



XMetal[®] 19 Author

User's Guide

2024 JustSystems Canada, Inc.



About JustSystems

JustSystems is a leading global software provider with three decades of successful innovation in office productivity, information management, and consumer and enterprise software. With over 2,500 customers worldwide and annual revenues over \$110M, the company is continuing a global expansion strategy that includes its enterprise software offering called xfy, its XMetaL content lifecycle solutions, and its pioneering work in the definition of the XBRL standard and commercialization of enabling technologies. A Gartner "Cool Vendor" selection in 2008, JustSystems is also a member of KMWorld's 100 Companies that Matter in Knowledge Management for 2008 and the 2007 EContent 100. XMetaL is a 2008 KMWorld Trend-Setting Product. Major strategic partnerships include IBM, Oracle and EMC. For more information, please visit <http://www.justsystems.com>.

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Contents

Welcome to XMetaL Author.....	8
Quick tour.....	9
Document views.....	9
Specify tag and tag text colors.....	11
Structure View.....	12
Panels.....	13
Toolbars.....	16
Display mode.....	20
Licensing	21
Activating XMetaL Author.....	21
Removing XMetaL Author License.....	22
Access Key.....	22
Customizing the user interface.....	23
Custom toolbars and menus.....	23
Create a toolbar.....	24
Create a button or menu.....	24
Set customizable buttons in Whiteboard toolbar.....	25
XMetaL Styling Assistant.....	25
XMetaL Styling Assistant Editor.....	26
Setting style properties.....	36
View support for properties and selectors.....	38
Assets (unsupported).....	42
Macros.....	43
Macro design guidelines.....	44
Record a macro.....	45
Create a keyboard shortcut.....	45
Associate a macro with a toolbar button.....	45
Associate a macro with a menu item.....	46
XMetaL API for providing asynchronous operations.....	46
Options.....	47
Managing documents.....	51
Creating documents.....	51
Templates.....	52

Opening and closing documents.....	53
If XMetaL cannot find the DTD, Schema, or Rules file.....	54
WebDAV-enabled folders.....	55
Managing open documents.....	55
Saving documents.....	57
Character encoding.....	58
Creating well-formed XML documents.....	60
Defining an element.....	60
Defining an attribute.....	61
Inline attribute editor.....	62
Archiving linked documents.....	63
Printing.....	64
Working with a repository.....	65
Editing documents.....	67
Selecting tags and text.....	67
Finding and replacing text.....	68
Search patterns.....	69
Finding and replacing elements.....	70
Finding and replacing entities.....	71
Checking your spelling.....	71
Using the spell checker.....	72
Using the background spell checker.....	76
Main word lists.....	78
User word lists.....	79
Language settings.....	81
Checking a selected word's spelling and synonyms.....	81
Using the thesaurus.....	82
Thesaurus options	83
Tracking your changes.....	84
Cross-file Operations.....	85
Finding and replacing across files.....	85
Spell checking across files.....	87
Replacing results across files.....	88
Running cross-file operations.....	89
Results pane.....	90
Text case assistant.....	94
Working with Markdown documents.....	95

Authoring structured content.....	96
Validation and rules checking.....	96
Validation using Schematron.....	97
XMetaL customizations.....	99
Working with elements.....	100
In-place, look-ahead element list.....	102
Setting attribute values.....	103
Inserting and editing lists.....	103
Images.....	105
Tables.....	106
Working with entities.....	115
Create a text entity.....	116
Create an external entity.....	116
Create a graphic entity.....	116
Special characters and symbols.....	116
Inserting CDATA sections.....	117
Inserting comments.....	118
Inserting processing instructions.....	119
Importing databases.....	120
Choosing a database.....	120
Creating a query.....	121
Table joins.....	122
Formatting table output.....	123
Keyboard shortcuts.....	125
Quick navigation tool.....	130
Finding and executing XMetaL commands.....	130
Viewing and customizing favorites.....	133
Application utilities.....	137
Document Ex commands.....	138
Bookmarks and comments.....	142
Adding bookmarks and comments.....	142
Bookmark manager.....	144
Comments UI.....	148
Context Menu for Bookmark	151
XMetaL utilities.....	154
Find text on WEB.....	154
Find text on WEB utility toolbar.....	156

Settings in WEB Browser	157
Context Menu for Web Operations	160
Integration with ChatGPT, Bing AI, and Google Gemini.....	163
Toolbar.....	167
Settings.....	169
Context Menu for AI Assistant.....	172
Integration with Grammarly.....	175
Toolbar.....	178
Context Menu for XGrammarly.....	179
XMetaL Project.....	183
Docs Desk.....	188
Edit.....	189
Set/Update Titles.....	189
Find.....	190
Find Document.....	190
Find Content.....	192
Tools.....	197
Archive Project.....	197
Spell Check Project.....	198
Resources Map.....	199
Links.....	202
Insert References.....	202
Find Cross-References Candidates.....	206
Set Keywords.....	209
Find Keywords Candidates.....	211
Find and Validate Links.....	213
3rd party viewers.....	216
Appendix A: XML basics.....	217
Valid vs. well-formed documents.....	218
DTDs and Schemas.....	218
Document type declarations.....	218
Elements.....	220
Attributes.....	220
Entities.....	221
CDATA sections.....	223
Comments.....	223
Processing instructions.....	223

Appendix B: W3C XML Inclusion (XInclude) Support.....224

Appendix C: XMetaL Licensing Server.....226

 Installing XMetaL Licensing Server.....226

 Using XMetaL Licensing Server Admin.....226

Glossary.....228

Index.....233

Welcome to XMetaL Author

XMetaL Author is a graphical editor for creating and editing structured documents. It provides a highly configurable user interface and a powerful array of authoring tools. You can use XMetaL to create XML documents in any language, regardless of your XML knowledge.

The user interface features multiple document views, customizable toolbars, and tear-off menus. The Resource Manager provides drag-and-drop management of text blocks, images, and other assets.

You can tailor XMetaL Author to fit your organization's workflow and graphical standards through customizations. A sample customization, Journalist, is provided as an example. Customizations determine how your information is presented and much of the authoring functionality.

Other XMetaL publications

APIs and other programming features such as scripts, forms, controls, and macros are described in the *XMetaL Programmer's Guide*. The *XMetaL Customization Guide* describes how to create and deploy customizations. These publications are distributed with XMetaL Developer and are available for download from the JustSystems website at <http://na.justsystems.com>.

Feedback

Send your comments or questions about XMetaL documentation to [XMetaL Support](#).

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Quick tour

The user interface provides access to all editing operations and allows you to create a custom environment that is tailored to your preferences. You can select a preferred view and choose panes and toolbars to frequently used tasks.

Getting help

Context-sensitive Help is provided in all XMetaL Author dialogs. You can also access online Help and search for information through the **Help** menu.

Sample files

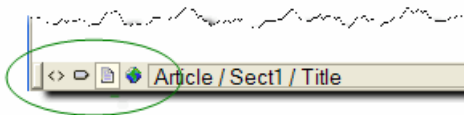
Sample files are provided to demonstrate various aspects of XMetaL Author functionality. When a document is open, you can view sample files through **Help > Samples**.

Your working copies of the sample files are saved to the following location:

`%APPDATA%\SoftQuad\XMetaL\<version>\Samples`. You can restore the sample files by deleting this folder and re-opening the sample files.

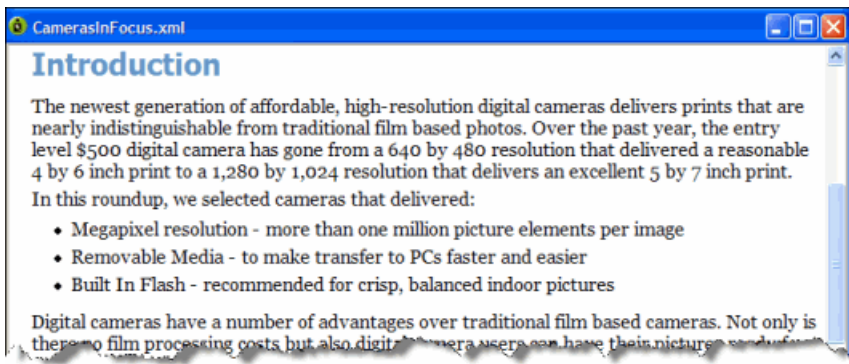
Document views

You can choose a view for your document through the **View** menu or from the view buttons in the document status bar. The view you select depends on how you want to work with your document. You can set view options, including a default view through **Tools > Options**.



Normal view

In Normal view, your documents appear similar to how they would appear in a word processor. Only the content of your document is visible; the underlying markup is not displayed. Formatting is determined by a Cascading Style Sheet. Structured authoring commands are available from the menus, and rules checking is active.

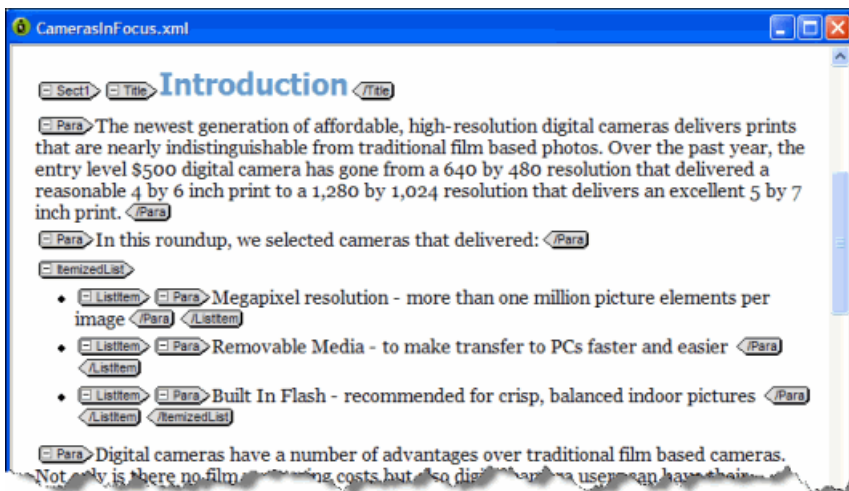


Tags On view

In Tags On view, both the content and markup (for example, element start and end tags) of your document are visible. This view is useful for navigating the element hierarchy and positioning the insertion point. Formatting is determined by a Cascading Style Sheet. Structured authoring commands are available from the menus, and rules checking is active.


Here are some of the features available in Tags On view:

- You can select an entire element by clicking its start or end tag.
- You can collapse or expand tags through the right-click menu.
- You can view all set attributes by resting the pointer over a tag.



Plain Text view

In Plain Text view, the markup and content of your document are displayed as text only. Rules checking is not active in Plain Text view, and you are not prevented from entering invalid markup. However, you can still validate your document.

 **Note:** Not all commands are available in Plain Text view.

Plain Text view is color-coded so that you can easily identify elements, attributes, and text. You can set plain text view options, including line numbering, colors, and wrapping.

If you enter markup characters (for example, '<', '>', and '&') in Plain Text view, they are interpreted as markup when you switch to another view. If you want to prevent the characters from being interpreted as markup, you need to enclose them in a CDATA section.

Page Preview

Page Preview allows you to view your document using a Web browser. This view is read-only; you cannot edit your document in Page Preview. Formatting is determined by a Cascading Style Sheet.



Note: The default browser is Microsoft Internet Explorer.

To do this	Follow these steps
View a document using the default browser	Click View > Page Preview
View a document using a browser	Click File > Preview in Browser and select a browser
Add a browser to the list of available browsers	Click File > Preview in Browser , click Add and select a browser
Remove a browser from the list of available browsers	Click File > Preview in Browser , select a browser and click Delete



Tip: You can also use the Preview toolbar to view a document using a selected browser. Click a blank Preview toolbar button to associate it with a Web browser.

Related Links

[Options](#) on page 47

You can set options through the **Tools** menu.

[Inserting CDATA sections](#) on page 117

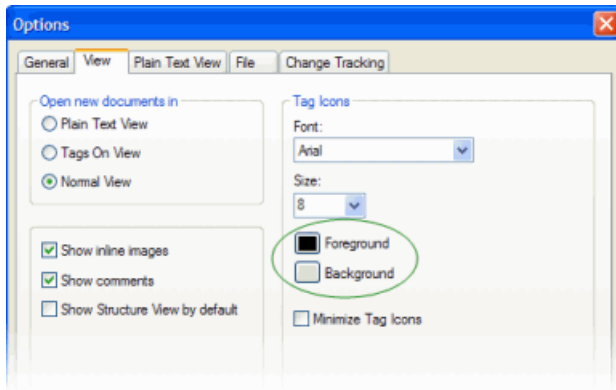
You can insert CDATA sections using the **Insert** menu.

[Authoring structured content](#) on page 96


When you create a document instance of a DTD or Schema in Normal or Tags On view, XMetaL Author ensures that your content is valid by guiding you through the authoring process. You do not need to have a complete understanding of XML to begin authoring structured content.

Specify tag and tag text colors

1. Click **Tools > Options** and click the **View** tab.
2. Click one of the following:
 - **Foreground** (for tag text)
 - **Background** (for tag background)



3. Choose a color.

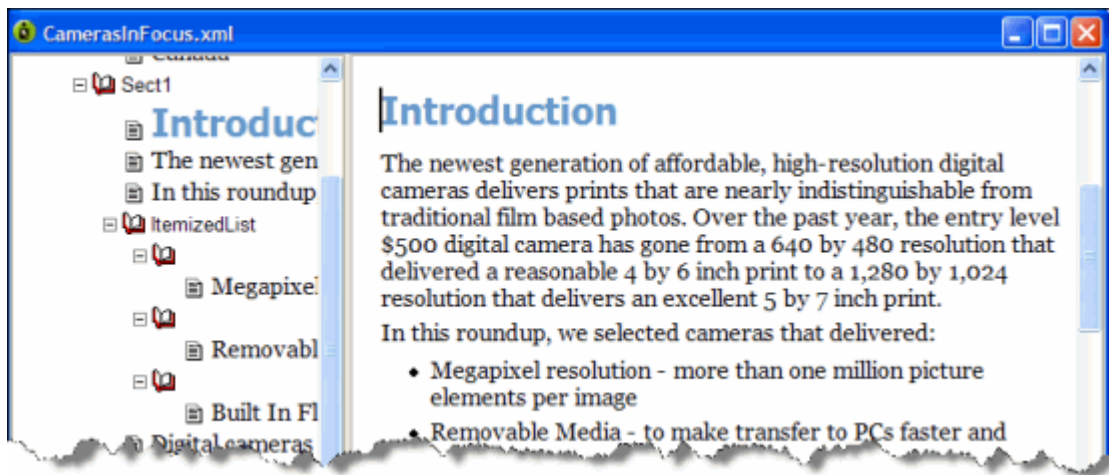
 **Tip:** You can specify custom tag and text colors by creating a custom palette.

Structure View

Structure View displays the overall structure or information hierarchy of the document. You can select Structure View from the **View** menu.

Structure View inherits the styles of the main document. It also has its own style sheet for each DTD or Schema that you use.

In Structure View, you can insert, cut, paste, copy, and drag-and-drop elements.



Related Links

[Customizing the user interface](#) on page 23

You can customize the user interface to give you quick access to tasks and assets. You can make your changes available to all users or reserve them for your use only. Likewise, your changes can apply only to documents that use a specific DTD or Schema, or to all documents.

[Options](#) on page 47

You can set options through the **Tools** menu.

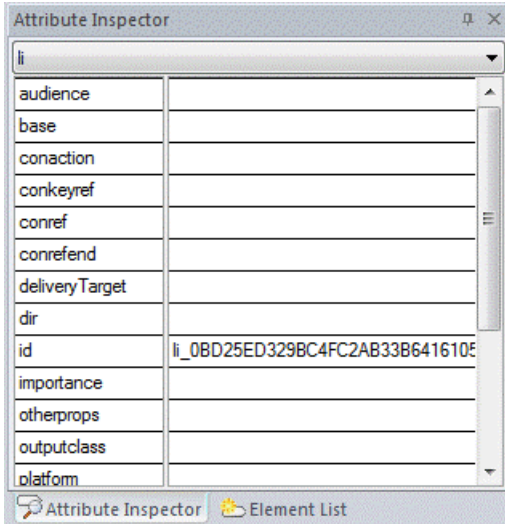
Panels

Panels provide access to the markup in your document and let you organize resources. You can have one or more panels open in your work area at any time. You can dock a panel so that it is attached to the work area border, or the panel can float. You can pin a panel to keep it open, or un-pin a panel to hide it.

