) Port

Specifies the port number of the proxy server to use when FTP connections are made.

Default: 80.

SOCKS proxy

Specifies the host name of the SOCKS V4 or V5 proxy server to use when network connections of any sort are made.

Default: none.

(SOCKS proxy) Port

Specifies the port number of the SOCKS V4 or V5 proxy server to use when network connections of any sort are made.

Default: 1080.

Authenticate SOCKS user

Check this toggle if the SOCKS proxy server of your organization requires you to authenticate yourself before using its services.

Default: not checked.

(SOCKS) User name

Your name as a user of the SOCKS proxy server.

Default: the login name of the user.

(SOCKS) Password

Your password as a user of the SOCKS proxy server.

Default: the empty string.

No proxy for

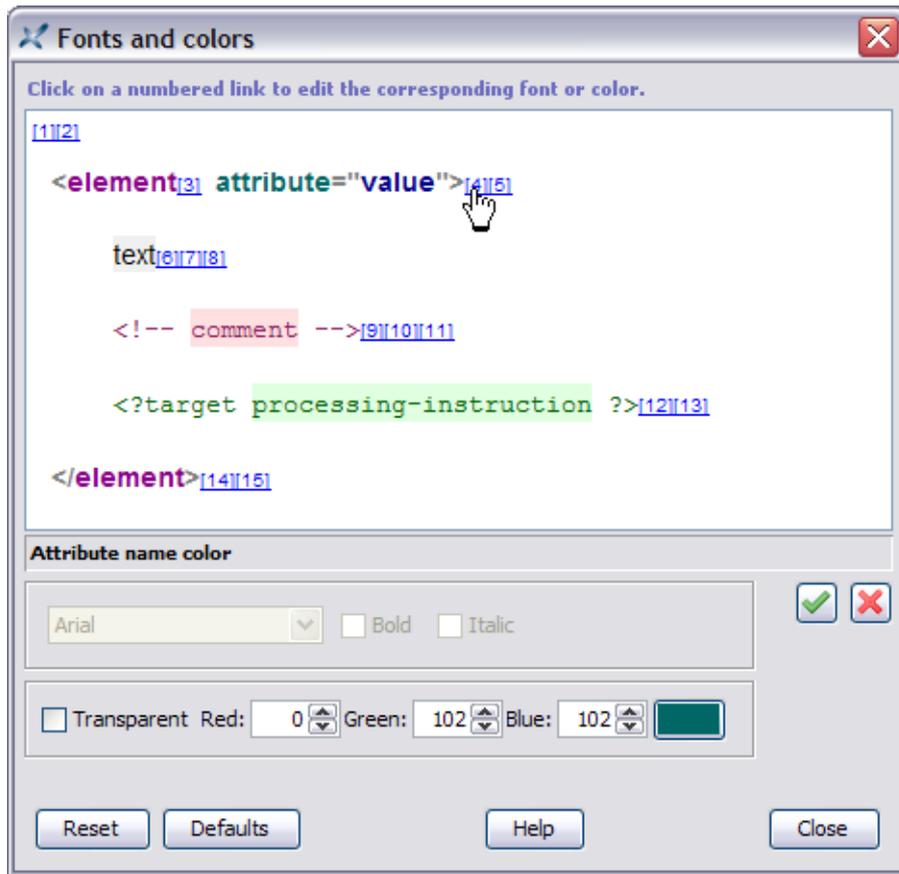
When XMLmind XML Editor runs on these hosts, do not use the services of proxy servers, if any. Make direct connections to the Internet.

Default: "localhost 127.0.0.1".

6. The "Tree view fonts and colors" dialog box

This dialog box is displayed by clicking "Fonts and colors" [101] in Options → Preferences, View section, "Tree view settings" subsection. It allows the specify the fonts and colors used to render a tree view.

Note that the *sizes* of the fonts used to render a tree view are not specified in this dialog box. Instead, they are specified by "Base font size" [101].



In order to specify a font or a color,

1. Click on a numbered link in the top pane.

In the case of the above screenshot, the user has clicked on [4] which corresponds to modifying "Attribute name color".

2. Doing this activates a font chooser or a color chooser in the bottom pane, depending on the kind of property being modified.

In the case of the above screenshot, "Attribute name color" is a color, therefore the color chooser is activated and the font chooser is grayed out.

Note that some colors are allowed to be transparent (background and border colors) and some are not (text colors). For example, if you specify Transparent for "Attribute name color", an error will be reported.

3. Specify a font or a color.
4. Click  (Apply).

The top, preview, pane is automatically updated to reflect your choice.

Other buttons:

Reset

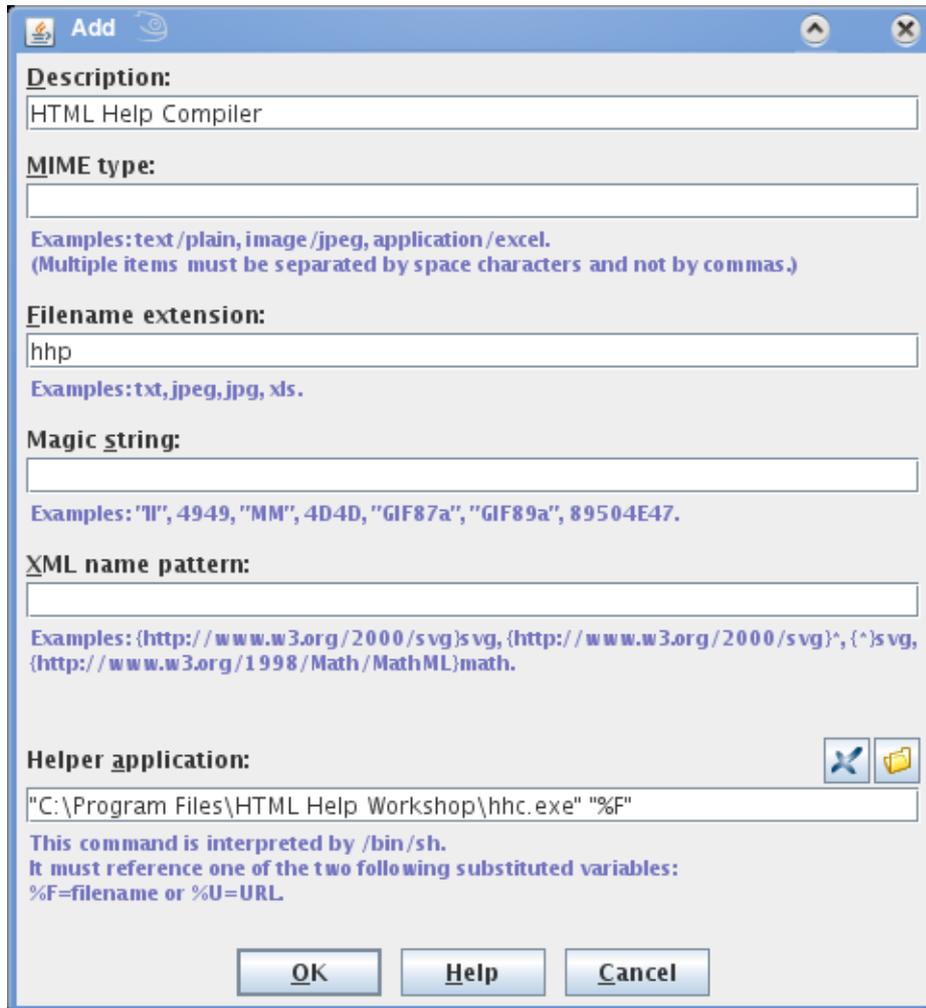
Discard all the changes. Revert to the initial fonts and colors.

Defaults

Discard all the changes. Revert to the default (that is, ``factory'') fonts and colors.

7. The "Helper Application Editor" dialog box

This dialog box allows to view or modify a file type listed in the Helper applications preferences sheet [102].



A file type is specified by *at least one* of the following characteristic:

MIME type

The official (or just well-known) formal name of the file type. Generally returned by Web servers to their client Web browsers. Non-registered MIME types typically start with string "application/x-".

A MIME type may end with a wildcard. Example: "image/*" matches "image/gif", "image/jpeg", etc.

Examples: text/plain, image/jpeg, application/excel, application/x-java-help-index.

Filename extension

If the filename or URL of a file ends with specified ".*extension*", then this file is detected as having this file type.

An extension may or may not start with a dot. This is unimportant because, in all cases, a leading dot would be automatically stripped.

Examples: txt, jpeg, jpg, xls.

Magic string

For some file formats, the first bytes of a file are always the same and therefore, can be considered as being the *signature* of this file type.

If a file starts with specified first bytes, then this file is detected as having this file type. This type of detection is supposed to work like magic, hence the name: ``magic string".

A magic string may be specified by a the hexadecimal representation of a sequence of bytes (example, one of the two TIFF magic strings: 4949) or by a *quoted* sequence of ASCII characters (same example, one of the two TIFF magic strings: "II").

Examples: TIFF: "II" or 4949, "MM" or 4D4D; GIF: "GIF87a", "GIF89a"; PNG: 89504E47; PDF: "%PDF-".

XML name pattern

If the root element of an XML file has a name which matches specified pattern, then this XML file is detected as having this file type.

An XML name pattern follows this syntax:

```
( '{ namespace_URI? ' } ' )? local_part
```

One of *local_part* or *namespace_URI* may be equal to wildcard "*"

Examples: {*}svg, {http://www.w3.org/1998/Math/MathML}:math.

Each file type has an associated helper application. This helper application is assumed to be able to open files detected as having this type. A helper application may be a viewer or an editor.

Description

Description of the file type. Not mandatory, just recommended. This text is displayed in the File types list of the Helper applications preferences sheet [102].

MIME type

One or more MIME types (see definition [113] above) separated by spaces.

Filename extension

One or more extensions (see definition [113] above) separated by spaces.

Magic string

One or more magic strings (see definition [113] above) separated by spaces.

XML name pattern

One or more XML name patterns (see definition [114] above) separated by spaces.

Helper application

This field must contain a command line interpreted by the native shell of the platform: `cmd.exe` on Windows and `/bin/sh` on the Mac and on Unix.

This command line must reference one of these two substituted variables: %U and %F. In principle, %U is replaced by the URL of the file to be opened by the helper application and %F is replaced by a filename. In practice, %U is just a *hint* meaning: the helper application can open URLs as well as filenames.

The Open in XMLmind XML Editor button allows to use XXE as an ``internal" helper application. For example, associating XXE to .xml files allows to edit the MathML documents referenced in a DocBook 4 document.

This button merely specifies (xxe) "%U" (notice the parentheses around xxe) as the command template of the helper application. It is of course possible to directly type this command template, or the following read-only variant: (xxe) -ro "%U", in the Helper application field.

The Choose Helper Application button displays the standard file chooser in order to specify an application (e.g. a .exe or a .bat file on Windows). String "%F" is automatically appended to the chosen application.

Helper applications on the Mac

When an *application* (that is, a folder having a name ending with hidden suffix ".app", containing a package bundle) has been selected by the user, the Choose Helper Application button automatically prepends:

- for a version older than Mac OS X 10.5 (e.g. Tiger): "open -a",
- starting from Mac OS X 10.5 (Leopard): "open -W -n -a".

Example: "open -W -n -a /Applications/Inkscape "%F"".

Options "-w -n" mean: start a new instance of the application and wait until this instance has exited. These options are required when the helper application is used to edit the content of an element, the content of an attribute or the whole document.

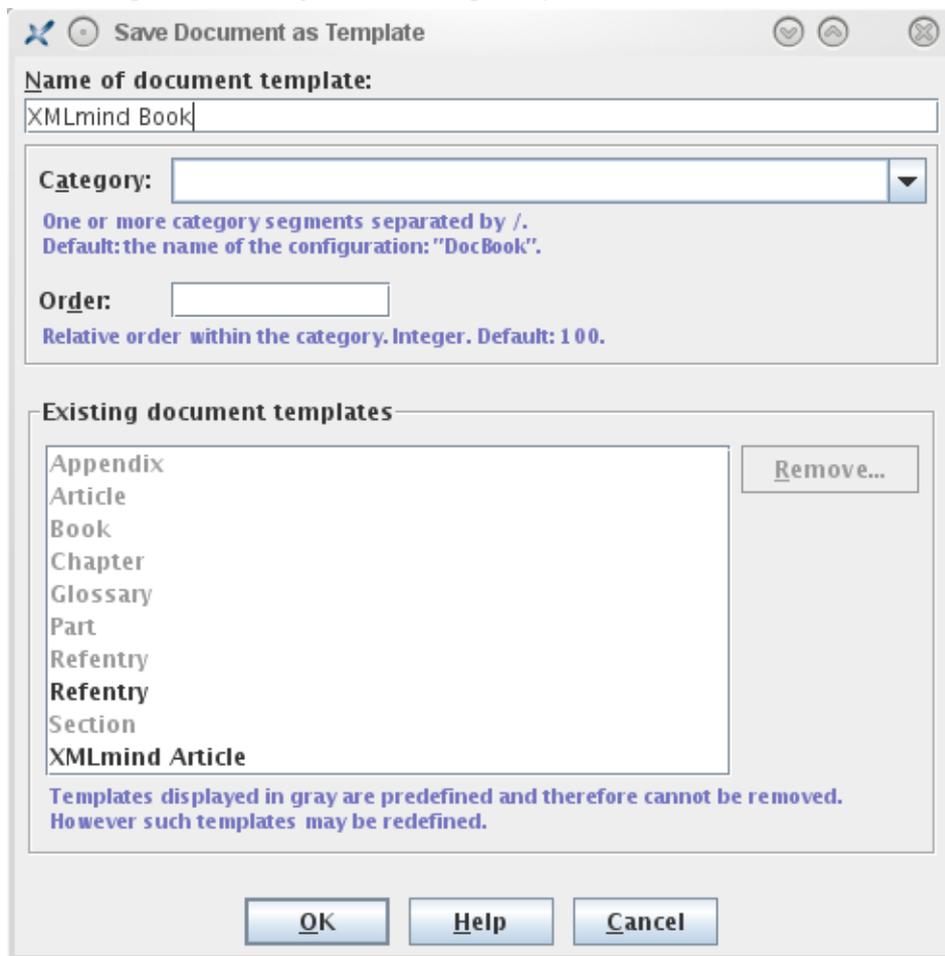
In practice, this means that, on Mac OS X versions older than 10.5, a helper application can only be used for viewing purposes and this, even if the helper is an editor.

8. The "Save Document As Template" dialog box

This dialog box is displayed by menu item Options → Customize Configuration → Save Document as Template [44]. Basically, it allows the user to specify a name for the newly created document template.

The name of a document template may contain any character, including spaces.

The name of a document template may be identical to the name of one of the existing document templates. This allows to replace an existing document template by a new one.



In the above screen shot, we can see that:

- The user is creating a new document template called "XMLmind Book".
- Previously, the user has replaced predefined template called "Refentry" by a "Refentry" document template of its own.
- Previously, the user has created another document template called "XMLmind article".

8.1. Organizing the content of the File → New dialog box

Optional document template properties Category and Order allow to better organize the content of the File → New dialog box.

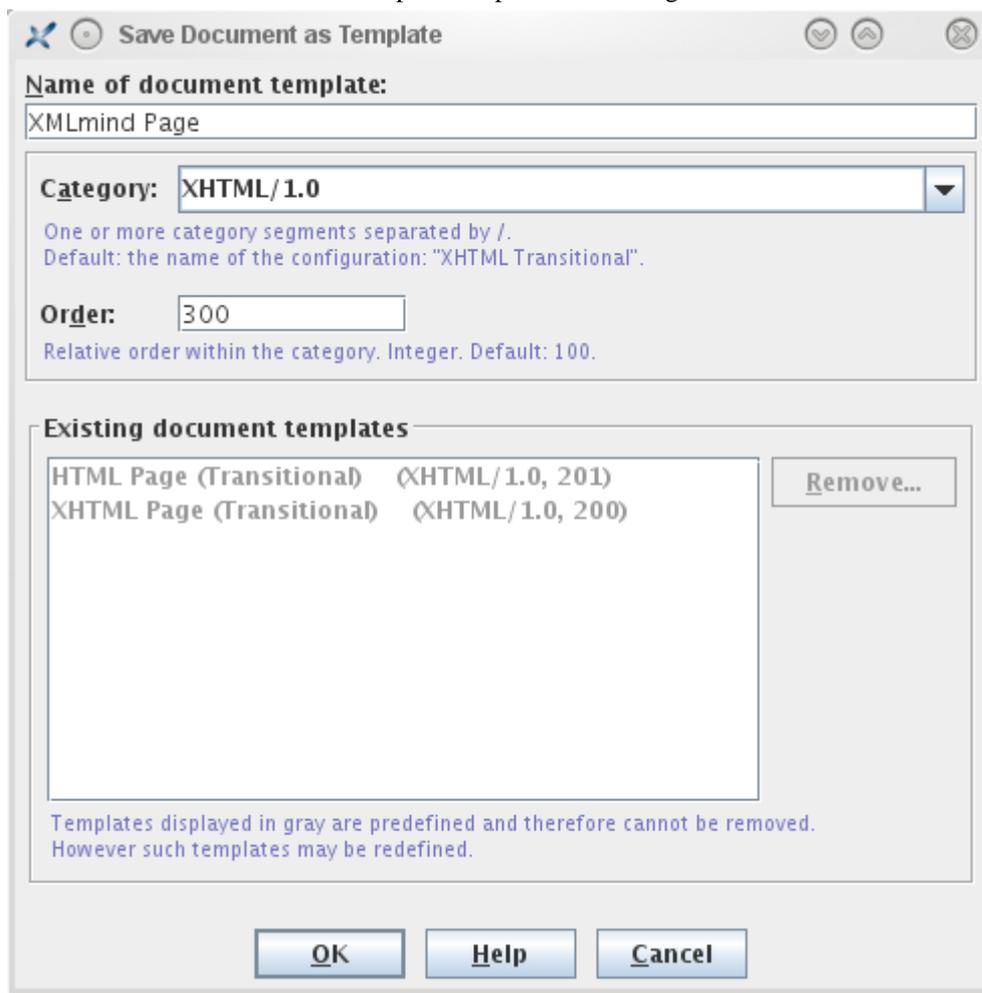
Category

Specifies the category of the new document template. A category consists in one or more segments separated by character '/'. By default, the category of a document template is the name of the configuration in which this template has been specified.