To do this	Follow these steps
Show/hide a panel	<ul style="list-style-type: none"> Click the View menu and select a panel to show or hide it, or Right-click on the panel header (or click the Window Position icon), and select Hide from the menu to hide a panel.
Dock a panel	<ul style="list-style-type: none"> Double-click the title bar, or Click and hold the title bar, and then drag the panel to its docked position, or Right-click on the panel header (or click the Window Position icon), and select Docking from the menu. <p>When you are docking a panel, docking hotspot indicators appear. While dragging a panel, you may move your mouse cursor over one of the indicators. When you release the mouse, the panel you are docking will snap to the indicated docking position.</p>
Un-dock a panel (make it float)	<ul style="list-style-type: none"> Double-click the title bar, or Click the title bar and drag the panel from its docked position, or Right-click on the panel header (or click the Window Position icon), and select Floating from the menu.
Pin a panel	Click the sideways pin (pins are displayed sideways when a panel is un-pinned)
Un-pin (auto hide) a panel	<ul style="list-style-type: none"> Click the upright pin (pins are displayed upright when a panel is pinned), or Right-click on the panel header (or click the Window Position icon), and select Auto hide from the menu. <p>When a panel is un-pinned, placing the cursor on the panel's tab slides open the panel.</p>

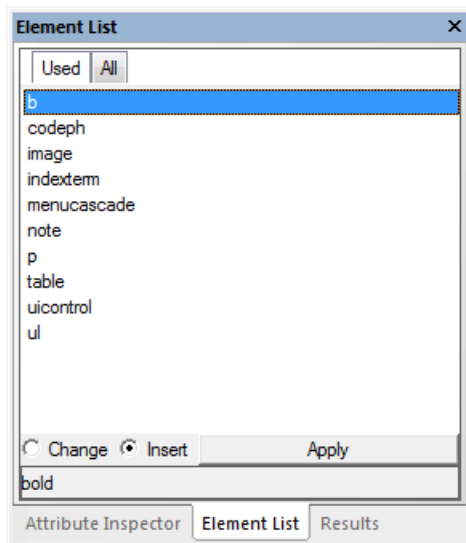
The following panels are available:

- **Attribute Inspector.** Displays the attributes for the current element and lets you set attribute values.

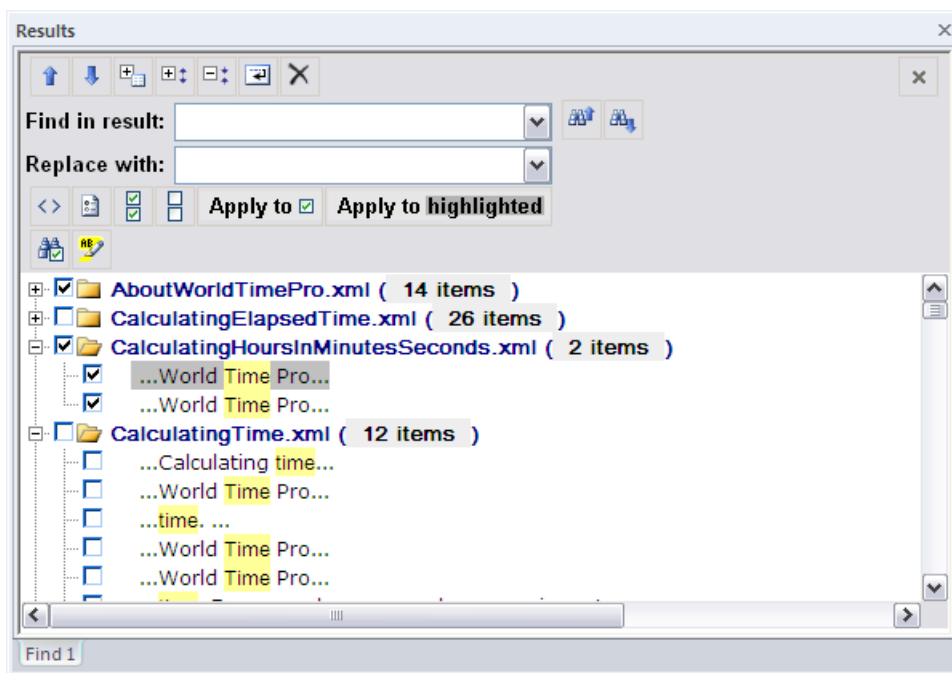


To do this	Follow these steps
Sort attributes alphabetically	<ol style="list-style-type: none"> 1. Hover the mouse over the Attribute Inspector pane. 2. Right-click to display the action menu. 3. Select Sort Attributes.
Sort attributes by displaying required attributes at the top of the list NOTE: Secondary sorting is alphabetically	<ol style="list-style-type: none"> 1. Hover the mouse over the Attribute Inspector pane. 2. Right-click to display the action menu. 3. Select Sort Attributes (Required First).
Sort attributes by displaying those that include a value, at the top of the list NOTE: Secondary sorting is alphabetically	<ol style="list-style-type: none"> 1. Hover the mouse over the Attribute Inspector pane. 2. Right-click to display the action menu. 3. Select Sort Attributes (Value First).

- **Element List.** Lets you insert or change elements in your document. In Normal and Tags On views, displays the list of elements that are valid at the insertion point (**All** tab), or the list of elements that are valid at the insertion point and are currently used in your document (**Used** tab). Elements that are required in the current context are displayed in bold. In Plain Text view, all elements are displayed.



- **Resource Manager.** Provides access to assets including images, cascading style sheets, and scripts. The Resource Manager pane also includes the Map Editor.
- **Results.** Displays the results for cross-file operations, Validation, XInclude, Reference Checking, Topic References, and Key References.



Related Links

[Working with elements](#) on page 100

Elements are the building-blocks of your documents. They are defined in your DTD or Schema. Authoring in Normal view is similar to applying styles, whereas Tags On view lets you work with elements as structural objects. You can insert elements using the Element List, the **Insert** menu, or the **In-place, look-ahead element list**.

[Setting attribute values](#) on page 103

You can set attribute values through the Attribute Inspector.

[Results pane](#) on page 90

The Results pane displays the results of cross-file operations, such as the Find in Files feature, and error-reporting features, such as the Validation Log.

[Assets \(unsupported\)](#) on page 42















You can organize frequently used objects as assets through the Resource Manager. Assets can be single files, such as images, text, or markup blocks. You can drag and drop assets into your document.

[Map Editor](#)The Map Editor lets you perform map-specific functions and edit element and map editor properties. The Map Editor is included in the Resource Manager.

Toolbars

You can show/hide toolbars, create new toolbars, or modify existing ones through **View > Toolbars**.

Table 1: Standard toolbar

Button	Name	Description
	New Page	Opens the New dialog or opens a new document based on the default template
	Open	Opens the Open dialog
	Save	Saves the active document
	Save All	Saves all open documents
	Find and Replace	Opens the Find and Replace dialog
	Find Next	Finds the next occurrence of the text string in the Find field of the Find and Replace dialog
	Check Spelling	Opens the Spell Checker
	Cut	Removes the selected text or element(s) to the clipboard
	Copy	Copies the selected text or element(s) to the clipboard
	Paste	Pastes the contents of the clipboard
	Undo	Reverses the last action
	Redo	Redoes the last reversed action
	Insert Image	Inserts an image element
	Insert Table	Inserts a table element and all required child elements
	Insert Element	Opens the Element List
	Resource Manager	Opens (or closes) the Resource Manager
	Previous Document	Makes the previous document in the list of open documents the active document




Button	Name	Description
	Next Document	Makes the next document in the list of open documents the active document
	Validate Document	Validates the active document
	Help Contents	Opens the online Help

Table 2: Formatting toolbar

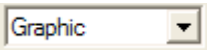
















Button	Name	Description
	Style Element	Lists the elements that can be inserted at the cursor location
	Bold	Applies or inserts an element designated as bold
	Italics	Applies or inserts an element designated as italic
	Underscore	Applies or inserts an element designated as underscore
	Overline	Applies or inserts an element designated as overline
	Strikethrough	Applies or inserts an element designated as strikethrough (or line-through)
	Numbered List	Inserts an element designated as an ordered (numbered) list
	Bulleted List	Inserts an element designated as an unordered (bulleted) list
	Decrease Indent	Decreases the indent of a list item
	Increase Indent	Increases the indent of a list item
	Cross-Reference	Opens the Insert Cross-Reference window

Table 3: Table toolbar

Button	Name	Description
	Insert Table	Opens the Insert Table dialog
	Edit Table Properties	Opens the Table Properties dialog
	Insert Row Above	Adds an empty row above the current row
	Insert Row Below	Adds an empty row below the current row
	Delete Row	Deletes the current row
	Insert Column Left	Adds an empty column to the left of the current column













Button	Name	Description
	Insert Column Right	Adds an empty column to the right of the current column
	Delete Column	Deletes the current column
	Move Row Up	Moves the current row up one row
	Move Row Down	Moves the current row down one row
	Move Column Left	Moves the current column to the left by one column
	Move Column Right	Moves the current column to the right by one column
	Merge Cell Right	Merges the current cell with the cell to the right
	Merge Cell Left	Merges the current cell with the cell to the left
	Merge Cell Up	Merges the current cell with the cell above
	Merge Cell Down	Merges the current cell with the cell below
	Split Cell into Rows	Splits the current cell into two cells horizontally
	Split Cell into Columns	Splits the current cell into two cells vertically

Table 4: Table Advanced toolbar





Button	Name	Description
	Contract Cell from Left	Inserts an empty cell to the left of the active cell
	Contract Cell from Right	Inserts an empty cell to the right of the active cell
	Contract Cell from Bottom	Inserts an empty cell below the active cell
	Contract Cell from Top	Inserts an empty cell above the active cell

Table 5: Macros toolbar


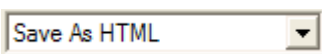



Button	Name	Description
	Run Current Macro	Runs the selected macro
	Select Current Macro	Shows the selected macro
	Record Macro	Records all keystrokes as a new macro
	Stop Recording	Stops recording keystrokes to the new macro
	Macros	Opens the Macros dialog

Table 6: Reviewing toolbar








Button	Name	Description
	Track Changes	Turns change tracking on (off)
	Previous Change	Goes to and selects the previous tracked change
	Next Change	Goes to and selects the next tracked change
	Accept Change	Accepts the current change
	Reject Change	Rejects the current change
	Accept or Reject Changes	Opens the Accept or Reject Changes dialog
	Revision Mark Options	Shows the Revision Mark Options tab

Table 7: Views toolbar

















Button	Name	Description
	Plain Text	Displays the active document in Plain Text view
	Tags On	Displays the active document in Tags On view
	Normal	Displays the active document in Normal view
	Browse	Displays the active document in a browser
	Attribute Inspector	Opens (closes) the Attribute Inspector
	Insert Element Window	Opens (closes) the Element List
	Resource Manager	Opens (closes) the Resource Manager
	Full screen	Opens (closes) full-screen mode

Table 8: Whiteboard toolbar

Button	Name	Description
	Show favorites	Displays a selection of favorite whiteboard commands
	Customizable	This button can be customized in the Set customizable buttons in Whiteboard toolbar on page 25 dialog
	Customizable	This button can be customized in the Set customizable buttons in Whiteboard toolbar on page 25 dialog
	Customizable	This button can be customized in the Set customizable buttons in Whiteboard toolbar on page 25 dialog

Button	Name	Description
	Customizable	This button can be customized in the Set customizable buttons in Whiteboard toolbar on page 25 dialog
	Add to favorites...	Displays the Add to Favorites dialog
	Application utilities	Displays the Run Macro dialog
	Open document Ex	Displays the Open Document dialog
	Find and execute XMetaL command	Displays a list of all available commands in XMetaL

Preview toolbar

You use the buttons on the Preview toolbar to display your document in a browser. The default browser is Microsoft Internet Explorer. The Preview toolbar also has blank buttons that you can associate with other browsers.

Special Characters and Symbols toolbars

The Special Characters toolbar contains accented letters and other characters that are used in European languages but that do not have corresponding keys on US English keyboards. The Symbols toolbar contains special punctuation characters, currency symbols, math symbols, and other symbols. Click a button to insert a special character or symbol in your document.

Related Links

[Character encoding](#) on page 58

XMetaL Author supports US-ASCII, ISO-8859-1 (Latin-1), and Unicode™ (UTF-8 or UTF-16) character encoding. By default, XML files that you create with XMetaL Author use UTF-8 encoding.

[Special characters and symbols](#) on page 116

You can use the Special Characters and Symbols toolbars, or the Insert Symbols menu (displayed by using the keyboard shortcut **CTRL + Shift + S**), to enter characters and symbols that do not have corresponding keys on US English keyboards. If your document's encoding supports it, the characters and symbols themselves (not the character entities) are saved with your document.

[Custom toolbars and menus](#) on page 23

You can create new toolbars and menus and customize existing ones. You can assign buttons and menus to built-in commands or user-defined macros.

Display mode

You can choose how much space to allocate for displaying your documents. You can also choose to display your documents in a tabbed interface so that you can easily switch between open documents.

To do this	Follow these steps
View a document in full-screen mode	Click View > Full Screen

In *full-screen mode*, the document display area expands to fill the screen, with only the menu bar visible. You can display other panes and views in full-screen mode.

Licensing

The licensing feature allows you to register and manage your XMetaL license.

You can view/edit your licensing information by clicking **Help > Licensing**. The following fields will be displayed:

- **License Type** - Displays the type of license; either Per-Seat, Concurrent, or Leased Concurrent.
- **Licensee** - Displays the name of the licensee.
- **License Count** - Displays the number of seats that apply to this license.
- **Maintenance End** - Displays the date when the maintenance contract for this license expires.

Activating XMetaL Author

Activating XMetaL Author is required in order for the software to be fully licensed. The license information required for activation is provided by a license file, or by a licensing server at your company.

When XMetaL is started without a full license, you will be prompted to activate the software or continue your



trial:

- **Activate** - Allows you to insert a license file. Choose this option if you have been supplied with a license file. Possible names for the license file include `XMEE.lic`, `XMES.lic` and `XMLS.lic`. When the license is verified, you are ready to use the software.



Note: If you have a license for a version of XMetaL earlier than 9.0, you will need to contact your system administrator or <http://xmetal.com/support> for an updated XMetaL Author license file.

- **Continue Trial** - Allows you to continue with the trial version of XMetaL. The trial lasts 30 days from the time of installation.
- **Exit** - closes XMetaL.

Removing XMetaL Author License

Removing XMetaL Author from a certain machine and will allow you to use the license on another machine. Concurrent licenses are automatically returned upon exit of XMetaL Author, leaving the local copy of XMetaL Author deactivated.

1. Click **Help > Licensing**
2. Click **Remove License**.
3. Click **Ok** when the confirmation window pops up.
A dialog will appear asking you to activate the software; you may choose to activate or to exit the program.



Note: XMetaL Author will prompt you to save your work upon exit.

Access Key

An access key, if required by your system administrator, allows you to use XMetaL Author in Concurrent or Leased Concurrent mode.

An access key may be required to receive a concurrent license. If you do not know the access key, contact your system administrator.

Customizing the user interface

You can customize the user interface to give you quick access to tasks and assets. You can make your changes available to all users or reserve them for your use only. Likewise, your changes can apply only to documents that use a specific DTD or Schema, or to all documents.

Related Links

[Specify tag and tag text colors](#) on page 11

[Spell checker options](#) on page 73

You can specify Spell Checker options through **Tools > Spell Checker**. Your settings are applied the next time you open the spell checker.

[Language settings](#) on page 81

You can choose a language for the current file or set it as the default language for the spell checker and thesaurus. You can also add and remove languages.

[Thesaurus options](#) on page 83

You can specify thesaurus options through **Tools > Thesaurus**. Your settings are applied the next time you open the thesaurus.

[XMetaL customizations](#) on page 99

Formatting and authoring functionality are provided by an *XMetaL customization*. The basis for an XMetaL customization is the DTD or Schema. Journalist is provided as an example customization. For detailed information about creating and deploying customizations, see the *XMetaL Customization Guide*.

Custom toolbars and menus

You can create new toolbars and menus and customize existing ones. You can assign buttons and menus to built-in commands or user-defined macros.

To do this	Follow these steps
Create toolbars and menus for all DTDs and Schemas	Perform the customization steps when no document is open
Create toolbars and menus for a specific DTD or Schema	Perform the customization steps when a document that uses that DTD or Schema is the active document

Toolbars are stored in the following files:


- **Global toolbars for the current user only.** %APPDATA%\SoftQuad\XMetaL\\default.tbr contains toolbars available to the current user for all documents being edited. Toolbars in this file take precedence over any toolbars of the same name in the above file.
- **DTD-specific toolbars for all users.** Toolbars available to all users for any document based on the DTD or Schema are contained beside the file location of the .dtd/.xsd OR in a fallback location under ..\Author\Rules\- **DTD-specific toolbars for current user only.** %APPDATA%\SoftQuad\XMetaL\\<dtdname>.tbr and a and per-user "gen" folder area contain toolbars available to the current user for any document based on the DTD or Schema. Toolbars in this file take precedence over any toolbars of the same name in the above file.

Related Links


[XMetaL customizations](#) on page 99

Formatting and authoring functionality are provided by an *XMetaL customization*. The basis for an XMetaL customization is the DTD or Schema. Journalist is provided as an example customization. For detailed information about creating and deploying customizations, see the *XMetaL Customization Guide*.

Create a toolbar

1. Click **View > Toolbars** from the main menu.
The **Customize** dialog opens.
2. Select the **Toolbars** tab.
3. Click **New**.
The **Toolbar Name** dialog opens.
4. Enter a name, and then click **OK**.
A floating window appears. This is your custom toolbar.
5. Select the **Commands** tab, and then drag and drop buttons from the Commands tab to the new toolbar.
 **Tip:** To create a separator line between buttons, click and drag the button to the right.
6. When have completed your new toolbar, close the **Customize** dialog.





Create a button or menu

1. Click **View > Toolbars** from the main menu.
The **Customize** dialog opens.
2. Select the **Commands** tab if it is not already selected.
3. Under **Categories**, select **New Menu**.
The new menu appears in the **Commands** column.
4. Drag and drop the new menu to the XMetaL's main menu bar.
5. With the **Customize** dialog open, right-click on the **New Menu** button.
A customization menu appears.
6. Customize the menu button as follows:
 - Click **Button Appearance**.
The **Button Appearance** dialog opens.
 1. Select whether the menu button is **Text Only**, **Image Only**, or **Image and Text**.
 2. Click **New** to add a new image or click **Edit** to edit an existing image in the **Edit Button Image** dialog.
 3. In the **Button Text** field, enter the name of the menu button if the menu button has text in the label.
 - Click **Image** to change the text-labeled button into an image-labeled button, or both.
 **Note:** If you click **Image** and you have not set an image to use, the **Button Appearance** dialog opens.
 - Click **Delete** to remove the menu button.
7. Add menu items to the menu as follows:
 - Click **Start Group**.
 - In the Customize dialog's Commands tab, select one of the categories other than New Menu.

- From the list of all available commands in the right-side menu, drag and drop the commands you want to include in the new menu.

8. When you are finished customizing your menu or button, close the Customize dialog.

Set customizable buttons in Whiteboard toolbar

The three customizable buttons (, , , and ) in the Whiteboard toolbar can be customized for your favorite macros, third-party applications, and documents. The default XMetaL installation contains examples of using third party applications such as finding selected text on Google or WIKI, opening an image in MS Paint and using free web services for translating selected text to and from different languages.

1. Press **Shift** and click one of the customizable buttons.
The **Customize favorites** dialog opens.
2. Select the item you want to relate to one of the buttons.
The selected function is displayed in the **Title** field.
3. Click the button to which you want to relate the function.
The function is now set for the selected button.
4. Click **Run Application** to test the function in the Title field.

XMetaL Styling Assistant

The XMetaL Styling Assistant and the Active Document WYSIWYG environment provide a means to establish appropriate document view styles within XMetaL. This process is efficient and straightforward, requiring only fundamental CSS knowledge. Proficient users can create a preliminary version of comprehensive customization, while regular users can adeptly fine-tune styles to align with their ongoing tasks.

In XMetaL Author, the presentation of XML and SGML documents can be managed through the application of cascading style sheets (CSS). The CSS file contains selectors and style properties for each element in your DTD or schema. Conveniently, the XMetaL Styling Assistant facilitates effortless modification of these style rules. These modifications encompass various attributes such as text font family, size, style, weight, color, decoration, background, alignment, display style, whitespace handling, and more. This functionality empowers users to add or replace new CSS styles within the context of existing active document customization, or to create fresh default CSS styles.

XMetaL Styling Assistant includes:

- Create a new CSS selector.
- Add a new style or edit existing styles for the selected CSS selector.
- Find a CSS selector matching to the selected element in active document if it is possible.
- Create a CSS selector matching to the selected element in active document.
- Add and traverse @import selector by:
 - selecting CSS file.
 - using XMetaL default style.
- Copy, Past, Delete, or Change orders of CSS selectors.
- Edit existing styles in text mode.
- Import styles from customization default CSS or user defined CSS file.
- Apply and Save CSS style changes to any opened documents with the corresponding customization.
- Reload active document CSS styles.

- Open the selected CSS file with the system default application or the customer's preferred CSS editor.
- Show the location of the selected CSS file in Windows Explorer.
- Generate default CSS styles for active document based on existing CTM rules.

XMetaL Styling Assistant Editor

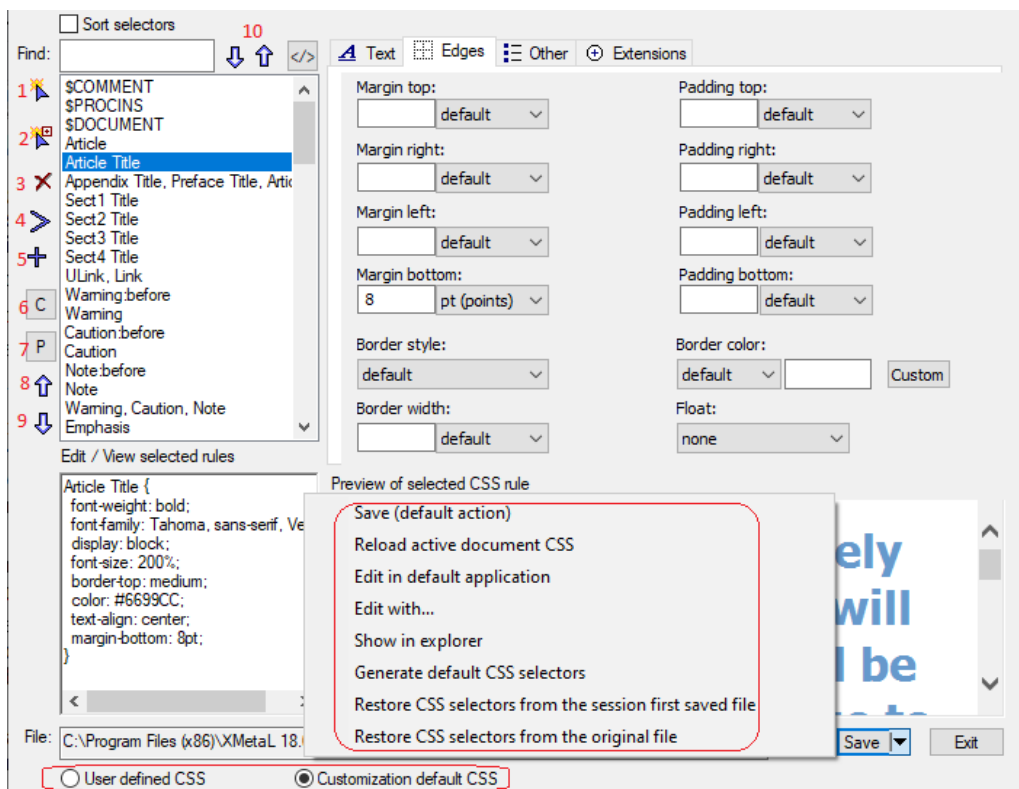
Opening XMetaL Styling Assistant Editor

To open the XMetaL Styling Assistant Editor, you can utilize the XMetaL quick navigation tool for invoking the "CSS styling assistant: open" macro:

1. Ctrl+?
2. Ctrl+G
3. Select "CSS styling assistant" command group, and press Enter key
4. Select "CSS styling assistant: open" macro, and press Enter key

The active document CSS is loaded into the editor.

XMetaL Styling Assistant Editor functionality

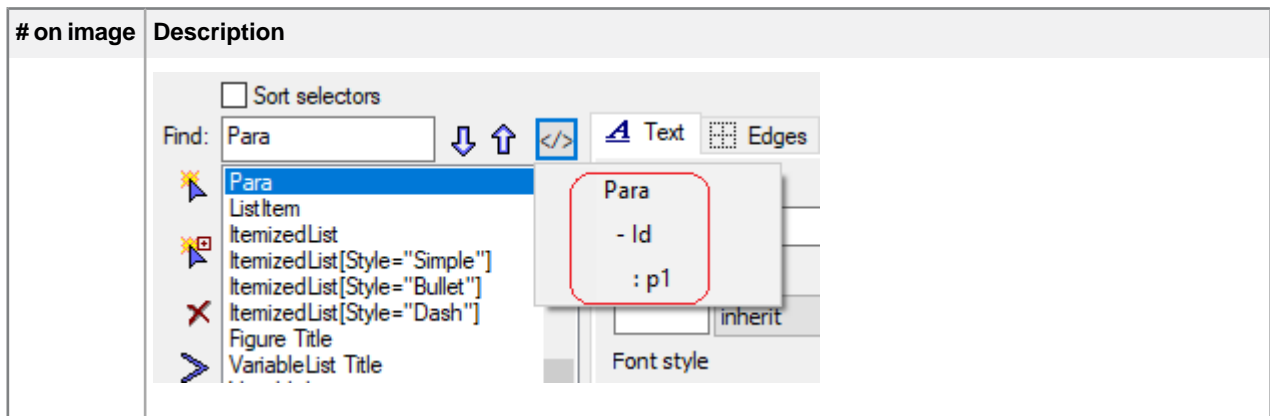


The XMetaL Styling Assistant Editor consists of the following areas:

- **Selectors area:** Enables you to create, delete, copy, past, sort, choose selectors, and more.
- **Style Rule area:** Display the style rule for the current selector and allow you to modify it.
- **Sample Text area:** Apply formatting to the text according to the style rule.
- **Properties area:** Enables you to create or edit the style rules in text mode.

Toolbar of Selectors area

# on image	Description
1	Create new CSS selector using "Create Empty Rules" dialog.
2	Create new CSS selector with properties of selected Selector using "Create Rules with current Properties" dialog.
3	Delete a selector from the list. Clicking the delete button by holding the Shift key deletes the selector silently, When the focus is on the selectors list, the keyboard keys Del and Shift enable the silent deletion of selectors.
4	Find CSS Selector matching to Active Document Selection. How to use: 1. Locate a cursor to the Active Document element whose style you want to change. 2. Click on ">" button to result in the highlighting of the corresponding CSS selector within the list of selectors. This function finds the selector in editing CSS style and the explicit selector definition only. For changes to the complex selectors, such as involving inheritance from nested CSS or using wildcard symbols, you can use an alternative approach. This involves accessing CSS styles through external text-based editors.
5	Create CSS Selector matching to Active Document Selection. How to use: 1. Locate a cursor to the Active Document element whose style you want to set, change, or create. 2. Click on "+" button resulting in automatic creation of a Full XPath selector without launching Selector Wizard. By holding the Ctrl button, the "+" button automatically creates a simple selector . This allows users to change styles instantly.
6	Copy selected CSS selector(s). Click on "C" button enables the copying of selector(s) from the imported CSS. Holding the Ctrl key while clicking the Copy button allows to copy all selectors.
7	Append or insert copied CSS selector(s). Click on "P" button enables the pasting of selector(s) from the imported CSS. Clicking on the Paste button appends the selectors. Holding the Shift or Ctrl key facilitates the insertion of selectors into particular position before or after the currently chosen selector in the list of selectors.
8	Change the order of the selectors: Move up.
9	Change the order of the selectors: Move down.
10	Find the desired text within the selectors list. Use the "Arrow up/down" buttons to locate subsequent or preceding text. Click on "</>" button reveals a list of the current element name, attribute names, and their corresponding values in the Active Document. Once a selection is made, the chosen content is presented in the "Find:" text box.



Save options

The Save button drop-down list provides the following options:

- Apply and Save CSS styles as a default action.
- Reload active document CSS.
- Edit in the system default application.
- Edit in the customer's preferred CSS editor.
- Show the location of the selected CSS file in Windows Explorer.
- Generate default CSS styles for active document based on existing CTM rules.
- Restore CSS selectors from the original file:
 - Once users modify the Default CSS Customization and save these changes for the 1st time, the assistant generates a ".bak" file holding the original state of the Default CSS Customization. This feature simplifies the process of reverting to the initial Default CSS Customization state.
- Restore CSS selectors from the session first saved file:
 - When users make alterations to any CSS files and save those changes for the first time during each session in utilizing the styling assistant, the assistant generates a ".bak1" file. This file retains the CSS state before the first save during each session. This feature allows users to revert to the CSS state prior to the first save in the ongoing session before closing the XMetaL Styling Assistant Editor dialog.

Note: If the present CSS file is altered using an external editor while the XMetaL Styling Assistant Editor is open, you will encounter a warning message upon refocusing on the assistant.

"User defined CSS" and "Customization default CSS"

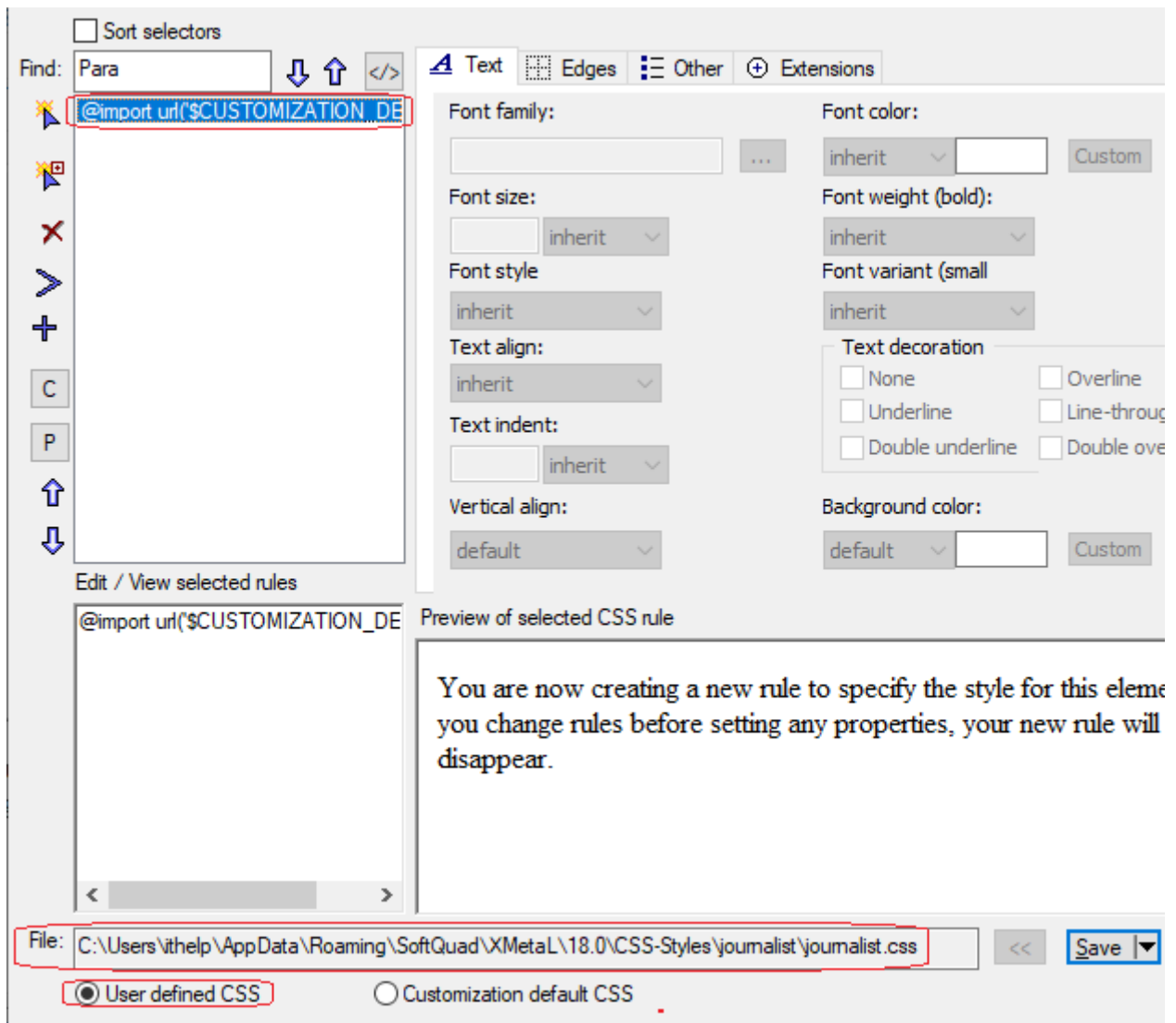
Users can switch between "User defined CSS" and "Customization default CSS" modes.