Order

Specifies the relative order of the new document template within its category. Default value is 100.

For example, stock category "XHTML/1.0" includes all the templates specified in stock configurations "XHTML Strict" and "XHTML Transitional". These stock document templates are "XHTML Page (Strict)", "HTML Page (Strict)", "XHTML Page (Transitional)" and "HTML Page (Transitional)". Let's suppose a user wants to create a new document template conforming to the Transitional DTD.



In the above screen shot, we can see that:

- The user is creating a new document template called "XMLmind Page".
- The user wants it to be found in the same category ("XHTML/1.0") as the stock XHTML 1.0 templates.
- The user wants it to be found *after* the "HTML Page (Transitional)" stock template (its order, 300, is greater than 201).
- Note that the above dialog box does not list all the document templates belong to category "XHTML/1.0", but instead it lists all the document templates specified the the configuration called "XHTML Transitional".

8.2. Removing a previously defined document template

This dialog box also allows to remove user-defined document templates. In order to do this, simply click on a template in the "Existing document templates" list and then click on the Remove button.

Note that this operation takes immediate effect: clicking on the Cancel button of the "Save Document As Template" dialog box will not cancel the deletion of the template⁵.

You can only remove the document templates you have created. You cannot remove predefined (grayed) document templates.

In the above screen shot, notice how removing user-defined template called "Refentry" would restore the predefined template having the same name.

9. The "Save Selected Element as Template" dialog box

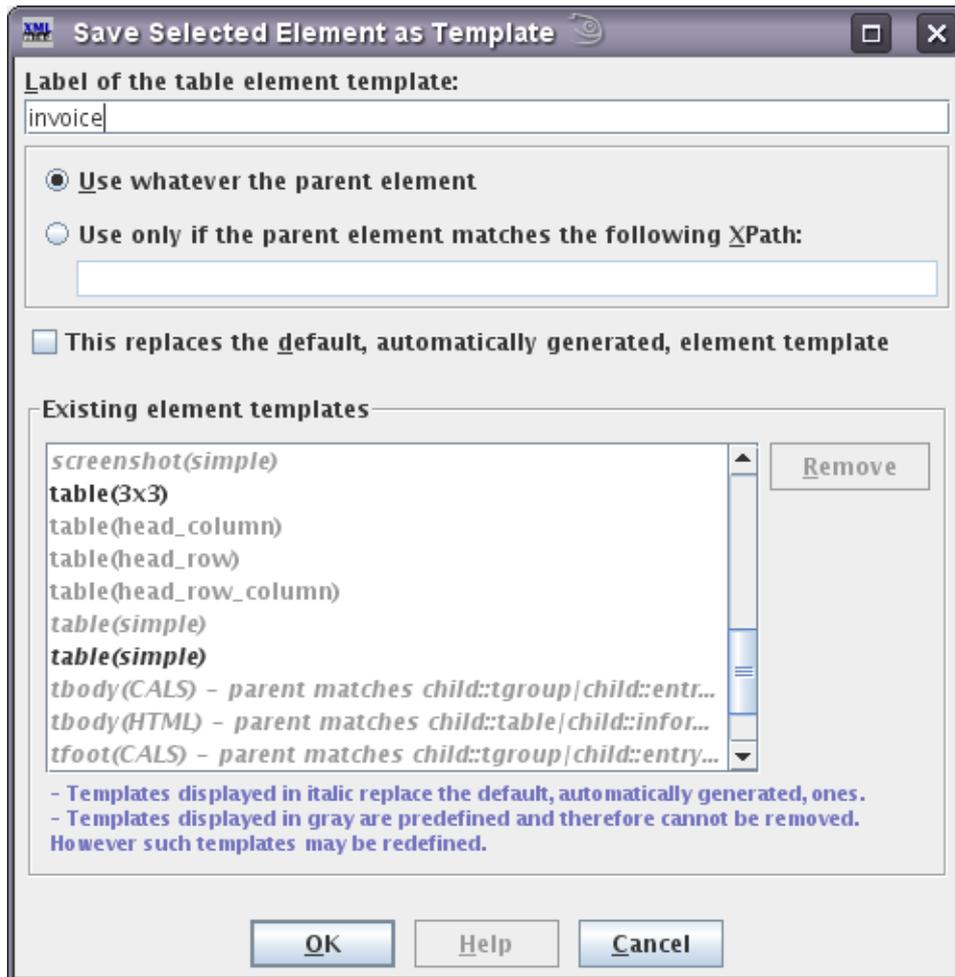
This dialog box is displayed by menu item Options+Customize Configuration → Save Selected Element as Template [44]. Basically, it allows the user to specify a *label* for the newly created element template.

Giving a label to an element template is needed to support different templates for the same element type. For example, in a DocBook document, select a `table` element and use Options+Customize Configuration → Save Selected Element as Template to label it as "L1". Then select another `table` element and use the same menu item to label it as "L2". This gives you two `table` element templates, one called "L1" and the other called "L2".

The label of an element template must be a valid `NMTOKEN`. It cannot contain whitespace.

The element name and label of a template may be identical to the element name and label of one of the existing templates. This allows to replace an existing template by a new one.

⁵The Cancel button of the "Save Document As Template" dialog box just cancels the action of creating a new template.



In the above screen shot, we can see that:

- The user is creating a new `table` element template called "invoice".

After creating this template, it will be displayed in the "Existing element templates" list as "table(invoice)", "table" being the element name of the template and "invoice" being its label.

- Previously, the user has created another `table` element template labelled "3x3".
- Previously, the user has replaced predefined "table(simple)" template by a "table(simple)" template of its own.

9.1. Advanced options

Use only if the parent element matches the following XPath

Normally an element template is suggested by the Edit tool whatever the parent element where this template is to be inserted. But in some cases, generally with W3C XML schemas and with RELAX NG schemas and not with DTDs, you'll want the template to be usable only in certain contexts.

Example: your schema defines two `title` elements: a *job title* which is a possible child element of `person` and `author` elements and the optional title (i.e. a *caption*) of `table` and `figure` elements.

You intend to define several job title templates. Example: element template "title(arch)" is defined as `<title>Software Architect</title>`.

Of course, you don't want to see "title(arch)" listed by the Edit tool when you are about to give a title to a `table`.

In such case:

1. Click on the "Use only if the parent element matches the following XPath" radio button.
2. Type XPath expression "`person|author`" in the text field below the radio button.

This means: suggest "title(arch)" but only when the template is to be inserted in a `person` or an `author` element.

Note that a very small subset of XPath is supported here:

XPath 1.0 subset

The XPath 1.0 subset is the one defined in "XML Schema Part 1: Structures, Identity-constraint Definitions", except that absolute XPaths (`/foo/bar`, `//bar`, etc) are also supported.

```

XPath      ::= Path ( '|' Path ) *
Path       ::= ( '/' | '//') ? ( Step ( '/' | '//') ) * ( Step | '@' NameTest )
Step       ::= '.' | NameTest
NameTest   ::= QName | '*' | NCName ':' '*'

```

Both abbreviated syntax and non-abbreviated syntax are supported.

This replaces the default, automatically generated, element template

This option is best explained by an example.

Out of the box, if you insert a `table` element in a DocBook document, in fact, you insert predefined `table` template called "table(simple)".

The "table(simple)" template has two rows and two columns which makes it much more useful than the default, automatically generated, `table` template which just contains a single cell⁶.

Note that when a *single* named template such as "table(simple)" replaces the default, automatically generated, element template, the Edit tool does not display its label. For example, in the case of the DocBook `table`, the Edit tool displays "table"⁷ and not "table(simple)".

Now, what if you prefer to use a `table` having 3 rows and 3 columns plus a `thead` header as your default `table`?

1. Create the table by inserting the rows, cells and header you want.
2. Select this table.
3. Use Options → Customize Configuration → Save Selected Element as Template.
4. The "Existing element templates" list shows you that a predefined template already replaces the default, automatically generated, one. You can see this because "table(simple)" is displayed in italic.

You need to label your own template like the existing one in order to replace it. Therefore specify "simple" in the Label of the element template field.

5. Click on check box "This replaces the default, automatically generated, element template".

9.2. Removing a previously defined element template

This dialog box also allows to remove user-defined element templates. In order to do this, simply click on a template in the "Existing element templates" list and then click on the Remove button.

⁶The default, automatically generated, element template is the simplest, valid, element allowed by the schema.

Most of the time this heuristic gives good results. However in some cases, the default, automatically generated, element template, is, well, too simple to be useful.

⁷There is no ambiguity and this is shorter to type.

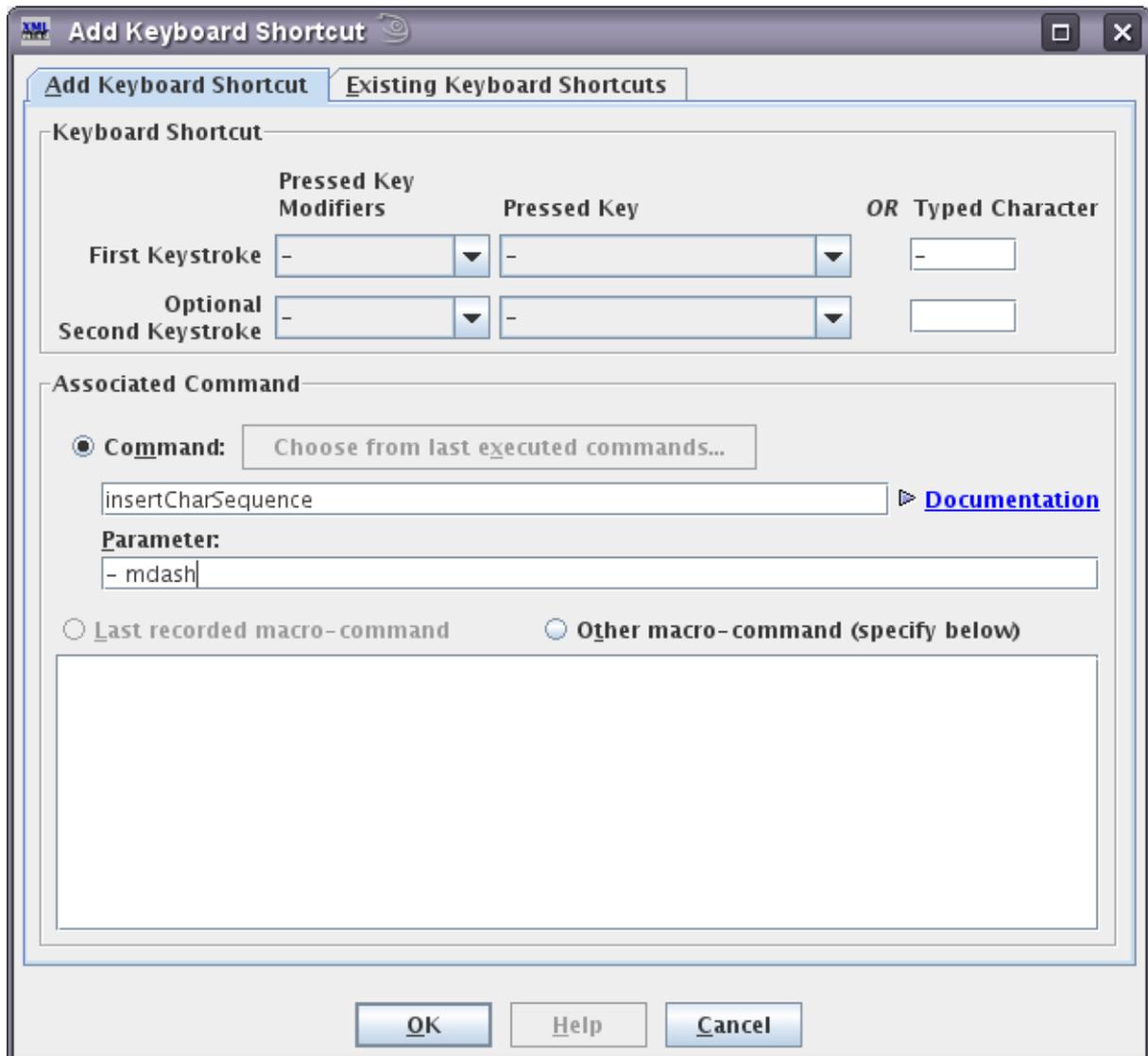
Note that this operation takes immediate effect: clicking on the Cancel button of the "Save Selected Element As Template" dialog box will not cancel the deletion of the template⁸.

You can only remove the element templates you have created. You cannot remove predefined (grayed) element templates.

In the above screen shot, notice how removing user-defined "table(simple)" template would restore the predefined template having the same element name and label.

10. The "Add Keyboard Shortcut" dialog box

This dialog box is displayed by menu item Options → Customize Configuration → Add Keyboard Shortcut [45]. It allows the user to specify a keyboard shortcut that will invoke a predefined command, last recorded macro-command or a user-defined macro-command.



In the above screen shot, the user adds a shortcut for command "insertCharSequence" with parameter "- mdash". This command will be invoked after character "-" (dash) is typed.

⁸The Cancel button of the "Save Selected Element As Template" dialog box just cancels the action of creating a new template.

Procedure 9.1. Adding a keyboard shortcut

1. Specify a keystroke. A keystroke is either:

- A *typed character* specified the Typed Character field.

A typed character is any character you can type using any combination/sequence of pressed keys. A typed character often does not correspond to a key of your keyboard. For example, on an US keyboard, there is no \$ key. You need to press on key **4** and on key **Shift** at the same time in order to type the '\$' character.

- OR a *pressed key* specified using the Pressed Key combo box.

A pressed key must correspond to a key actually found on your keyboard. For example, do not choose key \$ on an US keyboard because there is no such key. On the other hand, you may choose it on a French keyboard which has a \$ key⁹.

You'll often want to also specify the modifier keys (**Ctrl**, **Shift**, etc) which must be pressed at the same time as the main key specified in the Pressed Key combo box. Any combination of modifier keys may be chosen using the Pressed Key Modifiers combo box.

2. Optionally specify a second keystroke. In such case, the command will be invoked by the sequence: first keystroke immediately followed by second keystroke.
3. Specify the command invoked by your custom shortcut. There are three possible options for this:

Command

The command invoked by your custom keyboard shortcut is a predefined command (documented in Chapter 6, *Commands written in the Java™ programming language in XMLmind XML Editor - Commands*).

You may choose one of the last executed commands by using the list displayed by the "Choose from last executed command" button.

Last recorded macro

The command invoked by your custom keyboard shortcut is the last recorded macro-command (see Tools → Record Macro [42]).

Other macro-command

The command invoked by your custom keyboard shortcut is a custom macro-command that you'll type in the text area below the "Other macro-command" radio button.

It is recommended to restrict yourself to specifying one of the last executed commands or last recorded macro. Attempting to use the other options is harmless, but unless you know what you are doing (for example, because you have posted a support request to the <xmlmind-support@xmlmind.com> public mailing list), the commands specified the hard way will probably not work.