"Customization default CSS" is developed for specific DTD or schemas. It defines the general default view styles displayed in both Normal and Tags On views. While XMetaL Developer is a recommended platform for creating this type of CSS, users may modify, add, or generate their own styles through the XMetaL Styling Assistant Editor in accordance with specific editing requirements or personal preferences.

If users frequently engage in tasks of changing font family, size, styles, and background/foreground colors for specific XML elements, along with their layout in the editor view, switching to "User defined CSS" mode is a conventional approach.

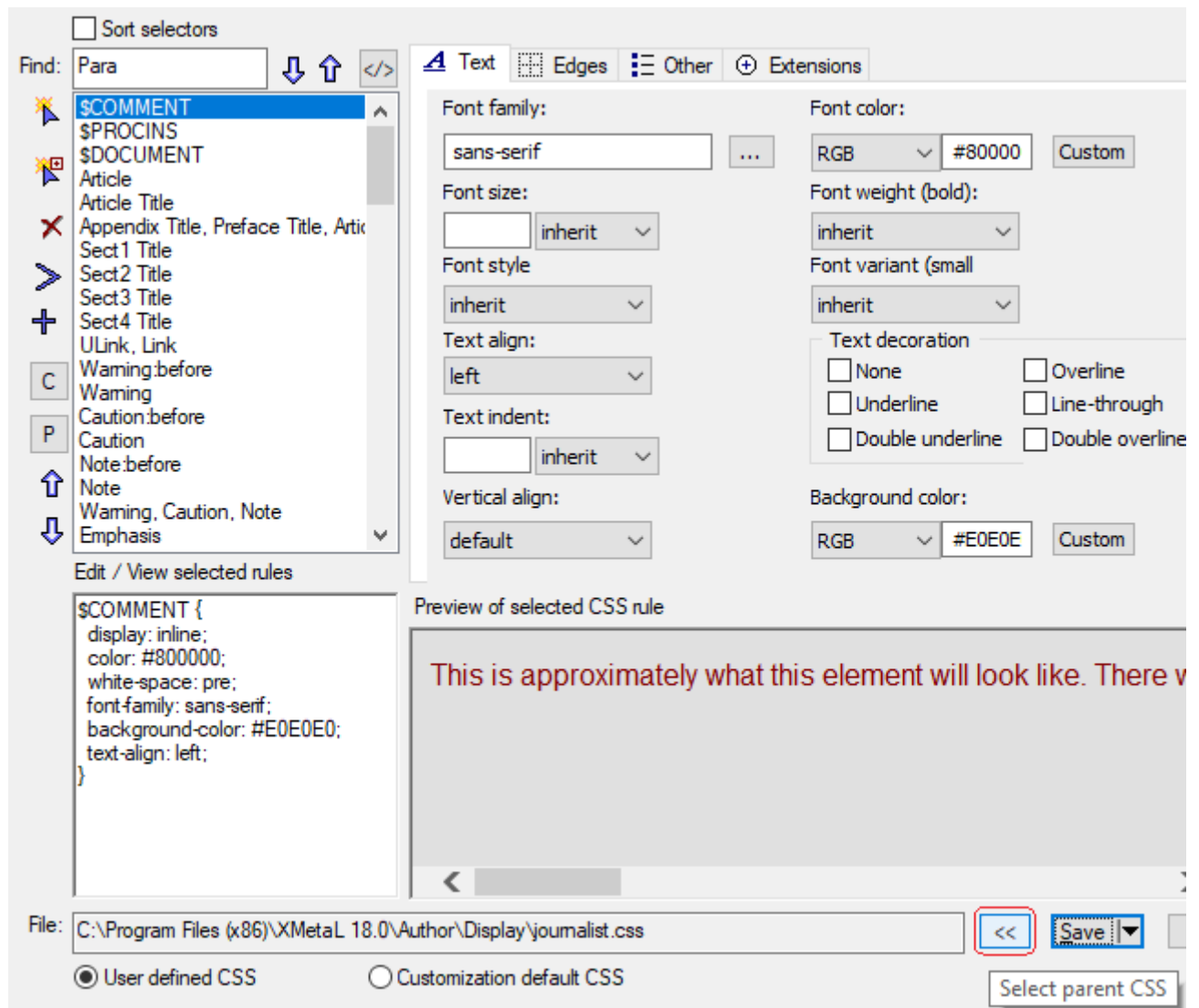
@import selector

In XMetaL Styling Assistant Editor, the @import selectors are supported. Selecting the "User defined CSS" mode in the XMetaL Styling Assistant Editor results in adding the special @import selector: "@import url('\$CUSTOMIZATION_DEFAULT')" by default.



The "File text box" contains the full path to the editing CSS file.

Double clicking on the @import selector imports the CSS file from the default document customization and displays all selectors and CSS styles as follows.



The "<<" button adjacent to the "File text box" becomes active, enabling you to navigate back to the parent CSS.

To insert the @import selector, several other methods are available:

- Select a Custom-type selector in the "Create Empty Rules" or "Create Rules with current Properties" dialog:
 - Choose the option of browsing desired CSS file in Insert button.
 - Choose the option of "@import: XMetaL default style" in Insert button.

CSS Styling Assistant Macros

Within the "CSS styling assistant" command group, there are seven distinct CSS styling assistant macros. To access the list of command groups, press Ctrl+? followed by Ctrl+G. After selecting the "CSS styling assistant" group and pressing Enter key, all the macros within the group will be displayed.



- <MACRO name="CSS styling assistant: open" hide="false" lang="JScript" desc="Edit Active Document CSS styles.">
- <MACRO name="CSS styling assistant: close" hide="false" lang="JScript" desc="Close Active Document CSS styling assistant.">

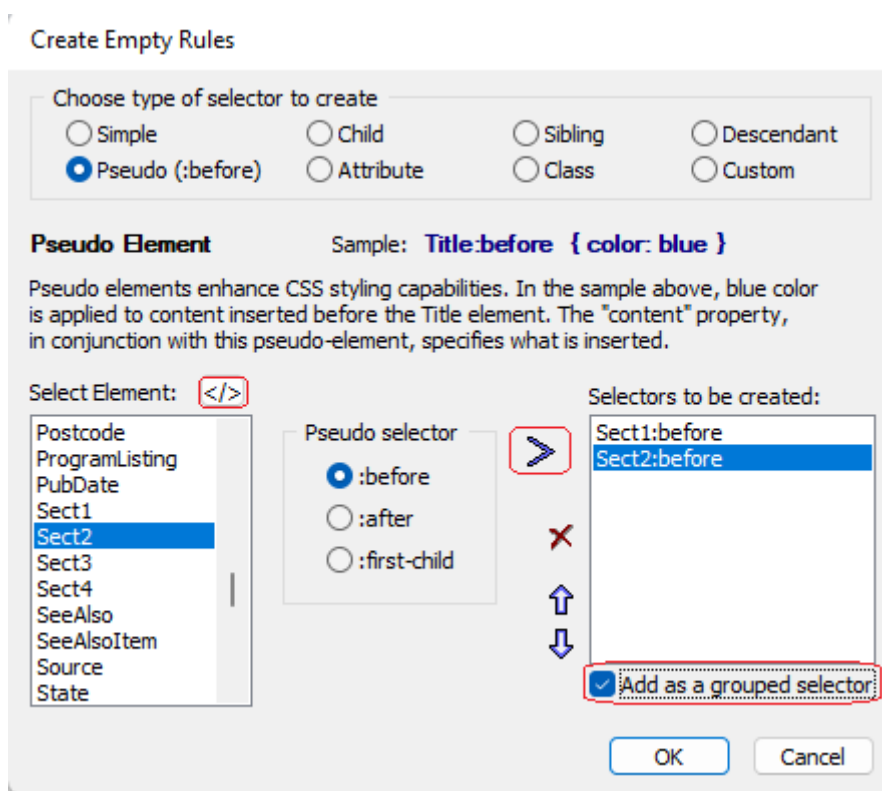
- <MACRO name="CSS styling assistant: refresh content" hide="false" lang="JScript" desc="Reload Active Document CSS styles into the styling assistant.">
- <MACRO name="CSS styling assistant: show selector" hide="false" lang="JScript" desc="Find and show CSS selector corresponding to current Active Document XML tag.">
- <MACRO name="CSS styling assistant: create custom selector wizard" hide="false" lang="JScript" desc="Create CSS selector corresponding to current Active Document XML tag.">
- <MACRO name="CSS styling assistant: create simple selector" hide="false" lang="JScript" desc="Create simple CSS selector corresponding to current Active Document XML tag.">
- <MACRO name="CSS styling assistant: create full XPath selector" hide="false" lang="JScript" desc="Create CSS selector containing all parent elements and corresponding to current Active Document XML tag.">

Create a selector

You can create a blank selector or copy style rules from an existing selector.

How to create a selector

1. In the **XMetaL Styling Assistant Editor**, do one of the followings to invoke Create Empty Rules window:
 - Click  **Create new CSS selector**.
 - In the Selectors list, click the name of the selector whose style rules you want to copy. Click  **Create new CSS selector with properties of selected Selector**.
2. In the **Create Empty Rules** dialog,



do the followings:

- a. Choose a type of selector.
- b. Locate the cursor on the Active Document element for which you intent to create a style. Then, either **click on the "</>" button located next to the "Select Element:" to select current active document**

element, or select the element's name or XMetaL specific selector directly from the "Select Element" list.

- c. Click on the **>** button to add the specified selector to the list of selectors being created.
- d. If you want to create a single style rule to apply to all selectors in the list of selectors being created, **click the Add as a grouped selector option**.

Note:

- For all types of selectors, the CSS styling wizard allows synchronizing the element selection in Active Document with the selection in "Select Element" list. Use the "</>" button in the wizard to synchronize.
- New selectors must have style rules associated with them and be saved before the cascading style sheet editor is closed.

Type of selectors

Simple selectors

The following example causes all Title elements to appear in blue:

```
Title {color:blue;}
```

Pseudo selectors

The following rule causes the content inserted before the Title element to appear in blue:

```
Title:before {color:blue;}
```

Child selectors

The following rule applies to all Title elements that have Book as a parent:

```
Book>Title {color:blue;}
```

Attribute selectors

The wizard allows the synchronization of element selection with a designated attribute value in the Active Document, using the "Attribute" selector type.

The following rule causes all Emphasis elements that have attribute "role" with value "bold" to appear in blue:

```
Emphasis[role="bold"] {color:blue;}
```

Sibling selectors

The following rule specifies the color blue for all Title elements that are preceded by Book element:

```
Book + Title {color:blue;}
```

Class selectors

The wizard allows the synchronization of element selection with a designated @class attribute value in the Active Document, using the "Class" selector type.

The following rule causes all Title elements that have attribute "class" with value "news" to appear in red:

```
Title.news {color:red;}
```

Descendant selectors

The following rule causes all Title elements that are within Book elements to appear in blue:

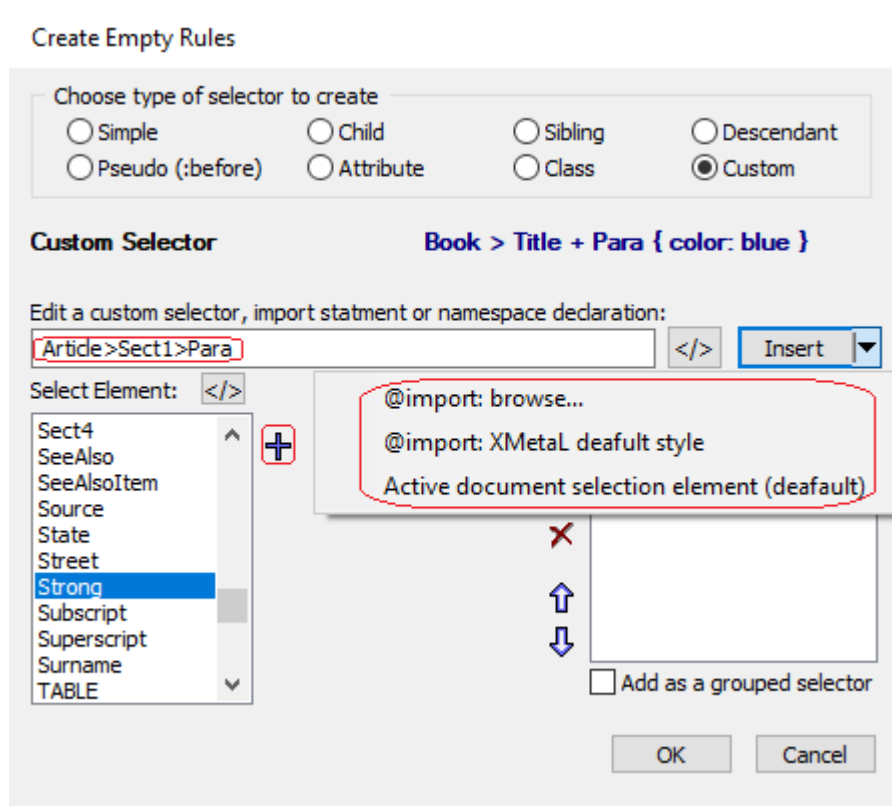
```
Book Title {color: blue;}
```


Custom selector

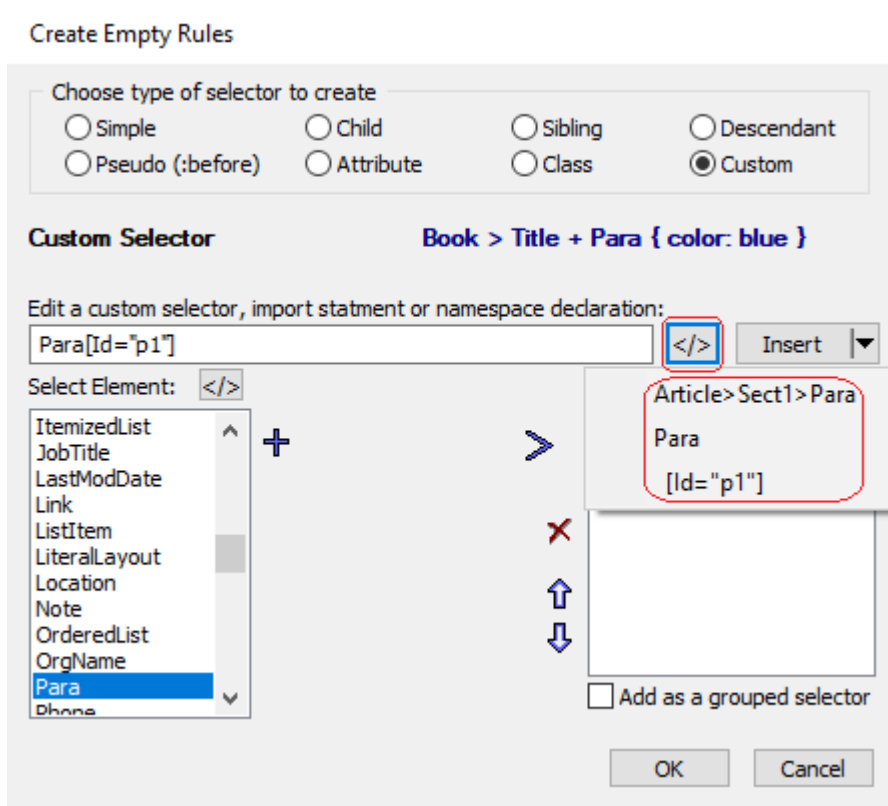
Under the "Custom" selector type, the "Insert" button presents three options:

- Browse CSS file to import CSS styles.
- Import XMetaL default CSS styles.
- Generate a full path selector to the selected element in Active Document.

After clicking the **"Insert" button**, the "Insert text box" automatically displays the full path to the selected element in the Active Document. In order to modify the full path, you can utilize the **"+" button** in the "Create Empty Rules" dialog after selecting the element name in the "Select Element" list. This button enables you to construct a custom selector string. Alternatively, you can directly edit the element path.



When you click the **"</>" button** adjacent to the "Insert" button, a list will appear containing combinations of the current element name, attribute name, and corresponding value from the active document. By selecting an option from this list, you can insert various combinations of the element name, attribute name, and attribute value into the "Insert text box".



Creating the new selector "Para[Id="p1"]" and setting the text font color to be blue in XMetaL Styling Assistant Editor results in the following style rule. This causes the element "Para" with @Id="p1" to appear in blue:

```
Para[Id="p1"] {color: blue;}
```

Note: For a description of selector syntax, see the CSS specifications on the World Wide Web Consortium website at www.w3c.org.

XMetaL specific selectors

XMetaL-specific selectors, which let you take advantage of specific XMetaL functionality. In the list of available selectors, these appear first unless you change the order.

Table 9: XMetaL-specific selectors

Name	Description
\$DOCUMENT	Applies styles to an entire document. All other selectors inherit the styles set for this selector unless different styles are set specifically for subordinate selectors.
\$MARKSEC	Applies styles to any marked sections in SGML documents or CDATA sections in XML documents.
\$COMMENT	Applies styles to comments within an XML or SMGL document.
\$PROCINS	Applies styles to processing instructions within an XML or SGML document.

Styling processing instructions

You can style processing instructions using the \$PROCINS keyword and the following qualifier names:

```
xm-pi-target
```

```
xm-pi-data
```

Examples of styling processing instructions

The processing instruction with "xm-replace_text" as "xm-pi-target" is used to specify <MiniTemplate> for each element in the CTM file. For example,

```
<Template>
  <Name>Para</Name>
  <MiniTemplate>
    <![CDATA[<Para><?xm-replace_text Paragraph?</Para>]]>
  </MiniTemplate>
</Template>
```

When the element is inserted, the value of "xm-pi-data" is displayed as a replacement text. In the above example, inserting <Para> element shows "Paragraph". The replacement text can be styled using \$PROCINS as the following examples.

The following rule styles all replacement text PIs in green color:

```
$PROCINS[xm-pi-target="xm-replace_text"] {color: green;}
```

The following rule colors all PIs with "Paragraph" as "xm-pi-data" value using blue text:

```
$PROCINS[xm-pi-data="Paragraph"] {color:blue}
```

The following rule styles all occurrences of PIs with "xm-replace_text" as "xm-pi-target" and "Paragraph" as "xm-pi-data" in red color:

```
$PROCINS[xm-pi-target="xm-replace_text"][xm-pi-data="Paragraph"] {color: red;}
```

Examples of XMetaL Styling Assistant Usage

For users often involved in tasks such as modifying font family, size, styles, and background/foreground colors for specific XML elements, along with arranging them in the editor view, setting to the "User Defined CSS" mode in the XMetaL Styling Assistant Editor is a customary method. In this mode, by default, the @import statement to the default customization is added.

Scenario 1:

1. Move selection between Active Document element and XMetaL Styling Assistant to find and create selectors using the ">" and "+" toolbar buttons and the Save button, along with the CSS styles wizard.
2. Set styles according to your preferences.

Scenario 2:

1. Remove all styles and @import statements.
2. Select "Generate default CSS" option in the "Save" button.
3. Edit default customization styles according to your preferences.


Scenario 3:

1. Double click on @import default styles statement .
2. Copy all styles.

3. Return back to the parent CSS using the "<<" button and delete @import default statement.
4. Append copied selectors.
5. Edit default customization styles according to your preferences.

Scenario 4:

This scenario allows to have both default customization styles and overwritten styles.

1. Remove all styles and @import statements.
2. Move selection between Active Document element and CSS styles wizard using the "+" button.
3. Create your own styles customization.
4. Open "Create Empty Rules" dialog using the  button.
5. Select a Custom-type selector and select "Import XMetaL default CSS" option in the "Insert" options.

Setting style properties

You can edit the properties of your style rules through the XMetaL Styling Assistant Editor. The Properties area lets you select options to set properties, or you can type properties directly in the Style Rule area. By default, many properties inherit their value from parent and ancestor elements.

The XMetaL Styling Assistant Editor's Properties Area comprises four tabs, each displaying the style properties applicable within XMetaL. To configure these properties for a given selector, users can choose the relevant selector within the Selectors area, access the corresponding tab, and proceed to adjust the property values as needed.

Table 10: Properties

Click this tab:	To edit:
Text	Fonts, text alignment, and indent
Edges	Margin, padding, and borders
Other	Miscellaneous properties, including classification, whitespace, and counters
Extensions	XMetaL-specific properties, including indent, prefix, and view settings

You can also add other properties by editing the text in the Style Rule area. However, these properties may not be visible in XMetaL.

For descriptions of CSS properties see the World Wide Web Consortium website at www.w3c.org.

Extensions properties

The Extensions tab in the XMetaL Styling Assistant Editor contains XMetaL-specific properties. The properties on this tab are not part of the CSS specifications, and can be viewed only in XMetaL.

Left indent

Use this property to display the element(s) indicated at a set distance from the left margin, regardless of the position of any ancestor element.

Prefix options

Use this property to display prefix text, the attributes of an element, or the parameters and parameter entities of a marked section (in Tags On view only). You can set the following prefix options:

- To set a rule to display prefix text, type the desired text.
- To set a rule to display all attributes with non-null values for the element(s) to which the style applies, type [%attribute-list;].
- To set a rule to display the value of a specific attribute for the element(s) to which the style applies, type [%attribute ATTRIBNAME;], where ATTRIBNAME is the name of the attribute whose value you want to display.
- If you are creating a display rule for marked sections, you can choose to display marked-section parameters and parameter entities by typing [%parameters;].

Using counters and auto-numbering

A counter is an element prefix that is incremented for each successive occurrence of that element. You can create counters in your document using pseudo-selectors and counter properties.

You can add simple or multi-level counters to elements in your document. For example, chapters in a document may be numbered 1, 2, 3, etc. and subsections of a chapter may be numbered 1.1, 1.2, ... , 2.1, 2.2, ..., etc. A counter can be initialized to start at a specified value and various numbering styles are available.

Counters are displayed in :before and :after generated text by using the counter and counters functions. They are configured using the counter-increment and counter-reset properties under the Other tab.

Simple counter

The following rule associates a counter with the Sect1 element and gives this counter the name 'section1', so that it can be referred to elsewhere in the style sheet.

```
Sect1 {
counter-increment: section1;
}
```

Displaying a counter

The following rule displays the counter at the start of the Sect1 element, but it is more common to display the counter before an element's title (if there is one):

This rule displays the counter at the start of the Sect1 element, but it is more common to display the counter before an element's title (if there is one):

```
Sect1>Title:before {
content: counter(section1);
}
```

You can include text before or after the counter. For example, the following rule displays 1., 2., ... before the titles:

```
Sect1>Title:before {
content: counter(section1) ". ";
}
```

Resetting the numbering

The following rules reset the number for each new list:

```
ItemizedList {
counter-reset: li;
```

```

}
ListItem {
counter-increment: li;
}
ListItem:before {
content: counter(li) ". ";
}

```

Initializing counters

The following rule resets the counter to 5:

```

Sect1 {
counter-increment: section1;
counter-reset: section2 5;
}

```

Multi-level counters

The following rules define two counters, section1 and section2. The `counter-reset` property in the `Sect1` rule means reset the counter called section2 to zero whenever a `Sect1` element is encountered.

```

Sect1 {
counter-increment: section1;
counter-reset: section2;
}
Sect1>Title:before {
content: counter(section1) ". ";
}
Sect2 {
counter-increment: section2;
}
Sect2>Title:before {
content: counter(section1) "." counter(section2) ". ";
}

```

Numbering styles

The following rules specify upper-alpha and lower-roman style counters:

```

Sect1>Title:before {
content: counter(section1, upper-alpha) ". ";
}
Sect2>Title:before {
content: counter(section1, upper-alpha) "."
counter(section2, lower-roman) ". ";
}

```

View support for properties and selectors

The tables below indicate XMetaL Author display support for CSS properties and selectors.

Table 11: Assigning property values, cascading, inheritance

Name	XMetaL Author Normal View
'@import' rule	X

Name	XMetaL Author Normal View
'inherit' value	X

Table 12: Font properties

Name	XMetaL Author Normal View
font	X
font-family	X
font-style	X
font-variant	X
font-weight	X
font-size	X

Table 13: Color and background properties

Name	XMetaL Author Normal View
background	X
background-attachment	-
background-color	X
background-image	-
background-position	-
background-repeat	-

Table 14: Text properties

Name	XMetaL Author Normal View
color	X
text-indent	X
text-align	X
text-decoration	X (except double-underline and double-underline)
letter-spacing	-
word-spacing	-
text-transform	-
vertical-align	sub and super only
line-height	-

Table 15: Box properties

Name	XMetaL Author Normal View
border, border-top, border-right, border-bottom, border-left	X
border-color	X (only when set to the same value for all sides)
border-top-color, border-right-color, border-bottom-color, border-left-color	X (only when set to the same value for all sides)
border-style	X
border-top-style, border-right-style, border-bottom-style, border-left-style	X
border-width	X (only when border-xxx-width are set to the same value)
border-top-width, border-right-width, border-bottom-width, border-left-width	X (only when set to the same value)
clear	-
float	X
height	-
width	-
margin	X
margin-top, margin-right, margin-bottom, margin-left	X
padding	X
padding-top, padding-right, padding-bottom, padding-left	X

Table 16: Classification properties

Name	XMetaL Author Normal View
white-space	X
display	X
list-style	X
list-style-type	X
list-style-position	-
list-style-image	-

Table 17: Generated content, auto-numbering, and list properties

Name	XMetaL Author Normal View
content: <string>	X
content: <uri>	-
content: <counter>	X
content: attr(X)	X
counter-increment	X
counter-reset	X

Table 18: Positioning properties

Name	XMetaL Author Normal View
position	-
top	-
right	-
bottom	-
left	-
width	-
height	-
clip	-
overflow	-
z-index	-
visibility	-

Table 19: Other properties

Name	XMetaL Author Normal View
@media	-
direction	X
unicode-bidi	X
min-width	-
max-width	-
@page	-
page-break-before, page-break-after	-
page-break-inside	-
orphans	-
widows	-
border-collapse	-

Name	XMetaL Author Normal View
border-spacing	-
caption-side	-
table-layout	-
empty-cells	-
cursor	-
outline	-
outline-width	-
outline-style	-
outline-color	-

Table 20: Selectors

Type	XMetaL Author Normal View
Grouping	X
Universal Selectors	X
Type Selectors	X
Descendant Selectors	X
Child Selectors	X
Adjacent Sibling Selectors	X
Attribute Selectors	X
Class Selectors	X
ID Selectors	-
Pseudo-Classes	:first-child only
Pseudo-Elements	:before and :after only

Assets (unsupported)

You can organize frequently used objects as assets through the Resource Manager. Assets can be single files, such as images, text, or markup blocks. You can drag and drop assets into your document.

To do this	Follow these steps
Create an asset folder	In the Resource Manager, click the Assets tab. Right-click the My Assets folder, and select New Folder . Specify a name and asset type.
Add an asset to an asset folder	Click the Desktop tab, select a file, drag it onto the Assets tab, and drop it in an asset folder.

The Resource Manager contains the Assets tab and the Desktop tab.


The Assets tab contains the following folders:

- **Customizable Asset Templates.** A set of templates that can be used to create your own asset folders. An asset template is displayed when you click on a folder.
- **Journalist DTD.** A set of sample assets to be used with the Journalist DTD.
- **My Assets.** A folder for organizing your assets.

The Desktop tab gives you access to the files on your computer.

You can create your own asset folders to organize and categorize objects. When you create an asset folder, you must specify an asset type. You create an asset by dropping a file from your computer into an asset folder.

The types of assets that you can create in My Assets are defined by asset templates, which are located in `..\XMetaL <version>\Author\Asset Templates`. You can add more templates to this folder, for example, by copying them from `..\XMetaL <version>\Author\Assets\Customizable Asset Templates`.

 **Note:** You may need to customize some of these templates for your DTD or Schema.

 **Tip:** You can drag and drop images, text, or markup blocks from your documents into asset folders.

Related Links

[XMetaL customizations](#) on page 99

Formatting and authoring functionality are provided by an *XMetaL customization*. The basis for an XMetaL customization is the DTD or Schema. Journalist is provided as an example customization. For detailed information about creating and deploying customizations, see the *XMetaL Customization Guide*.


[Images](#) on page 105

You can insert images into your documents if your XMetaL customization recognizes elements in your DTD or Schema as image elements.

Macros

A macro is a sequence of operations that can be run as a unit. Macros can be associated with a shortcut key, toolbar button, or menu item. They are useful when you need to repeatedly execute a task that does not have a built-in shortcut key or command.

To do this	Follow these steps
Run a macro	Click Tools > Macros . Then select a macro and click Run .

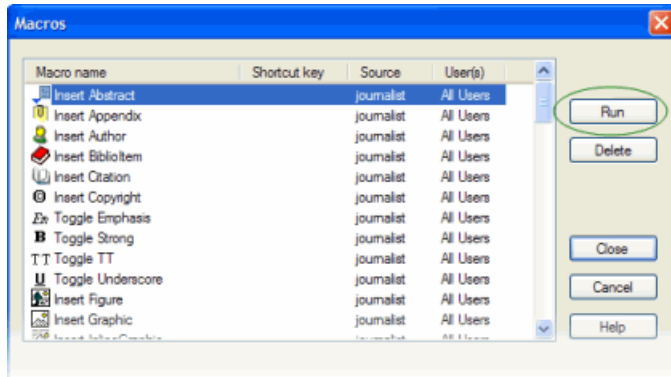
 **Tip:** You may want to create keyboard shortcuts for frequently used macros, or associate them with toolbar buttons or menu items.

DTD-specific macros are available when you edit a document using the associated DTD or Schema; global macros are available to all documents and when no documents are open.

Macros are stored in the following files:

- **Global macros for all users.** `..\XMetaL <version>\Author\Macros\xmetal.mcr` contains macros available to all users for all documents. This is the default macro file.

- **Global macros for the current user only.** `%APPDATA%\SoftQuad\XMetaL\\xmetal.mcr` contains macros available to the current user for all documents being edited. Macros in this file take precedence over any macros of the same name in the above file.
- **DTD-specific macros for all users.** `..\XMetaL <version>\Author\Macros\ contains macros available to all users for any document based on the DTD or Schema.`
- **DTD-specific macros for current user only.** `%APPDATA%\SoftQuad\XMetaL\ contains macros available to the current user for any document based on the DTD or Schema. Macros in this file take precedence over any macros of the same name in the above file.`



Related Links

[XMetaL customizations](#) on page 99

Formatting and authoring functionality are provided by an *XMetaL customization*. The basis for an XMetaL customization is the DTD or Schema. Journalist is provided as an example customization. For detailed information about creating and deploying customizations, see the *XMetaL Customization Guide*.

Macro design guidelines

You are advised to observe some guidelines when designing macros.

First, macros should be self-contained, that is, they must not depend on user input during execution. (Therefore, some actions cannot be included in a macro.)

If a macro involves any of the commands that open dialog boxes, that action should be completed somewhere in the macro. (Commands or buttons that open dialog boxes have an ellipsis (...) after the command or button name.) For example, you can create a macro that inserts a particular element, but you cannot create a macro that simply displays the Insert Element dialog.

Mouse clicks in the document pane are ignored during macro recording. The first time you try to use the mouse to change the selection, you will hear an alert. The second time, a message appears saying that you should use the cursor (arrow) keys to change the selection.

Not all commands can be recorded in a macro. A macro that was recorded in Normal or Tags On view can usually be played back in the other view. Macros recorded in Plain Text view are less likely to work in the other views.