However, if you decide to follow the hard way, you must know that:

- The Command field, allowing to specify the name of a command, supports auto-completion.
- Clicking on the Documentation link will open in the Web browser the reference manual in *XMLmind XML Editor - Commands* describing the command of interest¹⁰. This is almost always needed in order to specify in the Parameter field a valid parameter for the command.
- If you type a custom macro-command in the text area, do not bother declaring namespace prefixes. Consider that "http://www.xmlmind.com/xmlmind/schema/configuration" is declared as being the default namespace, that "cfg" is declared as a prefix for namespace "http://www.xmlmind.com/xmlmind-

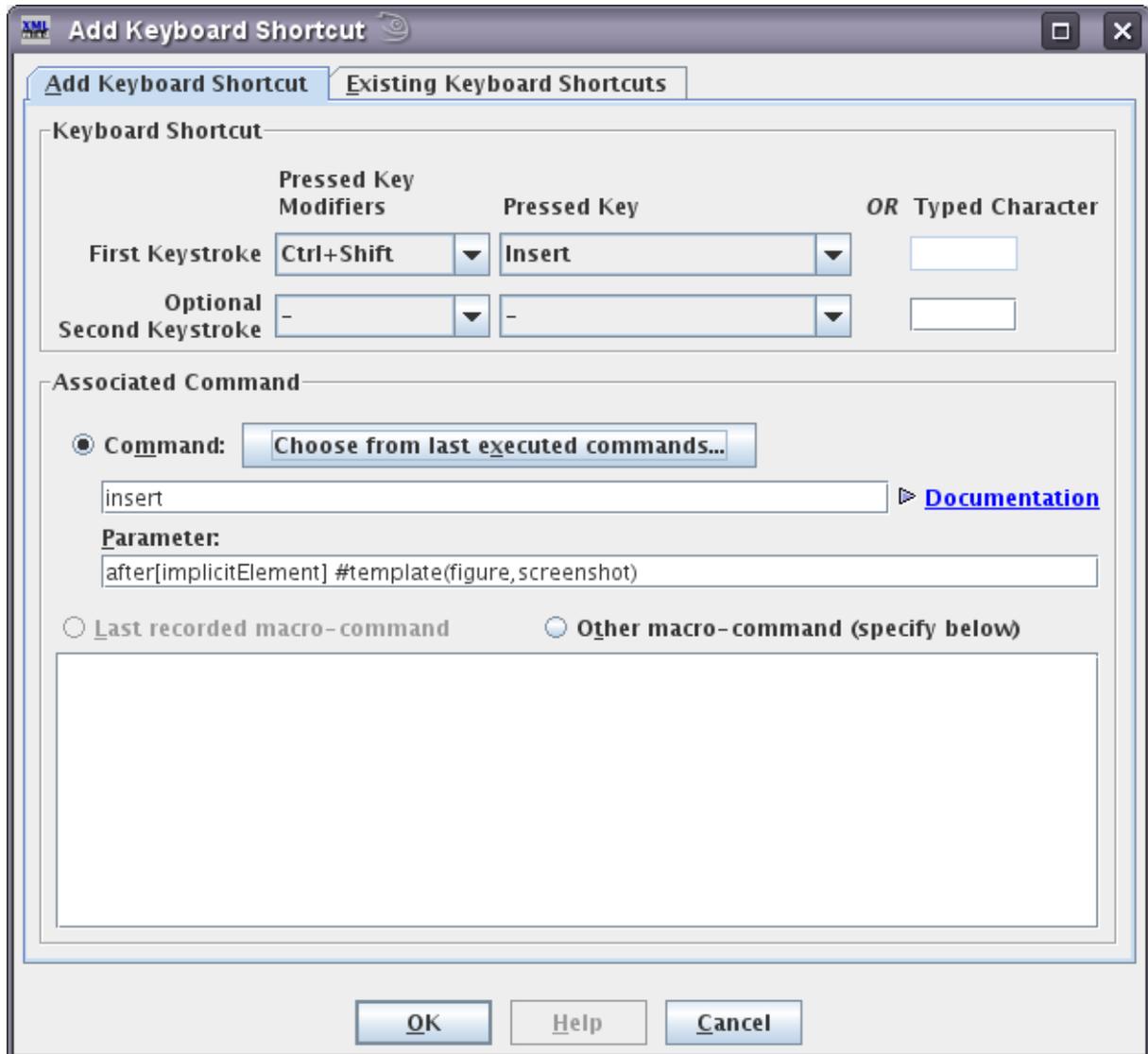
⁹Suprising, isn't it?

¹⁰This requires an access to the Internet if XMLmind XML Editor is deployed using Java™ Web Start.

or/schema/configuration" and that all namespace prefixes declared in the document being edited (see Tools → Declare Namespace [38]) are in scope also here.

4. Click OK.

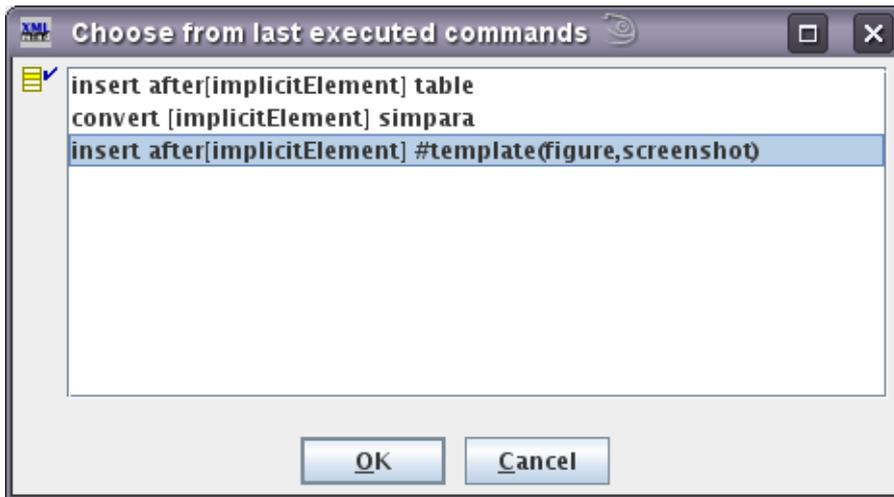
Other example:



In the above screen shot, the user adds a shortcut for command "insert after[implicitElement] #template(figure, screenshot)". This command will be invoked when the Insert key will be pressed at the same time as the Control and Shift keys.

Previously, by using the Edit tool, the user has inserted in the document being edited a `figure` element containing a `screenshot` child element¹¹. Having done this now allows her/him to pick this command from the list displayed by the "Choose from last executed command" button, instead of typing the command name and its parameter.

¹¹She/he picked `figure(screenshot)` from the list of elements suggested by the Edit tool.



Note

Many keystrokes may not be used to define custom keyboard shortcuts. Clicking on the "Existing Keyboard Shortcuts" tab will give you an idea of this fact.

Examples:

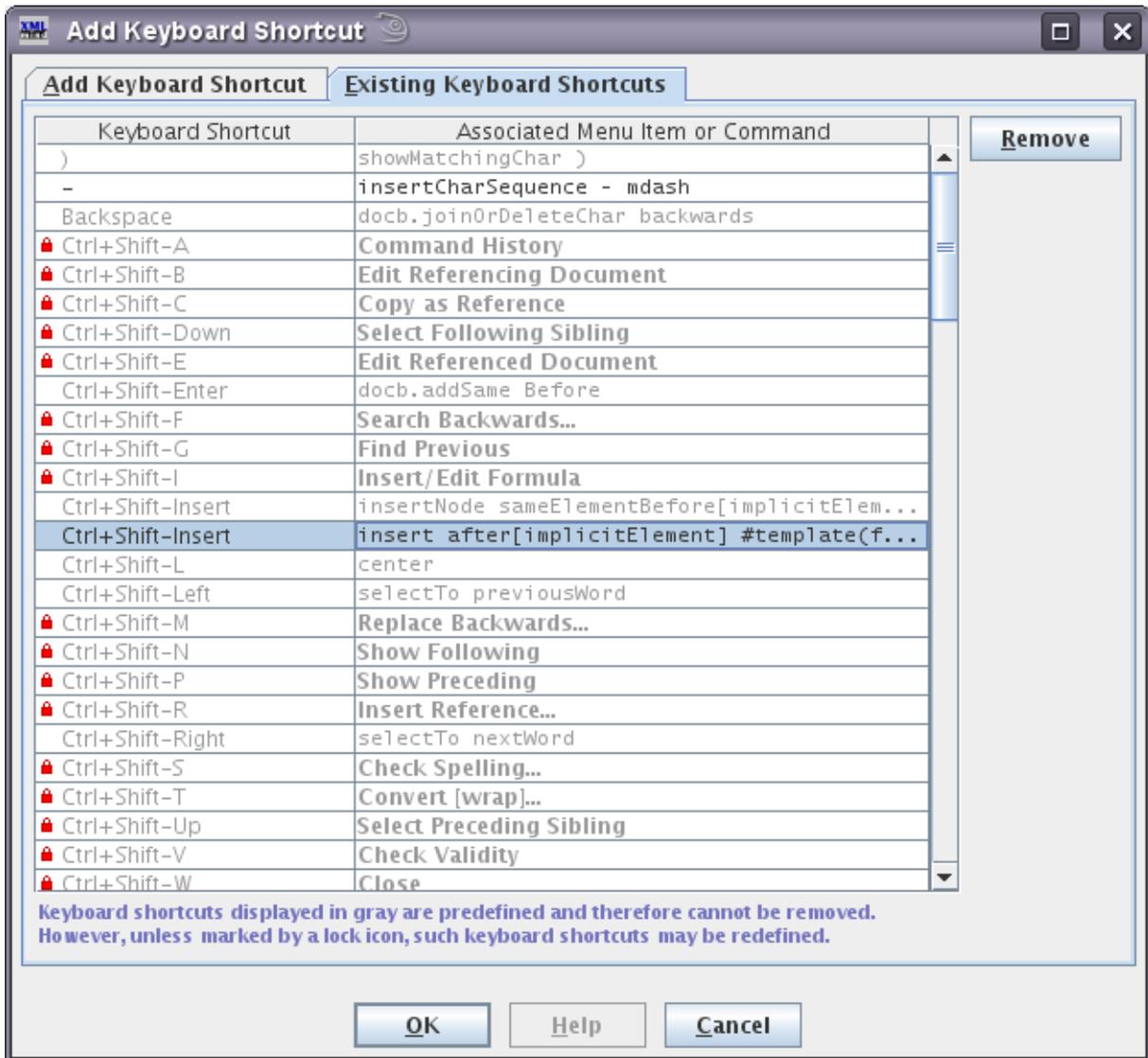
- You may not use **Ctrl+O** because this keystroke is reserved for menu item File → Open.
- You may not use **Ctrl+I** because this keystroke is reserved for menu item Edit → Insert.
- You cannot use single keystroke **Esc** because this would prevent existing keyboard shortcuts **Esc g** (bound to menu item Select → Find Element), **Esc x** (bound to menu item Tools → Execute) , etc, from working¹².
- You cannot use keystroke **Home**, for example followed by a second **Home** keystroke, because existing keyboard shortcut **Home** (bound to command "moveDotTo lineBegin") would prevent your custom shortcut from working.

Moreover certain keystrokes are reserved by Java™ (e.g. Tab, **Alt**) or by the operating system (e.g. there are loads of these on the Mac). Attempting to use these keystrokes for your custom keyboard shortcuts will almost certainly not work.

10.1. Removing a previously defined keyboard shortcut

This dialog box also allows to remove user-defined keyboard shortcuts.

¹²Using **Esc** followed by a second, carefully chosen, keystroke should work fine.



In the above screen shot, notice how removing user-defined keyboard shortcut **Ctrl+Shift+Insert** (invoking command "insert after[implicitElement] #template(figure,screenshot)") would restore the predefined keyboard shortcut (invoking command "insertNode sameElementBefore[implicitElement]").

Procedure 9.2. Removing a keyboard shortcut

1. Click on the "Existing Keyboard Shortcuts" tab.
2. Select the keyboard shortcut to be removed by clicking on it.

You can only remove the keyboard shortcuts you have created. You cannot remove predefined (grayed) keyboard shortcuts.

3. Click on the Remove button.

Note that this operation takes immediate effect: clicking on the Cancel button of the "Add Keyboard Shortcut" dialog box will not cancel the deletion of the keyboard shortcut¹³.

¹³The Cancel button of the "Add Keyboard Shortcut" dialog box just cancels the action of creating a new keyboard shortcut.

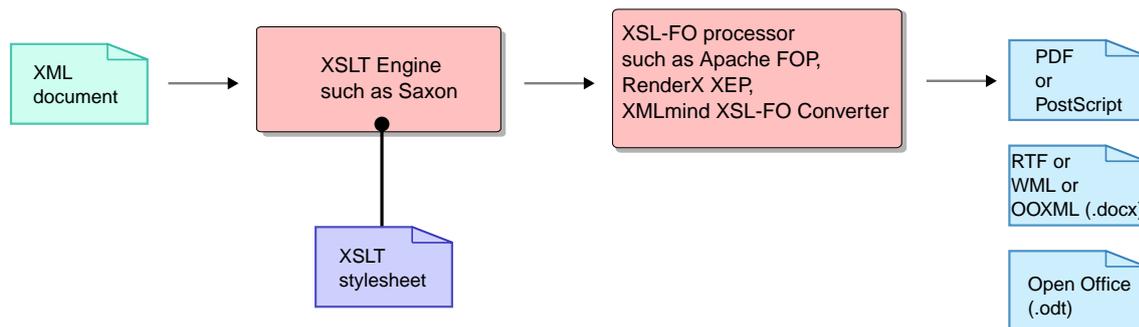
11. The "Customize Document Conversion Stylesheets" dialog box

Using this dialog box is a relatively simple way to influence the layout and style of the deliverable (PDF, RTF, HTML, etc) which results from the document conversion.

11.1. Introduction

The document being edited is converted to other formats by the means of *XSLT stylesheets*.

Figure 9.3. Converting an XML document to an XSL-FO based format



This dialog box allows to:

- Select an XSLT stylesheet other the default one.

Example: when converting a DocBook document to HTML, the default XSLT stylesheet generates HTML and does not support profiling. this dialog box allows to select any of the following alternate XSLT stylesheets: "Generate HTML; profiling stylesheet", "Generate XHTML", "Generate XHTML; profiling stylesheet".

- Create a custom XSLT stylesheet on the fly.

A custom XSLT stylesheet created this way merely imports the stock XSLT stylesheet. Example:

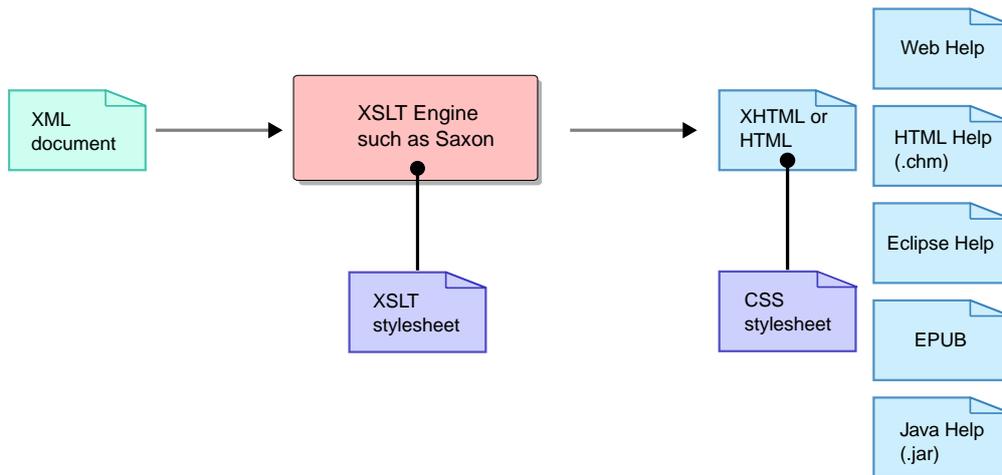
```
<xsl:stylesheet xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  version="1.0">
  <xsl:import href="xxe-config:docbook/xsl/fo/docbook.xsl"/>
  <!-- REDEFINE PARAMETERS AND ATTRIBUTE-SETS HERE -->
</xsl:stylesheet>
```

After such custom XSLT stylesheet has been created, the user is expected to add to it a number of parameters and attribute-sets.

- Invoke a specialized editor —XMLmind XSL Customizer [131]— to modify a user-created XSLT stylesheet.

However, when the document being edited is converted to an *HTML-based format* (Web Help, EPUB, HTML Help, etc)¹⁴, the HTML pages which are automatically generated by the aforementioned XSLT stylesheets are styled mainly by *CSS stylesheets*.

¹⁴As opposed to XSL-FO based formats (PDF, RTF, .docx, .odt, etc).

Figure 9.4. Converting an XML document to an HTML-based format

When this is the case, this dialog box allows additionally to:

- Select a CSS stylesheet other the default one.
- Create a custom CSS stylesheet on the fly.

A custom CSS stylesheet created this way merely imports the stock CSS stylesheet. Example:

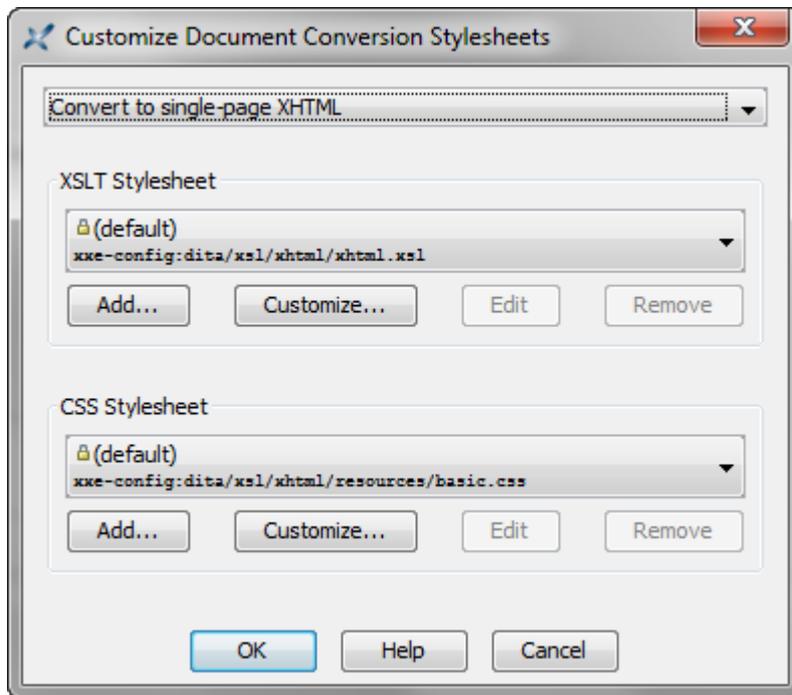
```
@charset "UTF-8";  
@import url(__stock_html.css);  
/* ADD YOUR STYLES HERE */
```

After such custom CSS stylesheet has been created, the user is expected to add to it a number of styles.

- Invoke a helper application [102] (generally, a text editor) to modify a user-created CSS stylesheet.

11.2. Reference

Figure 9.5. The "Customize Document Conversion Stylesheets" dialog box showing the stylesheets used when a DITA map is converted to single-page XHTML



"XSLT stylesheet" frame:

The combobox

This combobox allows to select:

- the default stock XSLT stylesheet,
- an alternate stock XSLT stylesheet (if any),
- a custom XSLT stylesheet added using the Add button,
- a custom XSLT stylesheet created using the Customize button.

Add

Add an existing custom XSLT stylesheet. This button displays a dialog box allowing to specify the filename of a custom XSLT stylesheet and also to give it a short title (a title is required).

Customize

Create a custom XSLT stylesheet based on the currently selected stock XSLT stylesheet.

It's not possible to create a customization of a custom XSLT stylesheet.

A custom XSLT stylesheet created this way merely imports the stock XSLT stylesheet. Example:

```
<xsl:stylesheet xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  version="1.0">
  <xsl:import href="xxe-config:docbook/xsl/fo/docbook.xsl"/>
  <!-- REDEFINE PARAMETERS AND ATTRIBUTE-SETS HERE -->
</xsl:stylesheet>
```

After such custom XSLT stylesheet has been created, the user is expected to click Edit to populate it with parameters and attribute-sets.

Edit

If the custom XSLT stylesheet has been created using the Customize button, this button starts the "XMLmind XSL Customizer" application [131] in order to edit it. Otherwise, this button starts a helper application [102] allowing to edit XSLT files.

It's not possible to edit a stock XSLT stylesheet.

Tip

Clicking Edit while keep the Shift key pressed allows to start a helper application rather than the "XMLmind XSL Customizer" application.

Remove

Remove the currently selected custom XSLT stylesheet from the combobox. Of course, clicking Remove does not delete the XSLT file.

It's not possible to remove a stock XSLT stylesheet.

"CSS stylesheet" frame (this frame is absent when the output format is based on XSL-FO):

The combobox

This combobox allows to select:

- the default stock CSS stylesheet,
- an alternate stock CSS stylesheet (if any),
- a custom CSS stylesheet added using the Add button,
- a custom CSS stylesheet created using the Customize button.

Add

Add an existing custom CSS stylesheet. This button displays a dialog box allowing to specify the filename of a custom CSS stylesheet and also to give it a short title (a title is required).

Customize

Create a custom CSS stylesheet based on the currently selected stock CSS stylesheet.

It's not possible to create a customization of a custom CSS stylesheet.

A custom CSS stylesheet created this way merely imports the stock CSS stylesheet. Example:

```
@charset "UTF-8";
@import url(__stock_html.css);
/* ADD YOUR STYLES HERE */
```

After such custom CSS stylesheet has been created, the user is expected to click Edit to populate it with styles.

Edit

Starts a helper application [102] allowing to edit CSS files.

It's not possible to edit a stock CSS stylesheet.

Remove

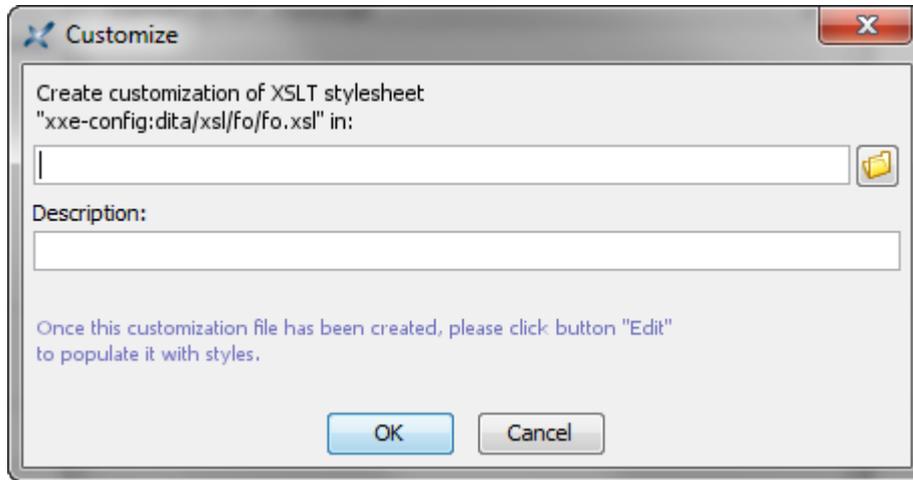
Remove the currently selected custom CSS stylesheet from the combobox. Of course, clicking Remove does not delete the CSS file.

It's not possible to remove a stock CSS stylesheet.

Example 9.1. When converting a DITA map to PDF, use a 12pt base font size and give a light gray background to all the topic titles

1. Open a DITA map in XMLmind XML Editor.

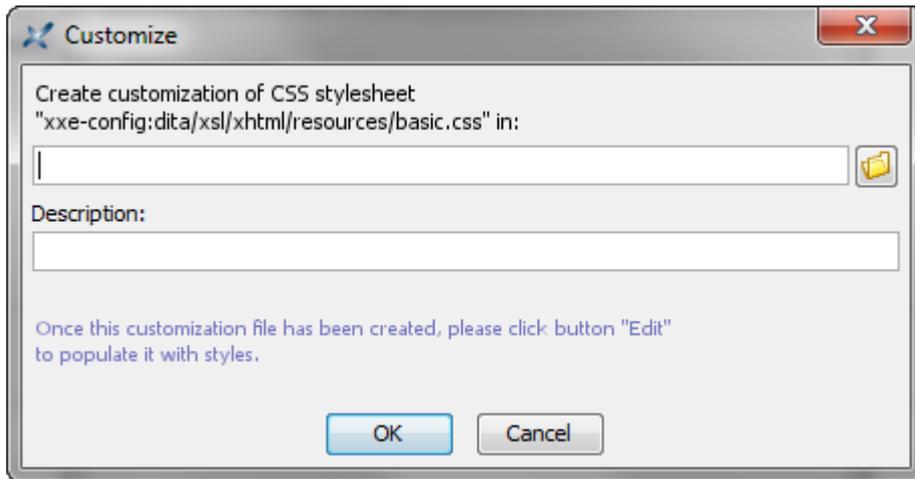
2. Select menu item Options → Customize Configuration → Customize Document Conversion Stylesheets. This displays the "Customize Document Conversion Stylesheets" dialog box.
3. Select "Convert to PDF, PostScript" in the top combobox.
4. In the "XSLT stylesheet" frame, click Customize. This displays the following dialog box:



- a. Specify the filename of the XSLT stylesheet which is to contain your customization of the stock `xe-config:dita/xsl/fo/fo.xml` XSLT stylesheet.
 - b. Also required: give a short title to your customization in the Description field.
5. In the "XSLT stylesheet" frame, click Edit. This displays the main window of the "XMLmind XSL Customizer" application [131].
 - a. Select the Attribute Sets tab and click Add to add attribute `background-color=#CCCCCC` to the attribute-set called `topic-title`. How to do this is detailed in the example below [135].
 - b. Select the Parameters tab and click Add to specify the following parameter: `base-font-size=12pt`. How to do this is detailed in the example below [136].
 - c. Click toolbar button Save to save your changes.
 - d. Click toolbar button Quit to close "XMLmind XSL Customizer" window.
 6. Click OK to close the the "Customize Document Conversion Stylesheets" dialog box.

Example 9.2. When converting a DITA map to single-page XHTML, use a 12pt base font size and give a light gray background to all the topic titles

1. Open a DITA map in XMLmind XML Editor.
2. Select menu item Options → Customize Configuration → Customize Document Conversion Stylesheets. This displays the "Customize Document Conversion Stylesheets" dialog box.
3. Select "Convert to single-page XHTML" in the top combobox.
4. In the "CSS stylesheet" frame, click Customize. This displays the following dialog box:



- a. Specify the filename of the CSS stylesheet which is to contain your customization of the stock `xxe-config:dita/xsl/xhtml/resources/basic.css` XSLT stylesheet.
 - b. Also required: give a short title to your customization in the Description field.
5. In the "CSS stylesheet" frame, click Edit. This displays the "Helper Application Not Found" dialog box¹⁵. This dialog box allows to specify which editor is to be used to edit a CSS file. By default, the "Helper Application Not Found" dialog box suggests to use a text editor.
- a. Replace the line:

```
/* ADD YOUR STYLES HERE */
```

by:

```
body {
    font-size: 12pt;
}

.part-title,
.chapter-title,
.appendices-title,
.appendix-title,
.section1-title,
.section2-title,
.section3-title,
.section4-title,
.section5-title,
.section6-title,
.section7-title,
.section8-title,
.section9-title,
.topic-title {
    background-color: #CCCCCC;
}
```

Make sure not to modify the `@import` line.

- b. Save your changes.
Make sure to use an UTF-8 encoding for the save file.
- c. Quit the text editor.

¹⁵Unless the user has already specified which is the helper application she/he prefers to edit a CSS stylesheet. This kind of preference is specified by using Options → Preferences, Tools|Helper Applications section. More information in Section 5.8.4, "Helper applications options" [102].

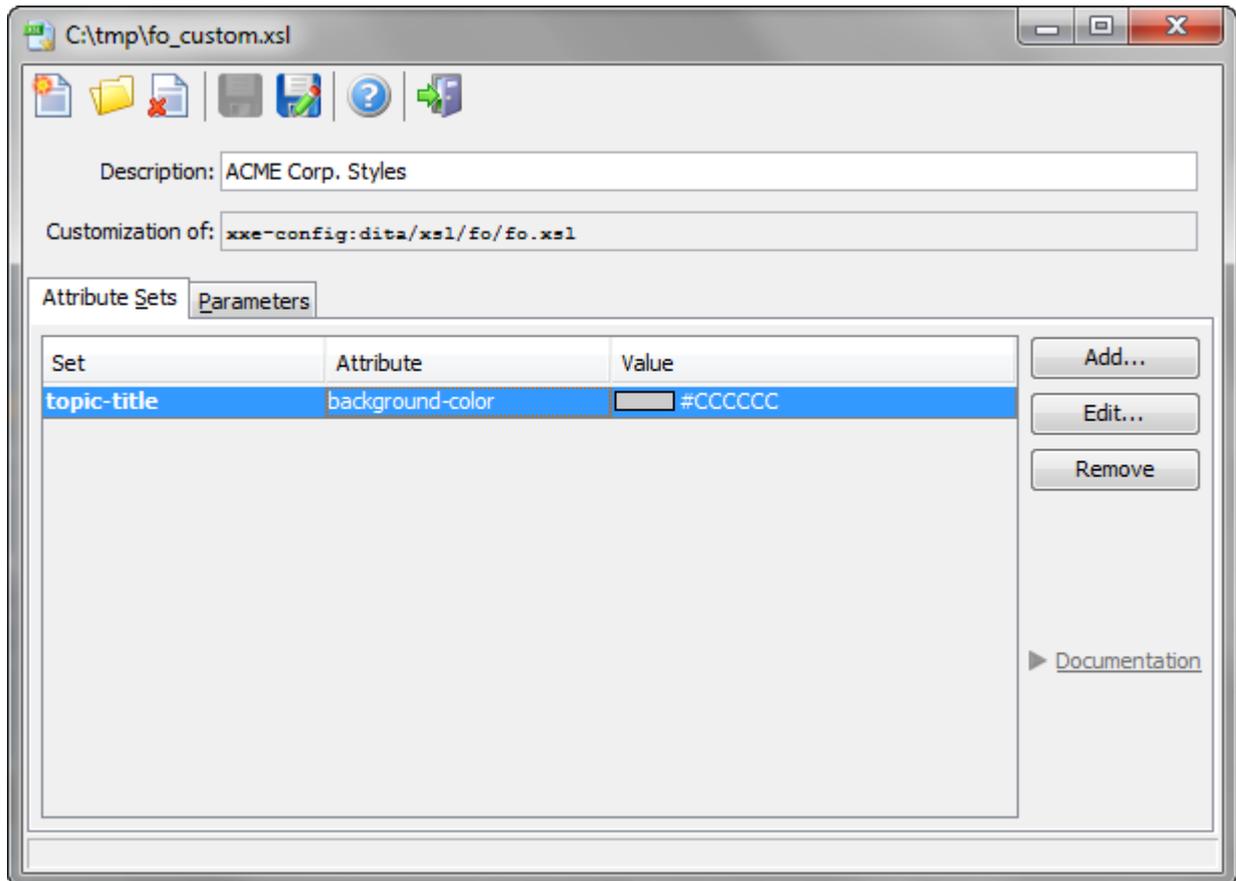
6. Click OK to close the the "Customize Document Conversion Stylesheets" dialog box.

11.3. The "XMLmind XSL Customizer" application

11.3.1. Introduction

The "XMLmind XSL Customizer" application is a companion application embedded in XMLmind XML Editor and XMLmind XSL Utility.

Figure 9.6. "XMLmind XSL Customizer" main window



This application is invoked by clicking the Edit XSLT stylesheet button found in XMLmind XML Editor and XMLmind XSL Utility. It allows to modify a custom XSLT stylesheet created by clicking the Customize XSLT stylesheet button found in XMLmind XML Editor and XMLmind XSL Utility.

A custom XSLT stylesheet created this way merely imports the stock XSLT stylesheet. Example:

```
<?xml version="1.0" encoding="UTF-8"?>
<?stylesheet-label ACME Corp. Styles?>
<xsl:stylesheet version="2.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
  <xsl:import href="xxe-config:dita/xsl/fo/fo.xml"/>
  <!-- REDEFINE PARAMETERS AND ATTRIBUTE-SETS HERE -->
</xsl:stylesheet>
```

"XMLmind XSL Customizer" is not an XSLT editor. However it allows to:

- add or change attributes in some of the *attribute sets* supported by the XSLT stylesheet,
- change the value of some of the *parameters* supported by the XSLT stylesheet,

and this, *without prior knowledge of XSLT*.

What are attribute sets and parameters?

XSLT stylesheets are often (but not always) parameterized by the means of:

- Parameters. DocBook XSL stylesheet example:

```
<xsl:param name="paper.type"❶>USletter❷</xsl:param>
```

- ❶ The name of the parameter is "paper.type".
- ❷ The value of the parameter is literal string "USletter".

- Attribute sets. DocBook XSL stylesheet example:

```
<xsl:attribute-set name="monospace.verbatim.properties"❶
    use-attribute-sets="verbatim.properties monospace.properties"❷>
  <xsl:attribute name="text-align">start</xsl:attribute>❸
  <xsl:attribute name="wrap-option">no-wrap</xsl:attribute>❹
</xsl:attribute-set>
```

- ❶ The name of the attribute set is "monospace.verbatim.properties".
- ❷ This attribute set includes two other attribute sets: `verbatim.properties` and `monospace.properties`.
- ❸ This attribute set directly contains attribute `text-align="start"`.
- ❹ This attribute set directly contains attribute `wrap-option="no-wrap"`.