In addition to the above restrictions, the following actions cannot be recorded in a macro:

- Actions that make a different document the active document (for example, drag and drop between documents)
- Setting table properties
- Spell checking operations
- Most commands in the **File** and **View** menus

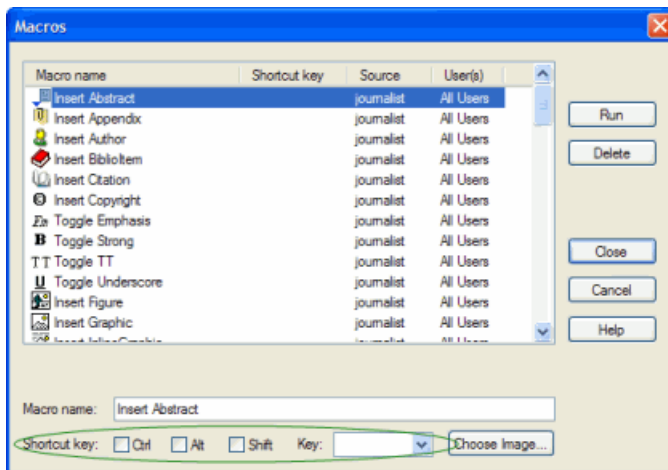
Record a macro

 **Note:** Recording is limited to keyboard actions only.

1. Click **Tools > Record New Macro**.
2. Perform the sequence of actions that you want the macro to execute.
3. Click **Tools > Stop Recording**.
4. Select an option from the **Create this macro for** list.
5. Type a name.
6. (Optional) Do any combination of the following:
 - Specify a shortcut key combination to associate with the macro
 - Specify an image to associate with the macro

Create a keyboard shortcut

1. Click **Tools > Macros**.
2. Select a macro.
3. Choose a shortcut key combination.



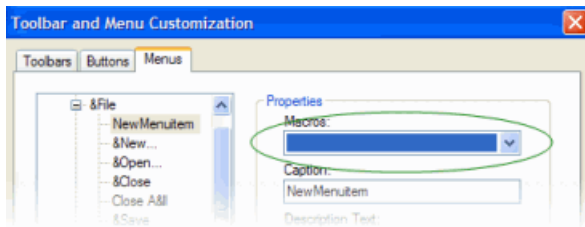
Associate a macro with a toolbar button

1. Click **View > Toolbars** and select the **Buttons** tab.
2. Select **Application Macros** or **<.dtdname> Macros** (where *.dtdname* is the name of the DTD or Schema for the current document).
3. Select a macro.

- (Optional) Do any combination of the following:
 - Choose an image to associate with the macro
 - Type the text you want to appear as the button tooltip
 - Type the text you want to appear in the status bar while the macro is running

Associate a macro with a menu item

- Click **View > Toolbars** and select the **Menus** tab.
- Select a menu to which you want to add your new command and click **Add Menu Item**.
- From the **Macros** list, select a macro.



- Type a name in the **Caption** text box.



Tip: Type the '&' character immediately before the letter that you want to use as the keyboard shortcut (the underlined letter).

- (Optional) Do any combination of the following:
 - Type the text you want to appear in the status bar while the macro is running
 - Select the **Begin Group** option to create a separator line above the command in the menu

XMetaL API for providing asynchronous operations

The API enables you to run XMetaL macros when XMetaL enters an idle state or when triggered by external events, e.g., "specific time elapsed", specific file(s) changed or specific application terminated.

Here are some scenarios that an XMetaL customization developer can achieve via macro scripts:

- Select a word in an open document - specify the file path that receives proposed alternatives for a selected word - run third party application passing word and file path as parameters - continue editing in XMetaL - after application completed or file changed events - run macro that moves selection to selected word - reads file with alternatives - show alternatives to user.
- XMetaL monitors the status of specific files in folders. Changing specific files via third party applications triggers running the XMetaL macro asynchronously. The XMetaL macro script reads the contents of the file that triggered the event.
 - RunMacroOnIdle** - runs the XMetaL macro script asynchronously after XMetaL has entered to an idle state. Optional parameters specify additional delay time and a VARIANT-type parameter that can be passed to the macro.
 - RunAfterProcessDone** - runs the XMetaL macro script asynchronously after a specific Windows process was terminated and XMetaL has entered to an idle state. Optional parameters specify a VARIANT-type parameter that can be passed to the macro.

- **AddFileChangeMacro** - runs the XMetaL macro script asynchronously after predefined file(s) were changed and XMetaL has entered to an idle state. Optional parameters specify the full file path or pattern and a VARIANT-type parameter that can be passed to the macro. XMetaL provides additional default parameters containing the full path of the file that triggered the event.
- Additional XMetaL APIs "**IsProcessRunning**", "**TerminateProcessEx**", "**RunAfterProcessDone2**", "**IsFileChangeMacro**", "**RemoveFileChangeMacro**" allow you to maintain a customization based on an asynchronous event.

Options


You can set options through the **Tools** menu.

Settings are stored in an *XMetaL configuration file* in the following locations:

- **Global settings:** `..\XMetaL <version>\Author\xmetal.ini` contains settings that are available to all users.
- **Settings for the current user only:** contains settings for the current user only. XMetaL Author makes changes only to this file. Settings in this file take precedence over any settings of the same name in the above file.

```
%APPDATA%\SoftQuad\XMetaL\<version>\XMetaL.ini
```

Table 21: General options

Option	Description
Current user	Identifies documents by username and initials
Location to temporarily store remote files	Specifies a location to temporarily store remote files
Show tag tips	Displays attributes in a tooltip
Restore last open documents	Re-opens documents that were open when XMetaL Author was last closed
Restore selection in open document	Moves a selection to the selected point before the document was closed.  Note: Changing this option requires restarting XMetaL.
Check spelling while typing	Automatically checks spelling as you type
Replace words from my word list while typing	Automatically replaces misspelled words with words from your word list.




Option	Description
Enable bi-directional text support	<p>Allows users to create text in languages that are right to left</p> <p> Note: A system restart is required for changes to take effect.</p> <p> Note: Turning off the 'Check spelling while typing' option is recommended when bi-directional text is enabled.</p>
Enable Workbench	<p>Allows users to use Workbench feature in Resource Manager</p> <p> Note: A system restart is required for changes to take effect.</p>
Enable AutoComplete for cell values	Allows users to complete cell values automatically
Enable AutoComplete for attribute values	Allows users to complete attribute values automatically

Table 22: View options

Option	Description
Open new documents in	Specifies a default view for opening documents
Tag icons	Provides formatting information for tags in Tags On view
Show inline images	Displays inline images
Show comments	Displays comments in Tags On view
Show structure view by default	Displays the structure view when opening a document

Table 23: Plain Text View options

Option	Description
Font	Specifies a text font
Syntax Coloring	Specifies colors for markup and scripts
Tab	Determines how tab characters are handled

Option	Description
Word Wrap	Specifies how to display lines that are longer than the width of the document pane
Line numbering	Displays line numbers

Table 24: File options

Option	Description
New	Specifies a template for files created through the New Page button
Save As	Specifies a default extension when saving new documents
Backups	Saves backup copies of your files
File Menu	Specifies the number of recently used documents to display
Automatic Saves	Specifies the number of changes or minutes after which your document will be saved automatically
End of Line	Specifies line ending options for different operating systems

Table 25: Change Tracking options

Option	Description
Inserted text	Specifies format, color, and preview options for inserted text
Deleted text	Specifies format, color, and preview options for deleted text

Table 26: Windows and Tabs options

Option	Description
Visual theme	Specifies the displayed Windows theme
Show "Close" button on the active tab	Displays a "close" button for file that is active
Show pop-up menu of tabbed windows	Displays a pop-up menu of tabbed windows
Animate "auto-hide" docking panes	Turns animations on when these panes are unpinned

Table 27: Symbols options

Option	Description
Insert symbol using unicode hex	Adds a symbol mapped to the entered unicode hex to the Insert Symbols menu that can be opened by typing the keyboard shortcut CTRL + Shift +S .
Delete symbol	Deletes a symbol from the Insert Symbols menu
Up / Down	Moves a selected symbol up or down as displayed in the Insert Symbols menu

Related Links

[Spell checker options](#) on page 73

You can specify Spell Checker options through **Tools > Spell Checker**. Your settings are applied the next time you open the spell checker.

[Thesaurus options](#) on page 83

You can specify thesaurus options through **Tools > Thesaurus**. Your settings are applied the next time you open the thesaurus.

[XMetaL customizations](#) on page 99

Formatting and authoring functionality are provided by an *XMetaL customization*. The basis for an XMetaL customization is the DTD or Schema. Journalist is provided as an example customization. For detailed information about creating and deploying customizations, see the *XMetaL Customization Guide*.

Managing documents

This section contains information about managing documents such as creating, opening, printing and saving documents, creating well-formed XML documents, and working with a repository.

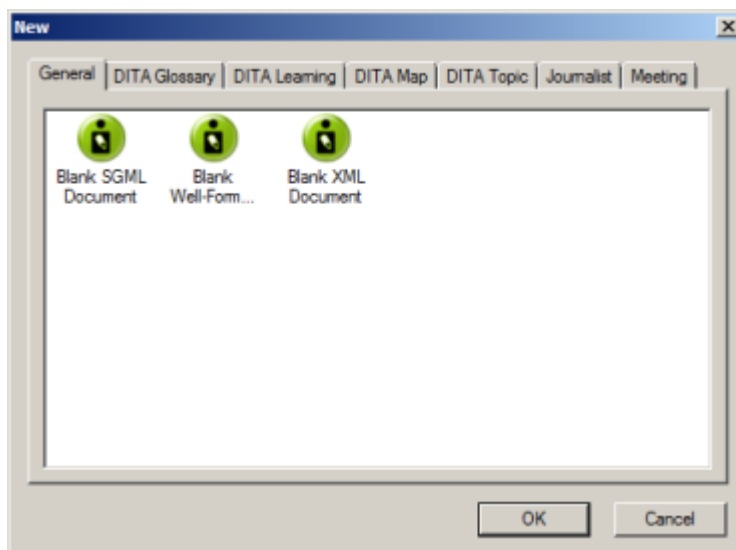
Creating documents

You can create a document from a template, create a blank XML or SGML document, or create a blank, well-formed XML document. You can set file options, including a default template, filename extensions, and autosave intervals through **Tools > Options**.

To do this	Follow these steps
Create a document from a template	Click File > New . Then click a tab and choose a template.
Create a blank XML or SGML document	Click File > New . In the General tab, select Blank XML Document or Blank SGML Document . Then choose a DTD, Schema, or Rules file.
Create a blank, well-formed XML document	Click File > New . In the General tab, select Blank Well-Formed XML Document .

The appearance of your new document and much of the authoring functionality is determined by an XMetaL customization. When you create a document that is based on a DTD or Schema that does not have a customization, the following files are created in the same folder as your DTD or Schema:

- Rules file - a Rules file is a DTD or Schema that has been compiled into a binary format. Rules files have an .rlx extension for XML files, an .rls extension for SGML files, and an .rld extension for Schemas.
- Style sheets for the document view and structure view (.css) - styling is based on element names. XMetaL Author recognizes many elements defined in XHTML, DocBook, and the Journalist DTD.
- Customization file (.ctm) - this file contains authoring behaviors that are based on the elements and attributes in your DTD or Schema (for example, some keyboard shortcuts, Enter key behavior, and mini-templates).



Related Links

[Options](#) on page 47

You can set options through the **Tools** menu.

[XMetaL customizations](#) on page 99

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Templates

Templates let you create new documents that use a particular DTD or Schema. They can also provide a document outline and text that help you in the authoring process.

You should create at least one template for each DTD or Schema. In many cases, you can use the same template to create either an XML or an SGML document. However, if your DTD was designed for SGML documents, it may contain features that are not supported in XML.

Templates are stored in the following folder: `.. \XMetaL <version> \Author \Template`. You can organize your templates in sub-folders. Sub-folders appear as tabs when you click **File > New** to create a new document.

Related Links

[XMetaL customizations](#) on page 99

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Create a template

1. Click **File > New** and select the **General** tab.
2. Select **Blank XML Document** or **Blank SGML Document** and click **Open**.
3. Choose a DTD or Schema to associate with your template.
4. Add elements and content to the template as required.
5. Create a folder in the template folder and save the file (for example, `.. \XMetaL <version> \Author \Template \New_products \Z-series.xml`).



Tip: Give the file a descriptive name that reflects the template use or associated DTD.



Note: The file extension you assign to your template (.xml or .sgm) determines whether an XML or SGML file is created when the template is opened.

Related Links

[Working with elements](#) on page 100

Elements are the building-blocks of your documents. They are defined in your DTD or Schema. Authoring in Normal view is similar to applying styles, whereas Tags On view lets you work with elements as structural objects. You can insert elements using the Element List, the **Insert** menu, or the **In-place, look-ahead element list**.

Opening and closing documents

When you open a file, XMetaL Author checks for a DTD, Schema, or Rules file.

To do this	Follow these steps
Open a document	<p>Click File > Open and choose a file, or drag and drop a file onto the XMetaL Author title bar</p> <p>In the Select Files to Open dialog, users can open a document in Tags On, Normal or Plain Text view.</p> <p>File navigation options are available in the Select Files to Open dialog as follows:</p> <ul style="list-style-type: none"> • Show Folder - displays the folder for a selected file to allows users to navigate to the folder where the file is located. • Find all files in folders - allows users to view all files in a selected directory, including sub-folders, in one list. The file extensions filter allows, including sub-folders, to narrow down list of file specific types. • A powerful file preview feature.
Open a document that is displayed in a Web browser	Click the file icon in the browser address bar and drag it onto the XMetaL Author title bar
Close a document	Click File > Close in the main menu, or right-click and select Close on the worksheet's tab.
Close all open documents	Click File > Close All

When opening a file, XMetaL checks the following conditions and stops as soon as one of the conditions is true:

- If the file starts with an XML declaration, it is edited as an XML file.
- If the file does not start with an XML declaration and if the filename has the .sgm or .sgml file extension, it is edited as an SGML file.

If neither condition is true and if the file contains a document type declaration, the file is edited as an XML file. In this case, XMetaL adds an XML declaration to the document.

If you open an XML document that does not specify a DTD or Schema and the document is not well-formed, XMetaL attempts to fix the markup.

Related Links

[Display mode](#) on page 20

You can choose how much space to allocate for displaying your documents. You can also choose to display your documents in a tabbed interface so that you can easily switch between open documents.

[Special characters and symbols](#) on page 116

You can use the Special Characters and Symbols toolbars, or the Insert Symbols menu (displayed by using the keyboard shortcut **CTRL + Shift + S**), to enter characters and symbols that do not have corresponding keys on US English keyboards. If your document's encoding supports it, the characters and symbols themselves (not the character entities) are saved with your document.

[XMetaL customizations](#) on page 99

Formatting and authoring functionality are provided by an *XMetaL customization*. The basis for an XMetaL customization is the DTD or Schema. Journalist is provided as an example customization. For detailed information about creating and deploying customizations, see the *XMetaL Customization Guide*.

If XMetaL cannot find the DTD, Schema, or Rules file

If XMetaL Author cannot find a DTD, Schema, or Rules file for the document you are opening, you must choose an option for editing the document.

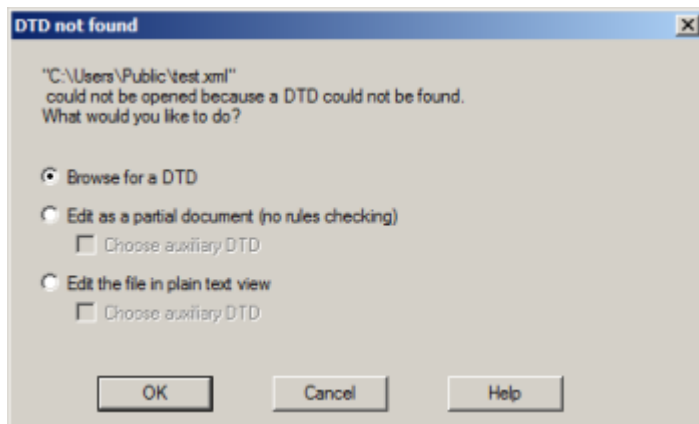
XMetaL may not be able to locate the DTD for any of the following reasons:

- Your document contains no document type declaration.
- There are no entries in the catalog that map the external identifier in the document type declaration with a DTD.
- The DTD is not at the expected location. An incorrect location may have been specified in the catalog. (If a relative location was specified, it should be relative to the location of your document.)

Select from the following options:

- **Browse for a DTD.** Opens a dialog from which you can select a DTD.
- **Edit as a partial document.** Opens the document as a well-formed document in Normal or Tags On view. You can edit elements and attributes, but no validation takes place. (Not applicable to XML files based on Schemas.)
- **Edit the file in plain text view.** Opens the document in Plain Text view.