An attribute set can contain any attribute. However attribute sets are mainly used in XSLT stylesheets which generate XSL-FO. The XSL-FO intermediate file generated by the XSLT stylesheet is then processed by programs such as Apache FOP, RenderX XEP, Antenna House XSL Formatter, XMLmind XSL-FO Converter, etc, in order to create the deliverable: PDF, PostScript, RTF, .docx, .odt, etc. The attribute sets are used in this case because they are the only way to influence the look of the deliverable. Such attribute sets contain standard XSL-FO presentation attributes (very similar to the CSS properties): `color`, `font-family`, `line-height`, `margin-left`, etc.

11.3.2. Reference

Toolbar buttons



New

Create a customization of an existing XSLT stylesheet. This button displays the standard file chooser dialog box allowing to choose the XSLT stylesheet for which a customization is to be created.



Open

Open a custom XSLT stylesheet previously created by clicking the New button. This button displays the standard file chooser dialog box allowing to choose the custom XSLT stylesheet to be opened.



Close

Close currently opened XSLT stylesheet.



Save

Save the changes made to currently opened XSLT stylesheet.



Save As

Save currently opened XSLT stylesheet to a different file.



Help

Display this online help.



Quit

Close "XMLmind XSL Customizer" main window.

Tip

Because "XMLmind XSL Customizer" is an (embedded) application and not a modal dialog box, you can keep it open while converting an XML document in XMLmind XML Editor or in XMLmind XSL Utility. This allows to experiment with attribute sets and parameters until you are satisfied with the result of the conversion.

Information fields about the currently opened XSLT stylesheet

Description:

Short description of the currently opened custom XSLT stylesheet. XMLmind XML Editor requires a custom XSLT stylesheet to have such description.

Customization of:

Read-only text field: URI of the stock XSLT stylesheet for which the currently opened XSLT stylesheet is a customization.

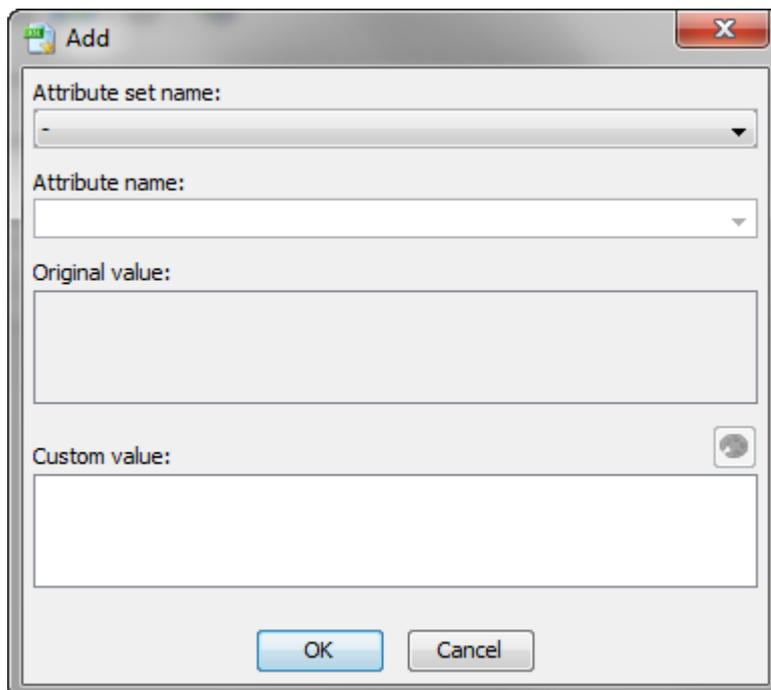
Attribute Sets tab buttons

Add

Add an attribute to one of the attribute sets supported by currently opened XSLT stylesheet.

This button displays the Add/Edit attribute dialog box. How to use this dialog box is described in the example below [135].

Figure 9.7. The Add/Edit attribute dialog box



Note

XMLmind XSL Customizer is designed for users who cannot “program in XSLT”. These users are expected to enter literal values, not XSLT elements, in the Custom value field. For example, they are expected to enter something like:

```
20pt
```

as the value of the `font-size` attribute, and not something like:

```
<xsl:value-of select="$body.font.master * 2"/>
<xsl:text>pt</xsl:text>
```

However, if the user happens to know what she/he is doing and nevertheless enters one or more XML nodes in the Custom value field, then XMLmind XSL Customizer will ask her/him to confirm that this is really what she/he wants and make it work.

Edit

Modify currently selected attribute.

This button displays the Add/Edit attribute dialog box.

Remove

Remove currently selected attribute.

Documentation

Start the web browser and make it display the page containing the documentation about currently selected attribute. This button is disabled (grayed) when such documentation is not available. For now, only the DocBook XSL Stylesheets provide some documentation for their attribute sets.

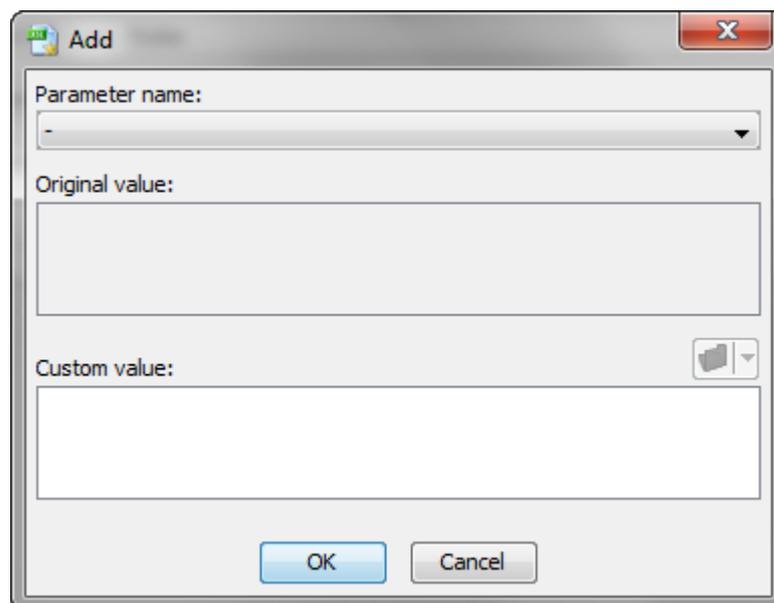
Parameters tab buttons

Add

Set one of the parameters supported by currently opened XSLT stylesheet.

This button displays the Add/Edit parameter dialog box. How to use this dialog box is described in the example below [136].

Figure 9.8. The Add/Edit parameter dialog box



Note

XMLmind XSL Customizer is designed for users who cannot “program in XSLT”. These users are expected to enter literal values, not XSLT elements, in the Custom value field. For example, they are expected to enter something like:

```
40pt
```

as the value of the *body.start.indent* parameter, and not something like:

```
<xsl:value-of select="$body.font.master * 4"/>
<xsl:text>pt</xsl:text>
```

However, if the user happens to know what she/he is doing and nevertheless enters one or more XML nodes in the Custom value field, then XMLmind XSL Customizer will ask her/him to confirm that this is really what she/he wants and make it work.

Edit

Modify currently selected parameter.

This button displays the Add/Edit parameter dialog box.

Remove

Remove currently selected parameter.

Documentation

Start the web browser and make it display the page containing the documentation about currently selected parameter. This button is disabled (grayed) when such documentation is not available.

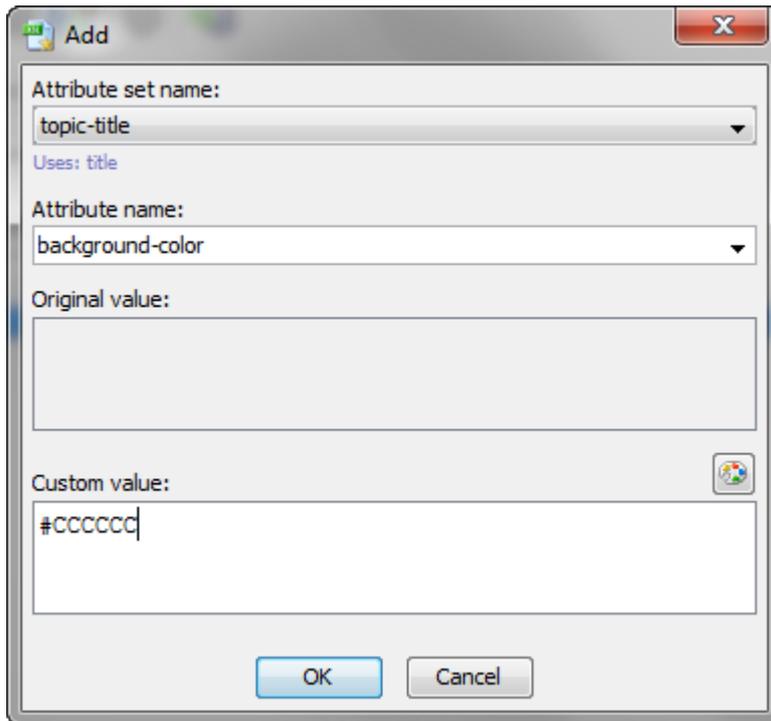
Example 9.3. When converting a DITA map to PDF, give a light gray background to all the topic titles

This is specified by adding attribute `background-color=#CCCCCC` to the attribute-set called `topic-title`.

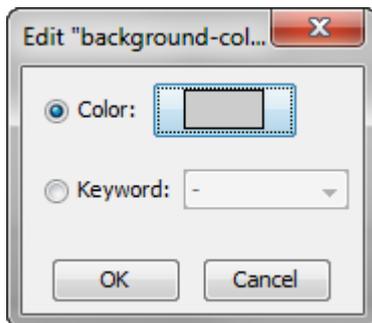
1. Select the Attribute Sets tab.
2. Click Add. This displays the Add/Edit attribute dialog box.
3. In the "Attribute set name:" combobox, select `topic-title`.
4. In the "Attribute:" combobox, type `"background-color"` or select this commonly used attribute from the drop down list.

The "Original value:" read-only text field remains empty, indicating that the stock XSLT stylesheet does not specify attribute `topic-title/background-color`.

5. In the "Custom value:" field, type `"#CCCCCC"`.



Or more simply, click  "Edit style attribute" and use the `background-color` editor to specify a light gray color.



6. Click OK to close the dialog box.

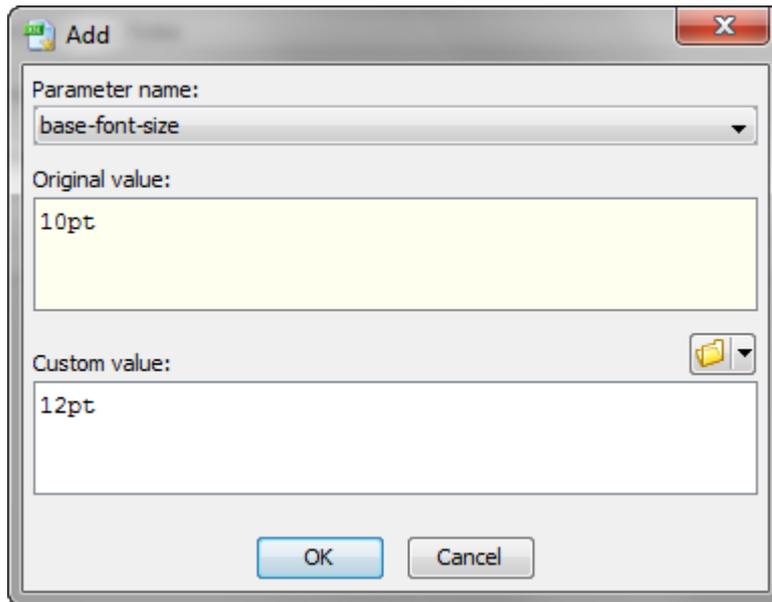
Example 9.4. When converting a DITA map to PDF, use a 12pt base font size

This is specified by setting parameter `base-font-size` to 12pt.

1. Select the Parameters tab.
2. Click Add. This displays the Add/Edit parameter dialog box.
3. In the "Parameter name:" combobox, select `base-font-size`.

The "Original value:" read-only text field changes to "10pt", which is the value of parameter `base-font-size` specified in the stock XSLT stylesheet.

4. In the "Custom value:" field, type "12pt".



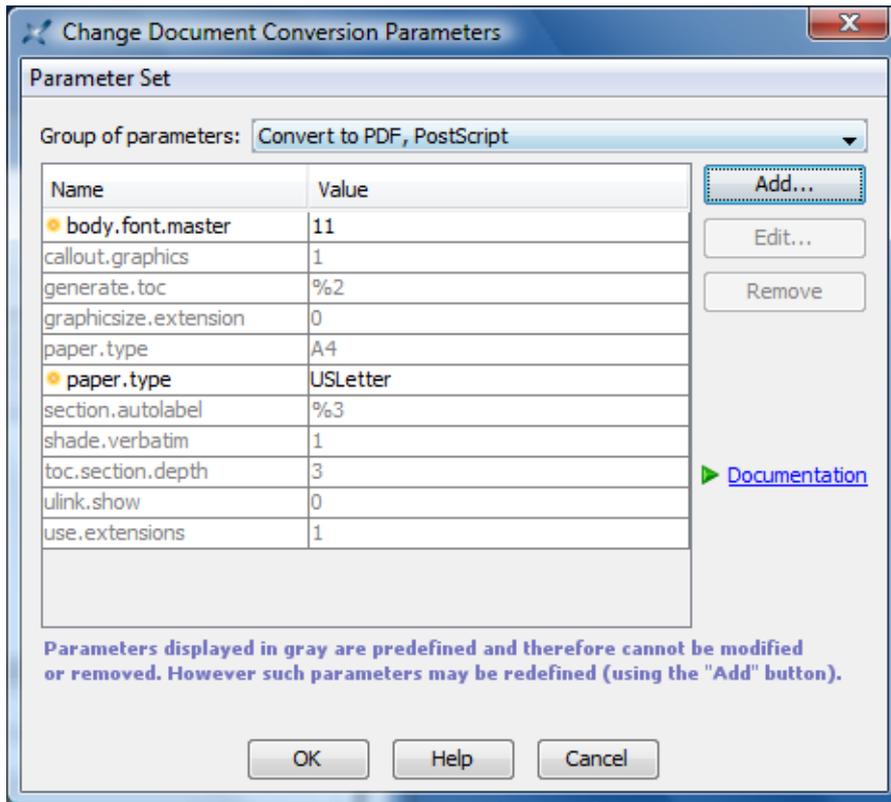
5. Click OK to close the dialog box.

12. The "Change Document Conversion Parameters" dialog box

This dialog box is displayed by menu item Options → Customize Configuration → Change Document Conversion Parameters [45]. This dialog box allows to specify the XSL style sheet parameters (e.g. `paper.type=USLetter`) used when converting the document being edited to other formats (e.g. PDF, HTML, etc).

Procedure 9.3. Adding a user-defined parameter

1. Select the conversion for which you want to specify parameters by using the "Group of parameters" combo box.



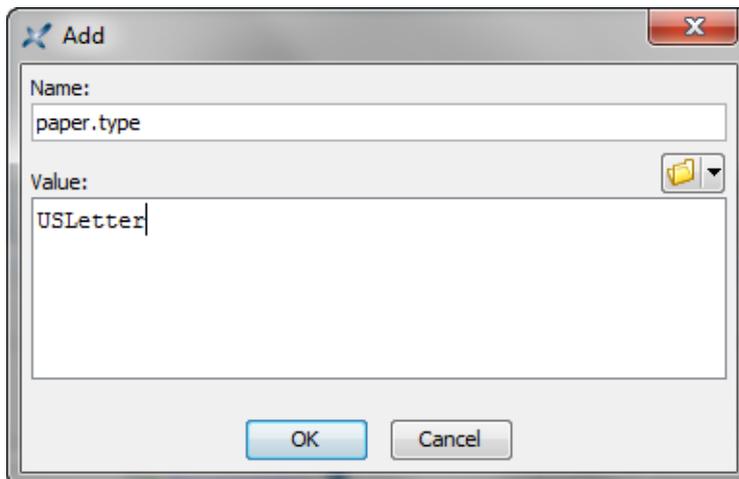
In the above screen shot, the user has selected the conversion of DocBook documents to PDF or PostScript.

2. Click on the Add button.

Tip

If, for example, you want to redefine `paper.type` from `A4` to `USLetter` as shown in the above screen shot. Select the `paper.type` parameter by clicking on it and then click on the Add button. This will spare you the effort of retyping `paper.type` as the name of the parameter you want to add.

3. Specify the name of the parameter and its value in the dialog box displayed by the Add button and then click OK.



The value of a parameter may contain whitespace, including newline characters.

4. Click OK if you are done or use "Group of parameters" combo box and the Add, Edit and Remove buttons to specify more parameters.

In the above screen shot:

- The user has added parameter `body.font.master=11`. (The default value of this parameter, as specified in the XSL style sheet, is 10.)

Notice the star which precedes newly added and newly modified parameters.

- The user has redefined parameter `paper.type` to `USLetter`.

Notice how the user-defined parameter follows the predefined, grayed, parameter.

Tip

The Documentation link is supposed to open in your favorite Web browser the reference manual of the XSL style sheet parameters.

Therefore, If you select a parameter by clicking on it and then click on the Documentation link, you should be able to read the documentation of this parameter.

However, this is not guaranteed to work because:

1. This generally requires an access to the Internet.
2. This documentation is not always available. For example, there is no documentation about the XHTML XSL style sheets yet. In such case, you need to send a support request to the xmleditor-support@xmlmind.com public mailing list to learn how the document conversion process can be parametrized.

Procedure 9.4. Modifying a user-defined parameter

1. Select the conversion for which you want to specify parameters by using the "Group of parameters" combo box.
2. Select the parameter to be modified by clicking on it.
3. Click on the Edit button.

Predefined, grayed, parameters cannot be modified.

4. Specify the value of the parameter in the dialog box displayed by the Edit button and then click OK.

Tip

It also possible to change the *name* of the parameter here. Doing this will simply add a new parameter or replace an existing one.

In fact, the Add and Edit buttons may almost be used interchangeably.

5. Click OK if you are done or use "Group of parameters" combo box and the Add, Edit and Remove buttons to specify more parameters.

Procedure 9.5. Removing a user-defined parameter

1. Select the conversion for which you want to specify parameters by using the "Group of parameters" combo box.
2. Select the parameter to be removed by clicking on it.

- Click on the Remove button.

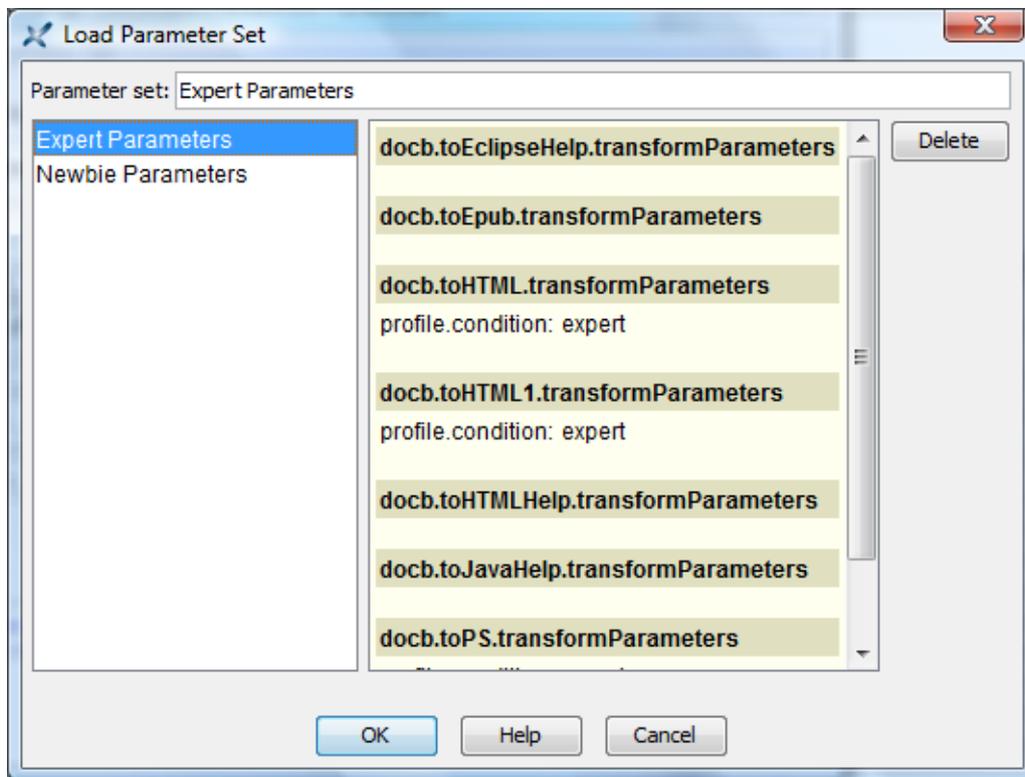
Predefined, grayed, parameters cannot be removed.

- Click OK if you are done or use "Group of parameters" combo box and the Add, Edit and Remove buttons to specify more parameters.

12.1. The "Parameter Set Chooser" dialog box

The "Change Document Conversion Parameters" dialog box has a Parameter Set menu which allows to load and save *named parameter sets*. A parameter set is the set of all the XSL style sheets parameters specified by a user using the "Change Document Conversion Parameters" dialog box. This facility is almost indispensable to deal with the DocBook profiling XSL style sheets. Using such style sheets requires the user to quickly switch from one parameter set (e.g. containing `profile.condition=newbie`) to another (e.g. containing `profile.condition=expert`).

Figure 9.9. The "Parameter Set Chooser" dialog box



Reset

Removes *all* the parameters currently specified by the user in the "Change Document Conversion Parameters" dialog box. The effect of Reset is thus to restore the stock configuration by removing all the user's customizations.

Example: parameter `paper.type=USLetter` is specified in both the `docb.toPS.transformParameters` and `docb.toRTF.transformParameters` groups. Selecting Reset from the Parameter Set menu means removing these two occurrences of the `paper.type` parameter.

Load

Displays the "Parameter Set Chooser" dialog box to let the user specify an existing parameter set. The contents of this parameter set is then used to *overwrite* all the parameters currently specified by the user in the "Change Document Conversion Parameters" dialog box.

Example: the user loads a parameter set called "USLetter" containing just `paper.type=USLetter` in both the `docb.toPS.transformParameters` and `docb.toRTF.transformParameters` groups. Selecting Load from the Parameter Set menu means removing all the currently specified parameters from all the parameter groups and then adding `paper.type=USLetter` to both the `docb.toPS.transformParameters` and `docb.toRTF.transformParameters` groups.

Save

Displays the "Parameter Set Chooser" dialog box to let the user specify the name of a parameter set. The integral contents of the "Change Document Conversion Parameters" dialog box at the save time is then copied to this parameter set.

13. The "Install Add-ons" dialog box

This dialog box allows to download and install and/or upgrade and/or uninstall one or more add-ons. This dialog box is not available if XXE has been deployed using Java™ Web Start.

In order to uninstall an add-on, select the Uninstall tab and click on the checkbox of the add-on (looks like this , when clicked looks like this). It is also possible to select the rows of the add-on table by using the Up and Down arrows and to toggle the state of the corresponding checkbox by pressing the space bar.

In order to install or upgrade an add-on, select the Install tab and click on the checkbox of the add-on.

The checkbox of an *upgrade* looks like this . In such case, there is no need to also explicitly uninstall the corresponding add-on because this is done automatically for you. (However it is harmless to do so.)

Important

XXE integrated add-on manager assumes that proxy servers, if any, have been properly specified using the Proxies section [110] of the Preferences dialog box.

Tip

The rows of the Uninstall add-on table have a light yellow background when the corresponding add-on is installed in the user preferences directory, and a light blue background when the corresponding add-on is installed in XXE installation directory.

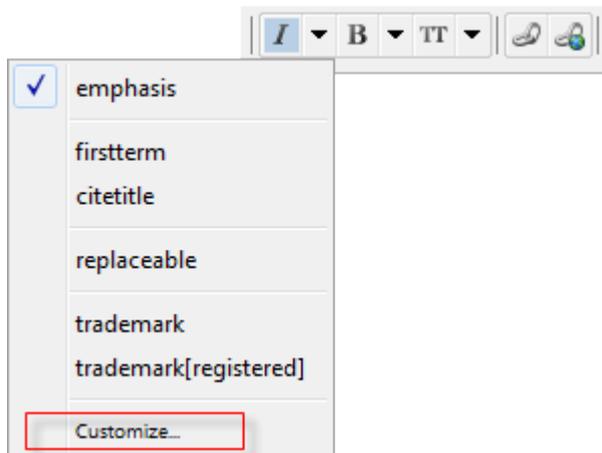
In both cases, a row is disabled (grayed) if you have insufficient privileges to uninstall the corresponding add-on.

Tip

If a problem occurs when listing the add-ons available for download and/or when uninstalling/installing the add-ons, use the "Show Message Log" button of the status bar, category "Install Add-ons", to see logged error messages.

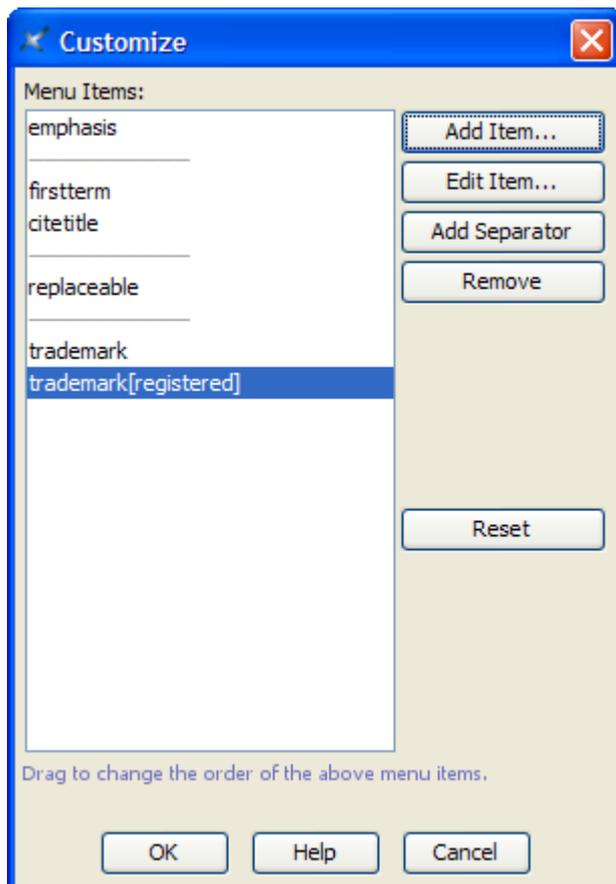
14. Dialog box allowing to edit "text style" menu items

This dialog box is displayed when you select the Customize menu item found at the end of a "text style" menu. Text style menus are displayed when you click the arrow button found next to a "text style" toggle. The XHTML, DocBook and DITA tool bars all start with a number of text style toggles. More information about text style toggles below [143].

Figure 9.10. Toggles found at the beginning of the DocBook tool bar

In the above screenshot, the caret is inside an `emphasis` element and the user clicked the arrow button next to a “italic text style” toggle.

The Customize menu item displays a dialog box allowing to edit the items of a “text style” menu:

Figure 9.11. Customizing the items of the DocBook' “italic text style” menu

Add Item

Add an item before selected item if any; at the end of the menu otherwise. Clicking this button displays the item editor dialog box [144].

Tip

When possible, select in your document an instance of the element you would like to add and then copy it to the clipboard (**Ctrl+C**). This is the quickest and safest way to add an item to a “text style” menu, as the item editor dialog box [144] has a handy "Paste Element" button.

Edit Item

Edit selected item. Clicking this button displays the item editor dialog box [144].

Add Separator

Add a separator before selected item if any; at the end of the menu otherwise.

Remove

Remove selected item or separator.

Reset

Restore the stock menu items.

Tip

Notice that the order of items within the menu may be modified by dragging a label in the list.

About “text style” toggles

The XHTML, DocBook and DITA tool bars all start with a number of “text style” toggles. These toggles emulate the behavior of the Bold, Italic, Underline, etc, toggles found in the tool bars of almost all word-processors.

Note that, by emulating what does a word-processor, these toggles behave very differently from the conversion buttons found in the previous versions of the XHTML, DocBook and DITA tool bars:

- Such toggles add a given “text style” to text spans not having this text style and remove a given text style to text spans already having this text style.
- Such toggles do not require some text to be explicitly selected. If the caret is in the middle of a word, then the toggle acts on this word. If the caret is before or after a word, the toggle acts on this text location by inserting an empty text span having or on the contrary, not having, the corresponding text style.

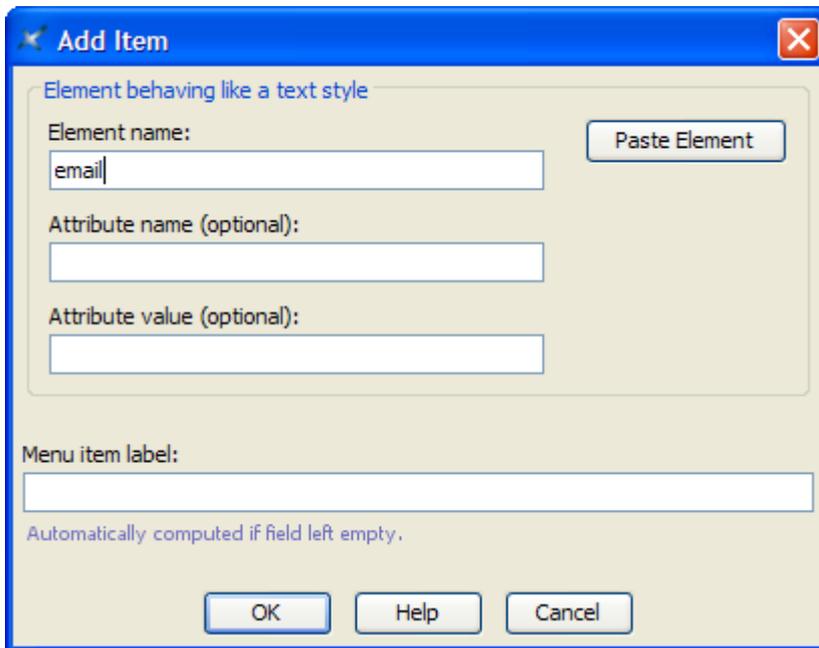
The main difference with word-processors is that XXE's “text style” toggles supports the node selection in addition to the text selection. For example, if you want to apply a “text style” to an element in its entirety, suffice to explicitly select it. This is more handy than selecting all the text this element contains.

A word-processor supports just a few text styles. A document type such as DocBook supports dozens of different text styles. (In XML, what we call a *text style* is an inline element having a mixed content.) That's why you'll often find next to a “text style” toggle, an arrow button displaying a menu of “text style” checkboxes. Moreover the entries of this “text style” menu can be easily customized by the end-user by the means of the Customize dialog box [142].

Such quick and easy customization is really needed in the case of document types such as XHTML, DocBook and DITA. For example, the DocBook “bold text style” menu contains checkboxes for `emphasis[role="bold"]`, `abbrev`, `guilabel`, `guibutton`, `guimenuitem`, `guisubmenu`, `keycap`, `keysym`. But what if a user never uses the `keycap` and `keysym` elements and often uses the `application` element? Answer: suffice for her/him to customize the entries of the “bold text style” menu.

14.1. Dialog box allowing to edit a “text style” menu item

Figure 9.12. The menu item editor



Try to use the "Paste Element" button as much as possible

The quickest and safest way to add an item to a “text style” menu is to click the "Paste Element" button. However in order to do that, you'll have to first select in your document an instance of the element you would like to add and then copy it to the clipboard (**Ctrl+C**).

Element name

The qualified name¹⁶ of the element behaving like a text style. *Make sure to specify an inline element having a mixed content.*

DocBook 5 example: `email`. Notice that there is no need to specify a namespace prefix as `http://docbook.org/ns/docbook` is generally the default namespace of DocBook 5 elements.

Attribute name

In some cases, the element you want to specify has a required attribute. This required attribute *must* be specified in this text field.

DocBook 5 example: an external `link` element has a required `xlink:href` attribute.

Attribute value

In some cases, the element you want to specify has a specific attribute value which characterizes it. This attribute value *must* be specified in this text field and the attribute name *must* be specified in the Attribute name text field.

DocBook 5 example: element: `trademark`, attribute: `class`, attribute value: `registered`.

Menu item label

The label of the menu item. Must be less than 40 characters long.

¹⁶Use the same namespace prefixes as those declared in your documents. Such namespace prefixes may be listed by selecting Tools → Declare Namespace [38].

If you leave this field empty, a label will be automatically computed out of the element name, attribute name and attribute value. In the case of the above DocBook 5 examples, the automatically computed labels are: `email`, `link[xlink:href]` and `trademark[registered]`.

Appendix A. Command line options

1. Command line

```
xxe [ advanced_option ]*  
[ [ -read ] file_or_URL_to_be_opened ]* [ -compare ]  
| -last  
| -new config template save_file_or_URL  
| -new save_file_or_URL
```

Options:

file_or_URL_to_be_opened

Open specified document in normal read/write mode.

-read *file_or_URL_to_be_opened*

Open specified document in read-only mode.

-compare

This option must be specified just after at least two *file_or_URL_to_be_opened* arguments. This option automates the comparison of two revisions of the same initial document for which change detection has been activated. (Background information about the compare revisions feature: the Tools → Changes submenu [39], the Compare tool [79].)