Some options let you choose an auxiliary DTD. If you do so, the elements and attributes from the auxiliary file are added to the document you are editing. However, the auxiliary DTD is not used to validate the document and you can add elements and attributes as necessary.



Related Links

[Document views](#) on page 9

You can choose a view for your document through the **View** menu or from the view buttons in the document status bar. The view you select depends on how you want to work with your document. You can set view options, including a default view through **Tools > Options**.

[Authoring structured content](#) on page 96

When you create a document instance of a DTD or Schema in Normal or Tags On view, XMetaL Author ensures that your content is valid by guiding you through the authoring process. You do not need to have a complete understanding of XML to begin authoring structured content.

WebDAV-enabled folders

To open files in a WebDav-enabled folder, you must have permission. When you open a document in a WebDAV folder, it is locked for editing. Other users can open the file as read-only. Auxiliary files such as the DTD are left unlocked.

Customization files can be downloaded from a WebDAV server following the normal search rules. Catalogs are not downloaded from a WebDAV server; only your local system is searched according to the normal search behavior for catalogs.



Note: Microsoft Internet Information Server (IIS) Version 5.0 must be installed, and the folder containing the target files must be Web Share enabled.

File caching

Files retrieved through WebDAV are stored in your Temp folder (usually `..\Documents and Settings\\Local Settings\Temp`). When you open a file from a WebDAV server, the URL to this folder is mapped and the cached file is used. If the file in the cache does not exist, the file is retrieved from the WebDAV folder and placed there. After the document is closed, all the cached items used by the document are removed.

Related Links

[XMetaL customizations](#) on page 99

Formatting and authoring functionality are provided by an *XMetaL customization*. The basis for an XMetaL customization is the DTD or Schema. Journalist is provided as an example customization. For detailed information about creating and deploying customizations, see the *XMetaL Customization Guide*.

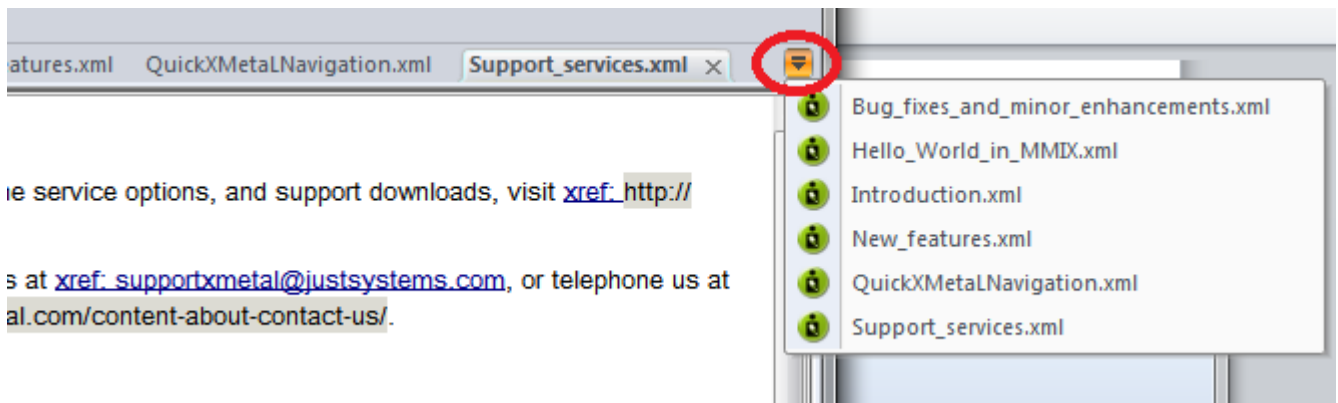
Managing open documents

Documents are displayed in windows in the editing pane. XMetaL provides various ways of organizing and navigating document windows, and navigating to documents outside XMetaL.

Moving between open documents

If you have more than one document open in XMetaL Author, you can move between the open documents in the following ways:

- Click the appropriate file name on the **Window** menu
- Press Ctrl+Tab or Ctrl+Shift+Tab
- Click Next Document (↔)/Previous Document (↔) on the Standard toolbar
- Click the "Active Files" downward arrow at the top-right corner of the editing pane and select the open document you want to view.



Moving worksheet tabs

You can move and arrange open worksheets' tab order by dragging and dropping the tab(s) you want to move.

Scrolling through worksheet tabs

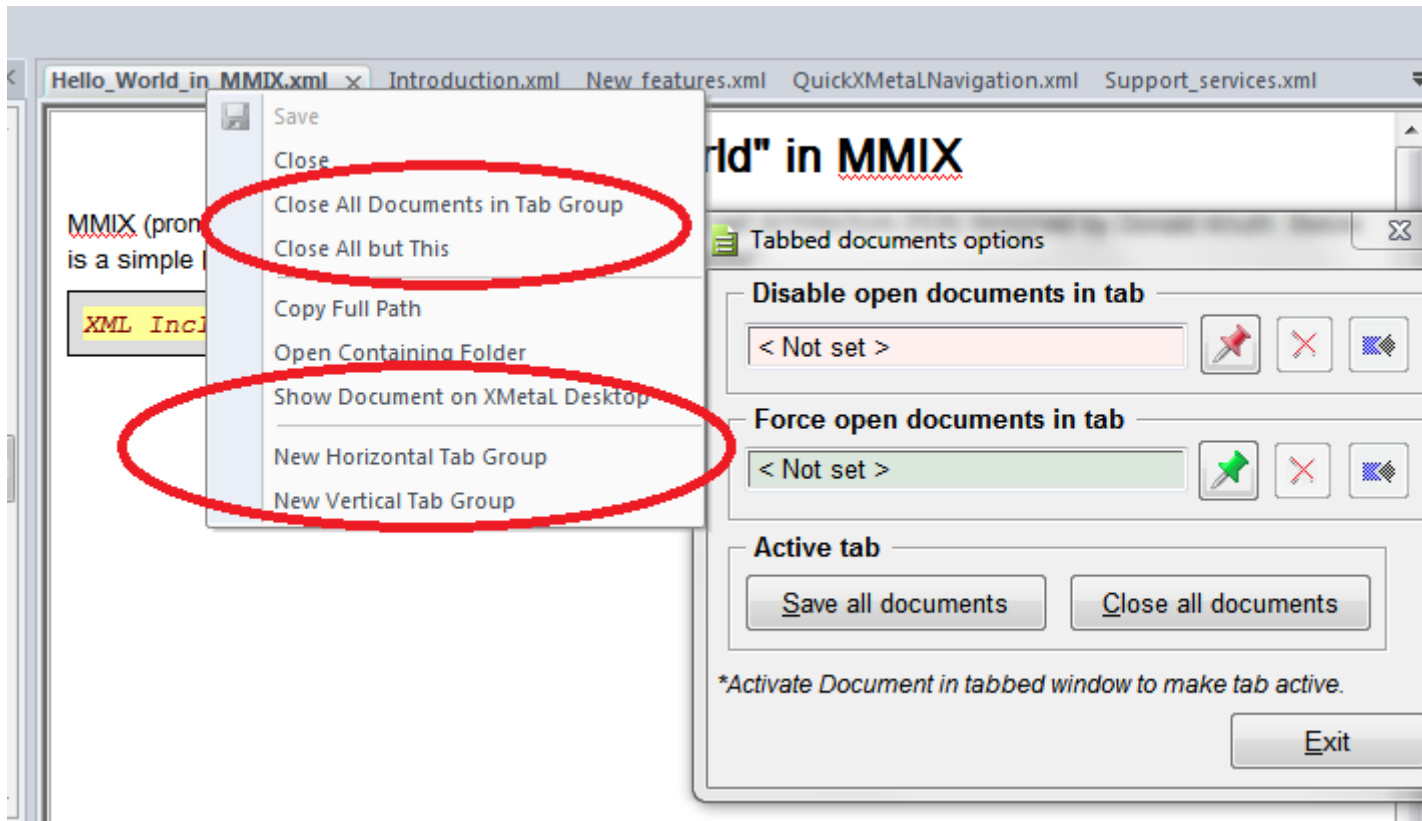
If more window tabs are open than can be displayed in the editing pane, you can use the arrows at the top-right of the editing pane to scroll through the windows.

Working with tab groups

Open documents can be grouped in the editing pane into vertical or horizontal tab groups.

 **Note:** Only a horizontal OR a vertical tab grouping can be utilized at one time.

To do this	Follow these steps
To create a horizontal tab group	Right-click on an open document's worksheet tab, and then click New Horizontal Tab Group .
To create a vertical tab group	Right-click on an open document's worksheet tab, and then click New Vertical Tab Group .
To move a document to the next tab group	When documents have been grouped into at least two separate tab groups, right-click on an open document's worksheet tab, and then click Move to Next Tab Group . The document is moved to the next group to the right (in horizontal grouping) or the group immediately below the current group (in vertical grouping).
To move a document to the previous tab group	When documents have been grouped into at least two separate tab groups, right-click on an open document's worksheet tab, and then click Move to Previous Tab Group . The document is moved to the next group to the left (in horizontal grouping) or the group immediately above the current group (in vertical grouping).
To close all documents in a tab group	Right-click on an open document's worksheet tab, and then click Close All Documents in Tab Group .
To close all documents in a tab group except the currently selected document	Right-click on an open document's worksheet tab, and then click Close All But This .



Viewing documents and document folders outside XMetaL

A document's containing folder can be opened from within XMetaL, and the document's full path can be copied to allow you to quickly navigate to a document's location.

To do this	Follow these steps
To copy a document's full path	Right-click on an open document's worksheet tab, and then click Copy Full Path . You can then paste the full path in a directory browser to view the location and open the document outside XMetaL.
To open a document's containing folder	Right-click on an open document's worksheet tab, and then click Open Containing Folder . The document's containing folder opens in Windows Explorer.
To open a document's desktop location in XMetaL	Right-click on an open document's worksheet tab, and then click Show Document on XMetaL Desktop . The document's desktop location is displayed in the Resource Manager pane.

Saving documents

You can save the current document or all open documents. XMetaL Author validates the document before saving it. You can save an invalid document or cancel the save operation. You can also set save options such as automatic saving and backup creation.

Save one or all documents from the main menu:

To do this	Click this
Save a document	File > Save
Save a document under a different name or in a different location	File > Save As In the Save As dialog, users can find and filter content. File navigation options are available in the Save As dialog to enable file navigation options such as: <ul style="list-style-type: none">• Show Folder - displays the folder for a selected file to allows users to navigate to the folder where the file is located.
Save all open documents	File > Save All

Save a document from the worksheet tab:

To do this	Click this
Save a document	Right-click on the worksheet tab of the document you want to save. In the menu that appears, click Save .

Related Links

[Options](#) on page 47

You can set options through the **Tools** menu.

[Special characters and symbols](#) on page 116

You can use the Special Characters and Symbols toolbars, or the Insert Symbols menu (displayed by using the keyboard shortcut **CTRL + Shift + S**), to enter characters and symbols that do not have corresponding keys on US English keyboards. If your document's encoding supports it, the characters and symbols themselves (not the character entities) are saved with your document.

[Authoring structured content](#) on page 96

When you create a document instance of a DTD or Schema in Normal or Tags On view, XMetaL Author ensures that your content is valid by guiding you through the authoring process. You do not need to have a complete understanding of XML to begin authoring structured content.

Character encoding

XMetaL Author supports US-ASCII, ISO-8859-1 (Latin-1), and Unicode™ (UTF-8 or UTF-16) character encoding. By default, XML files that you create with XMetaL Author use UTF-8 encoding.

You can enter Unicode characters using standard input devices such as a keyboard, or IMEs (input method editors). You can also use the keyboard shortcut **CTRL + Shift + S** or right-click your mouse and select **Insert Symbol** to select a symbol from a contextual menu of commonly used symbols (Note: The list of symbols can be edited from **Tools > Options > Symbols**). Alternatively, you can copy and paste characters from other programs.

Unicode characters are displayed in Normal and Tags On views. If a character appears as a box, then the font in use does not contain that character. The character will appear correctly when the required font is used.

XMetaL Author determines the file encoding by checking the following conditions, in the following order:

1. If the file contains a byte-order mark, UTF-8 or UTF-16 encoding is determined.
2. If the file contains an XML declaration, then the rules in Appendix F of the XML specification (www.w3.org/TR/REC-xml#sec-guessing) are used to determine whether the file uses UTF-16 encoding (that is, the encoding is determined by the '<?' characters in the XML declaration).
3. If the file contains an XML declaration that specifies an encoding string, then this encoding is used.
4. If the encoding cannot be determined, then the default is used: UTF-8 for XML documents and ANSI (Latin-1) for SGML documents.

Table 28: Supported encoding strings

Encoding Type	Strings
US-ASCII	ANSI_X3.4-1968
	ANSI_X3.4-1986
	ASCII
	CP367
	CSASCII
	IBM367
	ISO_646.IRV:1991
	ISO646-US
	ISO-IR-6
	US
	US-ASCII
ISO-8859-1	CP819
	CSISOLATIN1
	IBM819
	ISO-8859-1
	ISO_8859-1
	ISO_8859-1:1987
	ISO-IR-100
	LATIN1
	L1
UTF-8	UTF-8
UTF-16	UTF-16



Note: If the XML declaration contains an encoding string not listed in the above table, the file is opened in Plain Text view.

Related Links

[Special characters and symbols](#) on page 116

You can use the Special Characters and Symbols toolbars, or the Insert Symbols menu (displayed by using the keyboard shortcut **CTRL + Shift + S**), to enter characters and symbols that do not have

corresponding keys on US English keyboards. If your document's encoding supports it, the characters and symbols themselves (not the character entities) are saved with your document.

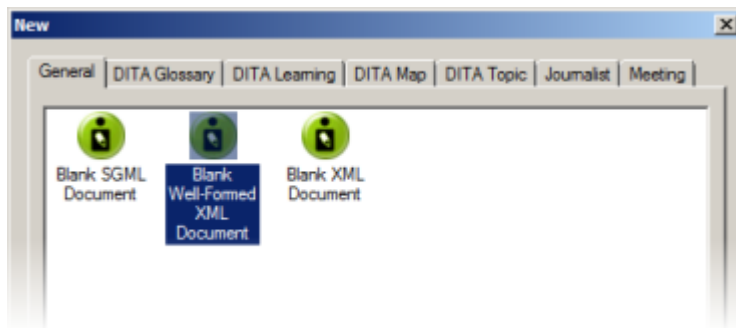
Creating well-formed XML documents

When you create a blank well-formed XML document, you must define elements and attributes before you can create content. Because the document is not based on a DTD or Schema no rules checking or validation occurs.

The Attribute Inspector and Element List display only the elements and attributes that you add to the document.

XMetaL Author inserts the following processing instruction in your well-formed document:

```
<?xm-well_formed path =  
" " ?>
```

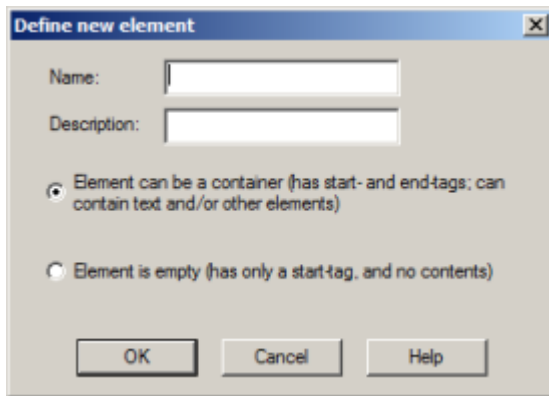


Defining an element

1. In the Element List, double-click **<Insert Element>**.
2. Type a name.
3. Type a description.

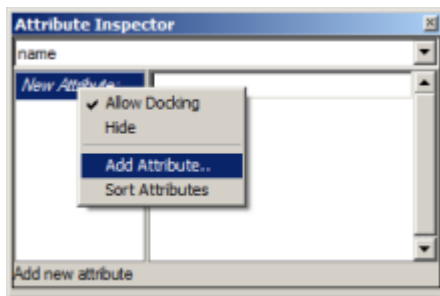
The description will appear at the bottom of the Element List when the element is selected.

4. Choose an option:
 - **Element can be a container.** Choose this option if you want the element to be able to contain text and other elements.
 - **Element is empty.** Choose this option if you do not want the element to have any content.