Examples:

```
xxe doc.xml~ doc.xml -compare  
xxe -read ../old_docs/art23.xml art23.xml -compare  
xxe art23.xml -read ../old_docs/art23.xml -compare
```

-last

Forces XXE to reopen the last document opened during the preceding editing session. Note that this option cannot be used when one or more *file_or_URL_to_be_opened*s have been specified.

See also the "Automatically reopen last opened document [106]" option for a handy alternative.

-new *category template save_file_or_URL*

Command-line equivalent to using File → New.

category

Specifies the (case-insensitive) name of the *category* of the document template. A category consists in one or more segments separated by character '/ '.

By default, the category of a document template is the name of the configuration in which this template has been specified.

Example 1: actual category : XHTML/1.0 or xhtml/1.0 (category "XHTML/1.0" includes all the templates specified in configurations "XHTML Strict" and "XHTML Transitional").

Example 2: actual category : XHTML/5.0 or xhtml/5.0 (category "XHTML/5.0" includes all the templates specified in configuration "XHTML 5.0").

Example 3: category which is in fact a configuration name: DocBook or docbook (the document templates of DocBook 4 are not sorted into categories).

Example 4: category which is in fact a configuration name: "Simplified DocBook" (the document templates of Simplified DocBook are not sorted into categories).

template

Specifies the (case-insensitive, possibly localized) name of a document template. Example: "seite (Streng)" ("Page (Strict)" in German).

Alternatively, you can specify the basename (without any extension) of the file containing the document template. Doing this should work whatever your locale. Example: "page_strict".

Use "-" to specify the first available document template. This option is mainly useful with configurations having a single document template such as "slides".

save_file_or_URL

Specifies the filename or URL of the newly created document. Note that specifying such filename does not create the corresponding save file. You'll have to use File → Save or File → Save As to actually save the newly created document.

Use "-" to let XMLmind XML Editor choose this filename for you (as it does it when you use File → New).

Examples:

- Create a new Slides¹ presentation. The filename of the new presentation is MyPresentation.xml. This file will be found in the current working directory.

```
-new slides - MyPresentation.xml
```

- Create a new XHTML 5.0 page and let XXE choose the filename for you:

```
-new XHTML/5.0 "XHTML Seite" -
```

or:

```
-new xhtml/5.0 page -
```

or:

```
-new xhtml/5.0 - -
```

- Create a new DocBook section in file sections/s4.xml (relative to the current working directory):

```
-new docbook section sections/s4.xml
```

-new save_file_or_URL

A convenient alternative to "-new category template save_file_or_URL". It creates a new document using

- last interactively selected (that is, using File → New) document template having the same file extension as save_file_or_URL if any;
- otherwise, first declared document template having the same file extension as save_file_or_URL.

Example:

```
-new page.html
```

Advanced options:

-putpref key value

Adds or replace preference specified by key/value to the set of the user's preferences.

The set of the user's preferences is normally modified using the Preferences dialog box [90].

For example, in the case of the Encoding [93] option, the preference key is encoding.

¹Requires installing the corresponding add-on.

```
xxe -putpref encoding Windows-1252
```

The reference of all preference keys is found below [148].

`-putprefs property_file_or_URL`

Similar to `-putpref` except that several key/value pairs may be read from specified property file. Example:

```
xxe -putprefs /etc/xxe/preferences.properties
```

`-delpref key`

Removes preference specified by *key* from the set of the user's preferences.

`-auth credentials`

This option can be used to specify authentication credentials for a given server. This allows to connect to the specified server without interactively asking the user to enter a username and a password.

String *credentials* consists in 6 fields: *host*, *port*, *prompt*, *scheme*, *username*, *password*, in that order, separated by a newline character ('\n'). Fields *host*, *port*, *prompt*, *scheme* can be left empty, which means: match any. The UTF-8 bytes of the string are then encoded in base-64.

Command-line utility "java -cp xxe.jar com.xmlmind.netutil.SimpleAuthenticatorModule" allows to generate such encoded string. Example: encode string "\n\nDocument Store\n\nvictoria\n\nsecret":

```
/opt/xxe/bin$ java -cp xxe.jar com.xmlmind.netutil.SimpleAuthenticatorModule \
victoria secret - "Document Store"
CgpEb2N1bWVudCBTdG9yZQoKanZpY3RvcmlhCnNlY3JldA==

/opt/xxe/bin$ xxe -auth CgpEb2N1bWVudCBTdG9yZQoKanZpY3RvcmlhCnNlY3JldA== \
http://www.acme.com/docstore/push_up.xml &
```

`-open file_or_URL_to_be_opened, -print file_or_URL_to_be_opened`

First *file_or_URL_to_be_opened* may be preceded by `-open` or `-print`, which are ignored. This may be useful when XXE is started by Java™ Web Start. Example: "javaws http://www.acme.com/xxe/xxe.jnlp -open /docs/doc.xml".

2. Preference keys

Key	Type	Default	Corresponding Option
activeInputMethodClient	boolean	false	Use integrated input method support [96]
addOpenLines	boolean	true	Add open lines [94]
addonInstallDir	user system best	best	Install add-ons in the user's preferences directory [105]
addonSource	servers directory both	servers	Download add-ons from these servers [104]
addonServers	list of URLs separated by newline characters ('\n')	See Download add-ons from these servers [104].	When <code>addonSource=servers</code> , this key specifies the list of "servers". See Download add-ons from these servers [104].
addonDir	the filename of an existing directory	none	When <code>addonSource=directory</code> , this key specifies the local directory. See Search add-ons in this directory [105].
allowAdvancedXInclude	boolean	false	Allow advanced use of XInclude [98]

Command line options

Key	Type	Default	Corresponding Option
appendSuggestionMode	none, auto or manual	manual	Append mode [97]
autoCheckForUpdates	boolean	true	Check for Updates [47]
autoCheckForUpdates.interval	positive integer	86400 (24 hours)	Specifies the minimal amount of time, in seconds, between two automated checks. See Check for Updates [47].
autoCheckForUpdates.after	integer between 10 and 14400	120 (2 minutes)	Specifies the amount of time, in seconds, after which the automated check is started. See Check for Updates [47].
autoDiffSupport	boolean	false	Automatically activate change detection [102]
autoSaveInterval	-1000000-1000000 (number of operations; negative means disabled)	-300	Max. modifications before saving [94]
autoSaveTimeout	10-86400 (number of seconds)	30	Idle time (seconds) before saving [94]
autoSelectAttribute	never, placeholder or required	placeholder	Automatically select an attribute [97]
autoSpellCheck	enumeration (never, always, seeConfig)	seeConfig	Activate if this is specified in the configuration file [102]
button2PastesSystemSelection	boolean	false	Clicking with middle button pastes system selection [96]
charsSavedAsEntityRefs	specification as in Always save these characters as entity references [93]	empty string	Always save these characters as entity references [93]
copyDocumentTemplate	boolean	false	Immediately save newly created document [90]
defaultBackground	3 0-255 integers separated by spaces (specify red, green, blue)	255 255 255	Default background [100]
defaultFontIsSerif	boolean	false	Default font family [100]
defaultFontSize	8-24 (pt)	12	Default font size [100]
defaultForeground	3 0-255 integers separated by spaces (specify red, green, blue)	0 0 0	Default text color [101]
documentCache	integer between 0 and 5000. Specify 0 to disable the cache.	100	Document cache [109]
dontIndentUnconstrainedDocs	boolean	false	Do not indent unconstrained documents [94]
encoding	any encoding supported by Java™ or "ORIGINAL_ENCODING"	UTF-8	Encoding [93]
ensureSaveFileHasExtension	boolean	true	Ensure that a save filename has an extension [94]

Command line options

Key	Type	Default	Corresponding Option
selectedFeatures	list of feature names (OpenFolder, IncludeTool, etc), separated by newline characters	All features except DeveloperTools and DocumentCacheTool.	Section 5.11.1, "Features Options" [107]
filterDuplicateIDs	boolean	true	Filter duplicate ID errors found in modular documents [101]
fontSize	8-24 (pt) or -1 (means: system's default)	-1	Font size [106]
ftpProxyHost	host name or host address	none	FTP proxy [111]
ftpProxyPort	integer	80	(FTP proxy) Port [111]
guessIgnorableWhitespace	boolean	true	When no DTD or schema, guess ignorable white space [90]
headerBegin [footerBegin]	text	empty [%F]	Begin [95]
headerColor [footerColor]	3 0-255 integers separated by spaces (specify red, green, blue)	128 128 128 [128 128 128]	Color [96]
headerEnd [footerEnd]	text	empty [%P]	End [95]
headerMiddle [footerMiddle]	text	empty [empty]	Middle [95]
helperApplications.entries	string	see File types [102]	File types [102]
	<p>The format of this string is:</p> <pre> entries --> (entry ('\n' entry)*)? entry --> mime_types ':' extensions ':' magic_strings ':' xml_name_patterns ':' command mime_types --> (mime_type (',' mime_type)*)? extensions --> (extension (',' extension)*)? magic_strings --> (magic_string (',' magic_string)*)? xml_name_patterns --> (xml_name_pattern (',' xml_name_pattern)*)? In any of the above fields, character ':' must be escaped using "\072" and character ',' must be escaped using "\054". magic_string --> HEXADECIMAL_NUMBER xml_name_pattern --> ('{' namespace_URI? '}')? local_part One of local_part or namespace_URI may be equal to "*". </pre>		
helperApplications.defaultViewer	string	see Default viewer [103]	Default viewer [103]
httpProxyHost	host name or host address	none	HTTP proxy [110]
httpProxyPort	integer	80	(HTTP proxy) Port [110]
httpsProxyHost	host name or host address	none	HTTPS proxy [110]
httpsProxyPort	integer	443	(HTTPS proxy) Port [110]

Key	Type	Default	Corresponding Option
indent	integer (negative means not indented)	2	Indentation [93]
ignoreStyleSheetPI	boolean	false	Ignore <code><?xml-stYLESHEET?></code> [91]
infoAboutReadOnlyInclusions	boolean	true	Inform about non-editable document parts [91]
imageViewportMode	image, thumbnail or box	image	Display images [100]
locale	language (e.g. fr) or language_COUNTRY (e.g. fr_CA) or - (means default)	-	Locale [107]
lockLocalDocuments	boolean	false	Lock documents stored on the local filesystem [91]
lockMode	shared, exclusive or none	exclusive	Preferred lock mode [92]
lockOwner	string	empty string which implies <code>user_name@host_name</code>	Identifier as a lock owner [92]
lockTimeout	integer (number of seconds)	86400 (that is, 24 hours)	<p>After specified number of seconds, a lock is to be automatically removed by the server (typically WebDAV) hosting the locked document.</p> <p>A negative or null value may be used to create locks which should never expire.</p> <p>Note that there is no need to create permanent locks as XXE automatically “refreshes” the lock each time the locked document is being saved.</p> <p>One notable exception is Subversion, which when used through WebDAV, does not support locks having a finite lifetime.</p> <p>This user preference cannot be specified using the GUI of XXE. You need to use the <code>-putpref</code> command-line option [147] for that.</p>
lookAndFeelClassName	Java™ class name of a PLAF or - (means default)	-	Style [107]
makeBackupFiles	boolean	true	Before saving, make a backup copy of the file [95]
maxLineLength	positive integer	78	Max. line length [93]
maxUndo	1-100	20	Max. undo actions [97]
monospaceFontFamily	font family name	Monospaced	Monospaced font family [100]

Command line options

Key	Type	Default	Corresponding Option
nonProxyHosts	list of host names, host addresses and domain names (e.g. .acme.com) separated by spaces	"localhost 127.0.0.1"	No proxy for [111]
onlyShowSuggestions	boolean	false	In the choice list, only show suggestions [97]
onUpdateDocumentSet	one or more of transclude, redraw, validate separated by commas	validate	Section 5.2.1, "Document Set options" [92]
overrideConfiguration	boolean	false	Override settings specified in config. files [94]
proxySettings	none system application	system	Use system settings [110]
quickStartCache	boolean	true	Quick Start cache [108]
reopenLastOpenedFile	boolean	false	Automatically reopen last opened document [106]
saveCharsAsEntityRefs	boolean	true	Save characters outside encoding as entity references [93]
schemaCache	integer between 0 and 100. Specify 0 to disable the cache.	10	Schema cache [109]
screenResolutionWhenPrinting	50-100 (Dot Per Inch)	100	Screen resolution [95]
sansSerifFontFamily	font family name	SansSerif	SansSerif font family [100]
serifFontFamily	font family name	Serif	Serif font family [100]
showBothViews	boolean	false	Show both tree and styled views [104]
showValidityPaneOnSave	boolean	false	Automatically show Validity tool [102]
singleInstance	boolean	false	Use a unique instance of XMLmind XML Editor [106]
singleInstancePort	1-65535	49987	Port [106]
socksPassword	encoded string	the empty string	(SOCKS) Password [111]
socksProxyAuthentication	boolean	false	Authenticate SOCKS user [111]
socksProxyHost	host name or host address	none	SOCKS proxy [111]
socksProxyPort	integer	1080	(SOCKS proxy) Port [111]
socksUser	string	the login name of the user	(SOCKS) User name [111]
spreadsheetAutoRecalc	boolean	true	Open spreadsheets in auto-update mode [103]
spreadsheetMaxIterations	2-2000	20	Maximum number of iterations allowed for calculations in spreadsheet [104]
treeViewAtRight	boolean	false	Place tree view at right [104]
treeViewFontsAndColors	(without a space after ';') "markupFont; textFont;	(without a space after ';') "SansSerif-Bold; Sans-	Fonts and colors [101]

Command line options

Key	Type	Default	Corresponding Option
	<i>verbatimTextFont</i> ;	Serif; Monospaced;	
	<i>backgroundColor</i> ;	ffffff; e0f0f0;	
	<i>readOnlyColor</i> ;	markup-808080; 8b008b;	
	<i>Color</i> ;	<i>elementNameColor</i> ;	008b8b; 00008b;
	<i>attributeNameColor</i> ;	000000; 8b1c62;	
	<i>attributeValueColor</i> ;	006400; f0f0f0;	
	<i>textColor</i> ;	<i>commentColor</i> ;	ffe0e0; e0ffe0"
	<i>piColor</i> ;	<i>textBorderColor</i> ;	<i>commentBorderColor</i> ;
	<i>piBorderColor</i> ;	<i>piBorderColor</i> ;	
treeViewFontSize	8-24 (pt)	12	Base font size [101]
treeViewShowAttribute	boolean	true	Show attributes [101]
treeViewShowComment	boolean	true	Show characters in comment nodes [101]
treeViewShowPI	boolean	true	Show characters in processing-instruction nodes [101]
treeViewShowText	boolean	true	Show characters in text nodes [101]
treeViewPercent	10-90	33	Tree view width [104]
underlineHeader [overlineFooter]	boolean	true	Underline [Overline] [96]
updateInclusionsOnSave	boolean	true	Automatically update references in modular documents [95]
useHelperDocumentType	boolean	true	When no DTD or schema, simulate a DTD [90]
useNativeFileChooser	boolean	true on the Mac, false on the other platforms	Use the native file chooser in preference to the multiplatform file chooser [90]
useURLChooser	boolean	false	Use the URL Chooser [19]
verticalSplit	boolean	false	Split Windows Vertically [46]
warnAboutAdvancedXInclude	boolean	false	Warn about advanced use of XInclude [98]
warnAboutCorruptedEditSession	boolean	true	When the change detection [39] has been activated for a given document and this document is modified outside XXE, the <?xxe-serial-numbers> processing-instruction which allows to use the Compare tool [77] to compare two revisions of this document, becomes out of sync with the contents of the document. When this is the case, a warning dialog box is displayed informing the user

Key	Type	Default	Corresponding Option
			<p>that the <code><?xxe-serial-numbers></code> processing-instruction had to be recreated from scratch.</p> <p>When this preference key is set to <code>false</code>, the warning dialog box (which may “frighten” the user) is not displayed.</p> <p>This user preference cannot be specified using the GUI of XXE. You need to use the <code>-putpref</code> command-line option [147] for that.</p>
<code>wrapLongWords</code>	boolean	<code>false</code>	Wrap words wider than available space [99]

3. Environment variables

The following environment variables are convenient to use while customizing or extending XXE. However, these variables are not really meant to be used in production.

Notes:

- All the scripts used to start XXE (that is, `xxe`, `xxe.bat` and `xxe.jstart`, `convertdoc`, `convertdoc.bat`) automatically define system properties corresponding to the following environment variables.
- You cannot use the following environment variables on the Mac² due to limitations in Apple's Java™ launcher.

Variable name	Value	Description
<code>XXE_ADDON_PATH</code>	List of directory filenames separated by semi-colons (';').	<p>Important</p> <p>Do not forget to clear, or even disable, the Quick Start cache [108] before using <code>XXE_ADDON_PATH</code>.</p> <p>All the directories referenced in this list are recursively scanned by XXE during its startup to dynamically discover add-ons.</p> <p>Linux example:</p> <pre>~\$ XXE_ADDON_PATH="my_docbook;+" convertdoc \ docb.toHTML doc.xml -u out</pre> <p>More info in chapter "The lookup phase during XXE startup" of Section 1, “Dynamic discovery of add-ons” in <i>XMLmind XML Editor - Configuration and Deployment</i>.</p>

²This is the case only with `XMLEditor.app`, the application bundle contained in the `.dmg` distribution. If you are a local guru or a consultant you may prefer to download and install the `xxe-*.zip` or `xxe-*.tar.gz` distribution rather than the `xxe-*.dmg` distribution.

After unzipping this archive in a directory of your choice, XMLmind XML Editor may be started using the `XXE_install_dir/bin/xxe` shell script. Unlike `XMLEditor.app` which leverages Apple's Java™ launcher, the `xxe` shell script makes it easy working with environment variables such as `XXE_GUI`, `XXE_ADDON_PATH`, etc.

Variable name	Value	Description
XXE_GUI	Relative or absolute filename or URL of an XXE GUI specification (.xxe_gui) file. A relative filename is relative to the current working directory.	Specifies which GUI to use for the newly started XXE. Linux example: <pre>~\$ XXE_GUI=my_gui.xxe_gui xxe &</pre> More info in XMLmind XML Editor - Customizing the User Interface.
XXE_PREFS_DIR	Relative or absolute filename of a directory. A relative filename is relative to the current working directory.	Specifies a custom user preferences directory. This directory is created if it does not already exist. Linux example: <pre>~\$ XXE_PREFS_DIR=test xxe &</pre>

4. System properties

In principle, there is no need to use the following, very low-level, system properties.

Property name	Value	Description
XSL_FO_PROCESSORS	List of XSL-FO processor names separated by semi-colons (;).	This property contains the names of all XSL-FO processor plug-ins. Examples: "FOP;XFC", "XEP". For use by some XSLT style sheets.
XXE_ADDON_DOWNLOAD_LOCATION	List of ".xxe_addon" URLs separated by semi-colons (;).	Clicking on the Reset button of the "Install add-on" preferences of the Preferences dialog box resets the list of download URLs to the value specified by this property. If this property is not set, by default, the list of download URLs is <ul style="list-style-type: none">• http://www.xmlmind.com/xmlmind/xmlmind/usercontrib/list.xxe_addon• http://www.xmlmind.net/xmlmind/xmlmind/download/list-{\$XXE_VERSION}.xxe_addon (for example, variable <code>{\$XXE_VERSION}</code> is replaced by "3_5_2" if the version of the running XML Editor is v3.5.2)• http://www.xmlmind.net/xmlmind/xmlmind/download/list.xxe_addon
XXE_APPLET_FORCED_PREFERENCES	List of user preference name/value pairs separated by whitespace. Values containing space characters must be quoted.	Specifies the user preferences which are <i>forced</i> by an applet version of XXE. Some user preferences are forced because values other than the forced ones do not make sense in the context of this applet. For example, the Viewer applet forces <code>autoSpellCheck [102]</code> to never. The default value of this system property depends on the kind of applet. For example, it's <code>treeViewShowText true treeViewShowAttribute true treeViewShowPI true treeViewShowComment true copyDocumentTemplate false linkCheckerMode local</code> for the Editor1 and Editor2 applets. Applets deployed by third-party integrators should use <code>-putpref [147]</code> arguments rather than specifying this system property in <code>xxe.jnlp</code> .

Property name	Value	Description
XXE_CATALOG_RESOLVER_VERBOSITY	Strictly positive integer (the larger, the more verbose)	Prints on the console messages tracing the resolution by the XML catalog resolver of system identifiers.
XXE_CONFIRM_CREDENTIALS_DELAY	Strictly positive number of milliseconds	<p>Workaround for the following problem: “when opening a document stored on a server requiring user authentication (e.g. a WebDAV server), a user who typed an incorrect username or password is never prompted again for her/his credentials”.</p> <p>Example: <code>-DXXE_CONFIRM_CREDENTIALS_DELAY=1000</code>, means wait for at least 1000 milliseconds before considering that the credentials specified by the user have been accepted by the server.</p> <p>When system property <code>XXE_CONFIRM_CREDENTIALS_DELAY</code> has been specified to an appropriate number of milliseconds, a user who typed an incorrect username or password is automatically prompted again for her/his credentials. However, this workaround, based on a heuristic, may be tricky to configure and may be not usable for some protocols. For example, it seems to work for HTTP and it gets in the way for FTP.</p>
XXE_DAV_TRACE	Any (example: 1; suffice to <i>set</i> this property).	Causes the WebDAV client to print DAV requests and responses on the console.
XXE_DAV_USE_SIMPLE_REFS	Any (example: 1; suffice to <i>set</i> this property).	<p>Causes the WebDAV client to use absolute paths rather than full URIs in the <code>Destination</code> and <code>If</code> headers.</p> <p>Doing this is allowed by RFC 4918, but not by (obsolete) RFC 2518.</p> <p>This may be useful when operating through a reverse proxy that does rewrite the <code>Host</code> request header, but not WebDAV-specific headers.</p>
XXE_DAV_URI_ENCODING_USES_8859_1	Any (example: 1; suffice to <i>set</i> this property).	<p>Used by the WebDAV client.</p> <p>Specifies that the WebDAV server expects and returns URIs where accented characters (to make it simple) are escaped using the customary <code>%HH</code> form but where <code>HH</code> is the hexadecimal code of an ISO-8859-1 character.</p> <p>The standard mandates <code>HH</code> to be UTF-8 codes, not ISO-8859-1 codes.</p> <p>For example, this flag is needed for Apache/mod_dav running on an “old” Linux server where the file system encodes filenames using ISO-8859-1.</p>
XXE_FOP_CONFIG	URL of a user-defined FOP configuration file	<p>Specifies the location of a FOP configuration file.</p> <p>Note that, because this URL is resolved using the XML catalogs of XXE, this allows to bundle a custom FOP configuration file with the FOP plug-in, prior to deploying XXE using Java™ Web Start.</p> <p>Procedure:</p> <ol style="list-style-type: none"> 1. Create the custom FOP configuration file in <code>FOP_plugin_dir/conf/fop.conf</code>.

Property name	Value	Description
		<p>2. Create XML catalog <code>fop_catalog.xml</code> in <code>FOP_plugin_dir/</code>. This file should contain:</p> <pre data-bbox="834 327 1394 488"><catalog xmlns="urn:oasis:names:tc:entity:~ xmlns:xml:catalog"> <rewriteURI uriStartString="fop-plugin:" rewritePrefix=". " /> </catalog></pre> <p>3. Run deploywebstart in <i>XMLmind XML Editor - Configuration and Deployment</i>.</p> <p>4. Add</p> <pre data-bbox="834 629 1394 678"><property name="XXE_FOP_CONFIG" value="fop-plugin:conf/fop.conf" /></pre> <p>to the <code>xxe.jnlp</code> file generated by deploywebstart.</p>
XXE_FTP_DISABLE_SESSION_RESUMPTION	Any (example: 1; suffice to <i>set</i> this property).	<p>Used by the FTP virtual drive plug-in. Disable session resumption (by default, it's enabled).</p> <p>Session resumption is a feature of SSL/TLS, which speeds up the establishment of secure connections by caching certain cryptographic parameters during the first connection, such that they may be used in subsequent connections. This is particularly handy for FTPS which opens a new connection for each file transfer. Occasionally it can cause problems when establishing secure connections on data-channels, so this flag is provided for disabling the feature and thus forcing a full exchange of cryptographic data for every file.</p> <p>For example, when XXE is a client of the <code>vsftpd</code> FTP server:</p> <p>With <code>vsftpd</code> option <code>require_ssl_reuse=YES</code> (default) This system property must not be set.</p> <p>With <code>vsftpd</code> option <code>require_ssl_reuse=NO</code> This system property must be set (e.g; <code>-DXXE_FTP_DISABLE_SESSION_RESUMPTION=1</code>)</p>
XXE_JAVA_IMAGE_TOOLKIT_EXCLUDE	List of file extensions separated by semi-colons (;).	<p>Example: <code>-DXXE_JAVA_IMAGE_TOOLKIT_EXCLUDE="bmp;wbmp"</code></p> <p>This would prevent the built-in Java™ 1.5 image toolkit from handing BMP images.</p> <p>This is useful in case you find an external image toolkit which handles specified image extensions better than the built-in Java™ image toolkit.</p>
XXE_NETWORK_TIMEOUT	A number of milliseconds.	<p>Specifies the default timeout used for creating network connections and reading responses. A negative or null number means: wait indefinitely.</p> <p>Used at various places in XMLmind XML Editor, for example by WebDAV and FTP virtual drives.</p>

Property name	Value	Description
		Built-in default value is 120,000ms (2mn).
X X E _ P R E - DECLARE_NAMESPACE_PREF- FIXES	Any value. Suffice for this system property to be set.	<p>Slightly changes the way namespace prefixes are declared in an XML save file, when the document being saved conforms to a DTD.</p> <ul style="list-style-type: none"> • -DXXE_PREDECLARE_NAMESPACE_PREFIXES=1 means: pre-declare on the root element <i>all</i> the namespace prefixes found in the document (regardless on whether this is allowed by the DTD). • The standard method is: declare a namespace prefix when needed to (regardless on whether this is allowed by the DTD). <p>Both methods are flawed. In the general case, XXE simply cannot generate XML documents in which the <code>xmlns</code> attributes are validated against a DTD.</p>
XXE_SHOW_SEMANTIC_ERRORS	Any value. Suffice for this system property to be set.	<p>Allows to make cross-reference errors less important than semantic warnings and errors (which are typically reported by Schematron validation). This has an influence of the Validity icon found at the bottom left of the main window and on the contents of the Validity tool.</p> <p>This system property is examined once and for all. Therefore it is best to specify it as a command-line argument (e.g. <code>-DXXE_SHOW_SEMANTIC_ERRORS=1</code>) or in a <code>customize.xxe</code> file (e.g. <code><property name="XXE_SHOW_SEMANTIC_ERRORS">1</property></code>). It may also be specified in a <code>.xxe</code> configuration file. However, in this case, you'll have to make sure that this configuration file is loaded before any other one.</p>
XXE_STRICT_CONREF	Any value. Suffice for this system property to be set.	When transcluding DITA conrefs, check the compatibility of the domains of the referencing document with the domains of the referenced document.
XXE_XEP_CONFIG	URL of a user-defined XEP configuration file	Same as <code>XXE_FOP_CONFIG</code> [158], but applies to RenderX XEP rather than to Apache FOP.

Appendix B. Description of the XML differencing algorithm implemented in the Compare tool

1. Comparison with other approaches

	Generic XML Differencing Tool	XMLmind Compare Tool	Change Tracking
Main function	Show <i>what</i> has been changed.	Show <i>what</i> has been changed. Inserting remarks [38] in a revision allows to specify by whom, when and why.	Show <i>how</i> changes have been made, by whom, when and possibly why.
How does it work?	Compare two arbitrary XML files.	Compare two revisions of the same initial document (in which change detection has been activated [39]).	Record insertions and deletions in the revised document, typically in the form of proprietary processing-instructions.
Needs to be activated for a given document	No.	Yes.	Yes.
Performance penalty when loading and saving the document	No.	Not significant.	Possibly yes, when the number of changes becomes large.
Performance penalty when editing the document	No.	No.	Possibly yes, when the number of changes becomes large.
Increases the size of the revised document	No.	Yes. The increase in size depends on the number of elements contained in the document. See Section 2, "Elements are given serial numbers" [160].	Yes. The increase in size depends on the number of changes made to the document.
Detects all changes	Highly depends on the quality of the underlying algorithm. Yes, for some algorithms.	Yes.	No, cannot handle attributes.
Allows to accept or reject one or more changes	Yes.	Yes.	Yes.
Validity of the document after accepting or rejecting one or more changes	Well-formed, may be valid.	Well-formed. In practice, generally valid.	Valid.

See also: "*Approaches to change tracking in XML*" by Robin La Fontaine.

2. Elements are given serial numbers

The XML differencing algorithm implemented in the Compare tool [77] requires all the elements to have a globally unique ID. This GUID, which is called a *serial number*, is assigned by XMLmind XML Editor (XXE for short) to an element during its lifetime and will not change no matter how you'll modify the content of this element.

Menu item Tools → Changes → Activate Change Detection [39] merely instructs XXE to systematically assign a serial number to all the elements contained in the document being edited.

These serial numbers are all stored in a single `<?xxe-serial-numbers>` processing-instruction. This processing-instruction is added after the root element of the document. Example:

```
<?xml version="1.0" encoding="UTF-8"?>

<section version="5.0" xmlns="http://docbook.org/ns/docbook">
  <title>Pangrams</title>
  ...
</section>

<?xxe-serial-numbers guqrbopr john
guqrevs5 bart
(1z141z5 (1z141z6) (1z141z7 (3y283y9) (3y283ya)) (1z141z8) (3y283yb))?>
```

Notes:

- Adding or deleting elements using a text or XML editor other than XXE will cause the change detection to be automatically deactivated the next time you'll reopen the document in XXE. Any other kind of change, for example text or attribute changes, poses no problem.
- The size of the `<?xxe-serial-numbers>` processing-instruction is proportional to the number of elements contained in a document. This size can be large, for example, 250Kb for a 2.1Mb DocBook document. However note that this size does not depend on the number of changes made to the document.
- Activating change detection should not slowdown XXE perceptibly. That's why there is an option [102] which allows to automatically activate change detection in all the documents created and edited using XXE.

3. A simple XML differencing algorithm

The XML differencing algorithm implemented in the Compare tool [77] may be described as follows:

1. Begin by comparing the root element of the original document to the root element of the revised document.
2. If the element in the original document (let's call it the original element) and the element in the revised document (let's call it the revised element) have the same serial number, then compare their contents. Otherwise consider that these elements are completely different.
3. Trivially compare the attributes of the original element to the attributes of the revised element.
4. The child nodes of an element are converted to a sequence of *comparable items* prior to be compared:
 - A text item is added to the sequence for each *word* contained in the element¹.
 - A serial number item is added for each child element contained in the element.
 - A comment item is added for each XML comment contained in the element.
 - A processing-instruction item is added for each processing-instruction contained in the element.
 - An inclusion directive item is added for each range of included nodes contained in the element.

Example:

```
<p>The <i>quick <b>brown</b></i> fox jumps over the <b>lazy</b> dog.</p>
```

¹If the element has or inherits `xml:space="preserve"`, a text item is added for each *text line* contained in the element.

gives:

```
"The ", element_7223, " fox", " jumps", " over", " the ", element_10087, " dog."
```

5. The sequence of items of the original element is compared to the sequence of items of the revised element using the well-known Unix **diff** algorithm² here applied to comparable items rather than to text lines:
 - Two text items are equal if they contain exactly the same text.
 - Two serial number items are equal if they have the same serial number.
 - Two comment items are equal if they contain exactly the same text.
 - Two processing-instructions items are equal if they have the same target and contain exactly the same text.
 - Two inclusion directive items are equal they have exactly the same XML contents. For example, `<xi:include href="vars.xml" xpointer="copyright"/>` and `<xi:include xpointer="copyright" href="vars.xml"/>` are equal, while `<xi:include href="vars.xml" xpointer="copyright"/>` and `<xi:include href="vars.xml" xpointer="notice"/>` differ.
6. Compare each child element of the original element to the child element element having the same serial number in the revised element. Proceed as explained starting from the Compare attributes [160] step.

Notes:

- The above algorithm is fast and 100% accurate by design.
- The comparison of attributes, comments and processing-instructions is not as fine-grained as the comparison of elements. For example, if attribute `class` is `"ui-widget"` in the original element and `"ui-widget ui-state-highlight"` in the revised element, the algorithm will tell you that attribute `class` has changed. It will not tell you that word `"ui-state-highlight"` has been added at the end of attribute `class`.
- Included contents (also called transcluded contents) found in the original element and in the revised element are never compared. Instead, the corresponding *inclusion directives* (`xi:include`, DITA `conref`, etc) implicitly³ found in the original element and in the revised element are compared. In our opinion, this is the right thing to do, however this design choice leads to the following pitfall:

Menu item Edit → Reference → Untransclude Reference [33] allows to explicitly replace some included content by the corresponding inclusion directive. If you do this in a document, save the document to disk and then quit the application, XXE will fail to reactivate the change detection the next time you'll reopen this document.

²"A file comparison program" by Webb Miller and Eugene W. Myers, 1985.

³By default, inclusion directives are always transcluded by XXE. Hence such directives do not really exist in the document being edited. Instead, they are recreated by XXE each time the document is saved to disk.