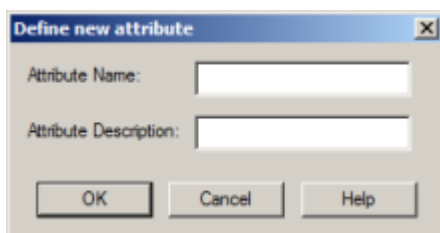
Defining an attribute

1. Insert an element in your document.
A new, blank attribute is created for the element.
2. In the Attribute Inspector, right-click on the new attribute and click **Add Attribute**.



3. Type a name.
4. Type a description.

The description will appear at the bottom of the Attribute Inspector when the attribute is selected. All new attributes created in well-formed XML documents have character data (CDATA) content.



Inline attribute editor

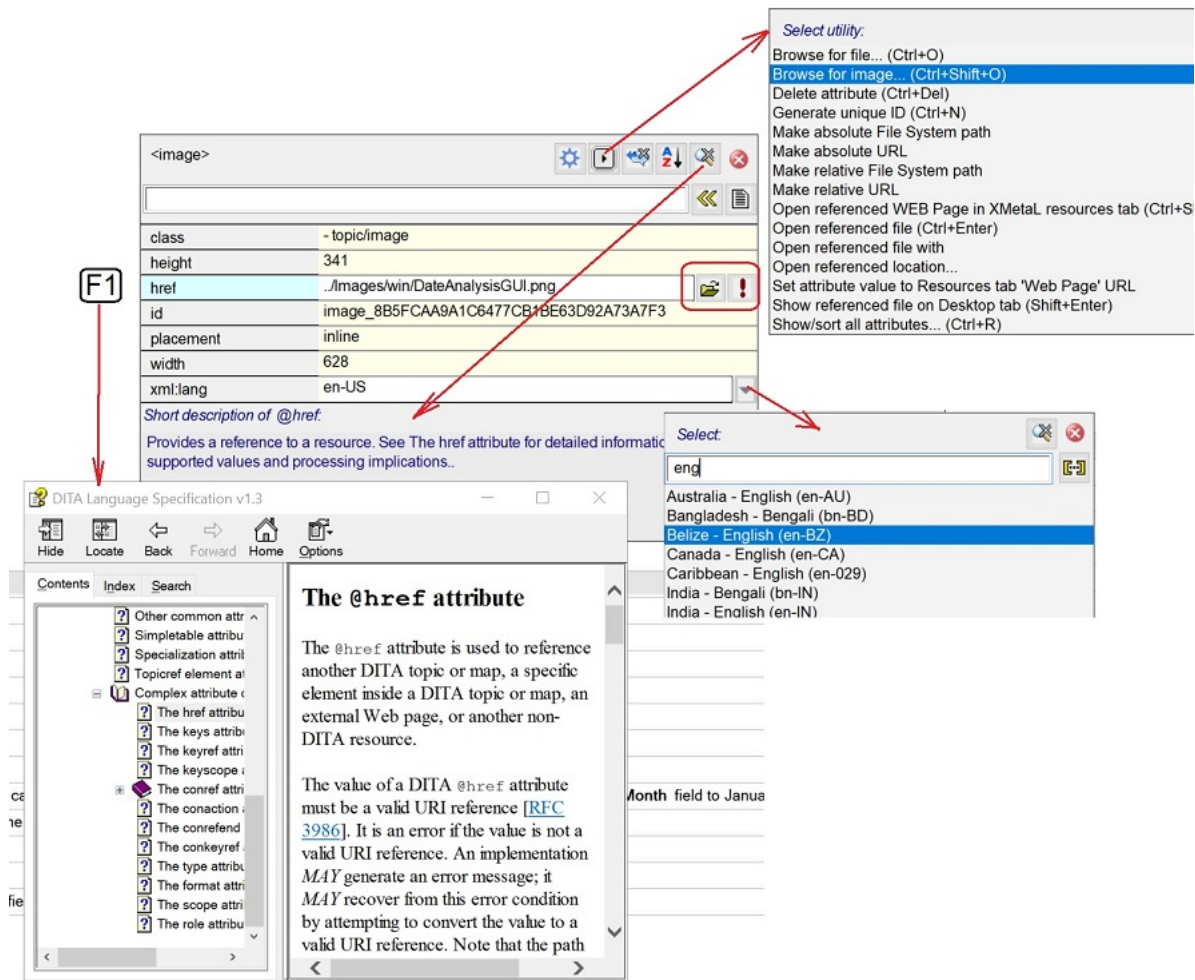
The inline attribute editor allows users to edit attributes in the element that is under the cursor. All actions can be completed via keyboard only.

All keyboard shortcuts defined below, except for opening the inline attribute editor, presupposes that it is open.

To do this	Do this
Open the inline attribute editor	Type CTRL + SHIFT + F6 on your keyboard
Find an attribute by name or description	Enter the search criteria in the search field. The results will be displayed as you type. If the search field is hidden, type CTRL+F on your keyboard to unhide it
Show an attribute's description	Hover your cursor over the name of the attribute and the description will be displayed in the lower pane. If the lower pane is hidden, type CTRL + I on your keyboard to unhide it.
Sort attributes	Type CTRL + R on your keyboard to toggle the sorting. You can sort by default order or alphabetically.
Delete an attribute from an element	Type CTRL + Del
Generate a unique ID	Type CTRL + N
Use other utilities for managing reference attributes	Type CTRL + ?

Users can also:



- Customize the list of predefined values
- Select an attribute description topic in the DITA Language Specification help system (DITA users only)
- Run custom macros for predefined attributes





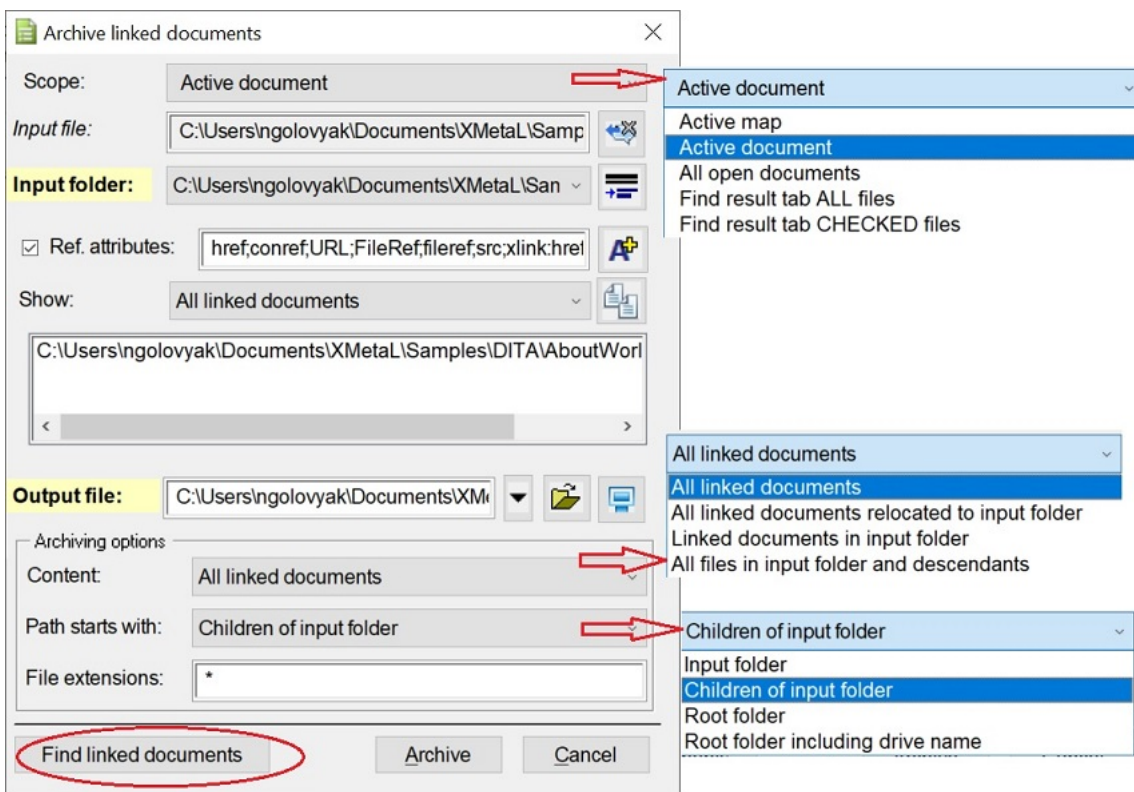
Archiving linked documents

The tool for archiving linked documents creates a backup (zip) of files opened in XMetaL editor or files found in XMetaL "Find in files" cross-files operations, including referenced content and images.

Linked documents are archived in the Archive Linked Documents dialog. To access this dialog, press **CTRL + ?** and then find and select **Archive linked documents** in the dialog that appears.

To do this	Do this
Set the scope of the archive	Click the Scope field and select the scope from the available options.
Find linked documents	Click the Find linked documents button.
Set reference attributes	<p>Click the  button. In the dialog that appears, select the attributes you want to add.</p> <p> Note: The Ref. attributes checkbox must be selected to enable this function.</p>

To do this	Do this
Select a common folder for all archiving documents	Click the  button to the right of the Input folder field.
Select the content included in the archive	Under archiving options , open the Content drop-down list, and then select one of the available options.
Copy the list of paths to linked documents to the clipboard	Click the  button to the right of the Show field.
Send a created zip file via email as an attachment	After you have created the output successfully, click the Send [email application name] email button.
Remove files manually	When the paths for the found documents are shown, select the document you want to delete and press Delete on the keyboard.
Set where the path will begin for the folder structure in the created archive	In the Path starts with field, select a path from the available options.
Add only files with specific extensions to the archive (e.g., find and archive images only)	Enter the extension(s) in the File extensions field.
Include all files in the subfolders of the archiving documents in the archive	In the Content field, select All files in input folder and descendants .



Printing

You can print from any document view mode, including Page Preview.

To do this	Follow these steps
Print a document	Click File > Print . Click Options to create headers and footers.
Print a document in Page Preview mode	Right-click in the browser pane and choose Print .

Working with a repository

XMetaL Connector is an integration layer that lets you access your repository through XMetaL Author dialogs and menus.



Note: Operation availability is determined by the adapter (a software driver for your repository). Refer to your repository documentation for details.

Table 29: Common repository operations

To do this	Click this	Notes
Open a topic or map file	Repository > Open from Repository	When you open a topic or map reference from a repository map, you have the option to view the file or check it out for editing (if enabled).
Create a new repository file	Repository > New from Repository Template	Select a template. When you add referenced components (for example, images and links) to the new file, you have access to repository-specific operations (such as advanced search) if your adapter supports it.
Create a new repository map	Repository > New Map from Repository Template	Select a template.
Open a document that you have checked out	Repository > Open Checked-Out Document	
Explore a repository	Repository > Explore Repository	
Check in a document	Repository > Check In Document	You may check in a document only if it is currently open for editing.
Check out a document	Repository > Check Out Document	You may check out a document only if it is currently open for viewing. When you check out a document, the current view of the document is replaced with the latest version of the document.
Undo checkout of a document	Repository > Undo Checkout	The document reverts to its previous version.

To do this	Click this	Notes
View document or map properties	Repository > Document Properties	
Set the URL for the default repository	Repository > Repository Options	You must set the URL for the repository before accessing files for the first time or if you switch repositories.
Log on to a repository	Repository > Log On to Repository	Some repositories require that you log on before any repository operations are allowed.
Log off from a repository	Repository > Log Off from Repository	

Adapter configuration file

Configuration files are located at `..\XMetaL x.x\Author\CRCL\configs`. Each adapter *instance* must have a configuration file.



Note: Only one configuration file can have the `default` attribute of the `<AdapterInstance>` element set to true.

Related Links

[Toolbars](#) on page 16


You can show/hide toolbars, create new toolbars, or modify existing ones through **View > Toolbars**.

Editing documents

A full suite of editing tools is available to assist you in the authoring process. Although they are similar to those found in many word processors, some are structure-aware.

You can cut, copy, and paste selections using menu commands, shortcut keys, or by drag-and-drop.

To do this	Follow these steps
Cut (Copy) and paste a selection	Click Edit > Cut (Copy) , move your cursor to the desired location and click Edit > Paste
Delete a selection	Click Edit > Delete

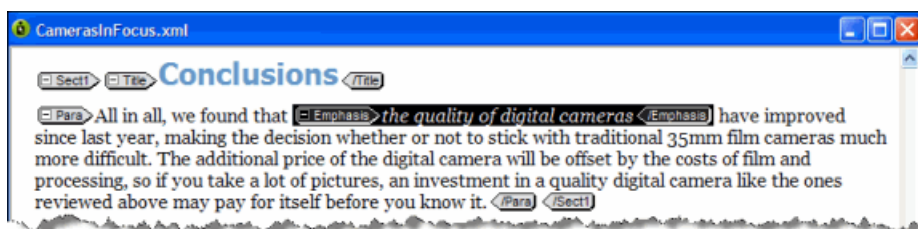
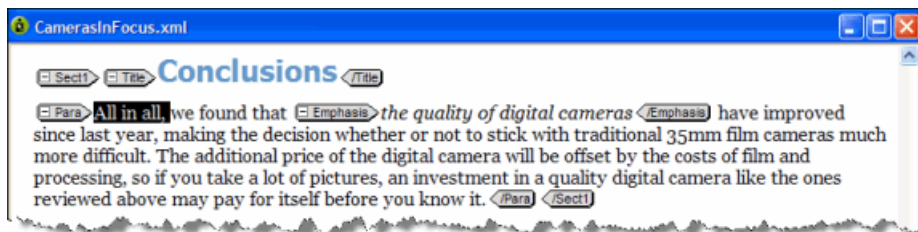
 **Note:** You cannot delete a selection if it includes required elements, and you cannot paste a selection that would cause the markup to become invalid.

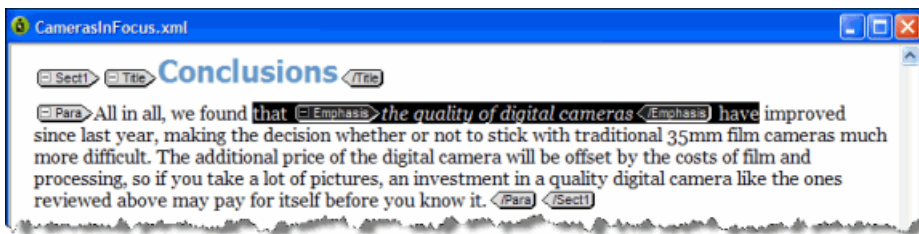
Selecting tags and text

Selection behavior is similar to that in word processors, but selection rules prevent you from creating an invalid document. If you select a start (or end) tag, your selection is extended to include the corresponding end (or start) tag and all of the text in between.

To do this	Follow these steps
Select a single word	Double-click the word you want to select
Select a single element	Click Edit > Select Element
Select consecutive elements	Click anywhere in the first element to be selected and drag the cursor until all of the elements are selected
Select the entire contents of a document	With the insertion point anywhere in the document, press Ctrl+A

The following examples show text and markup selections in Tags On view.





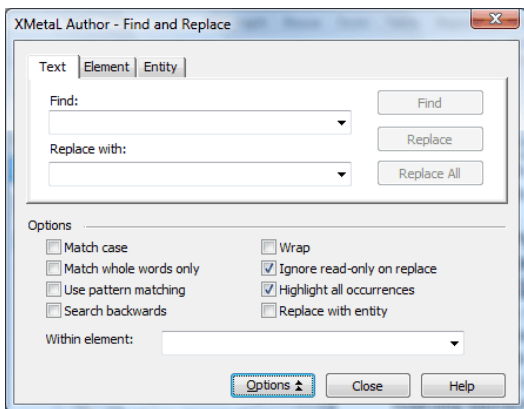
Finding and replacing text

You can search for a text string and replace it with different text or with a text entity. You can also restrict your search to a text string that occurs within a specific element.

To do this	Follow these steps
Find and replace text	Click Edit > Find and Replace .
Find and replace text within a specified element	Click Edit > Find and Replace . Then click Options and select an element.
Find and replace text with an entity reference	Click Edit > Find and Replace . Then click Options and select Replace with entity .

Choose from the following search options:

- **Match case.** Finds only text that matches the text and case specified.
- **Match whole words only.** Matches a sequence of one or more whole words only.
- **Use Pattern Matching.** Searches by pattern, using special search characters.
- **Search backwards.** Searches from the current location towards the beginning of the document.
- **Wrap.** Searches from the current location to the bottom of the the document, and then continues searching from the top of the document.
- **Ignore read-only on replace.** Ignores read-only elements when replacing text. (If this option is not chosen, an error message appears whenever you attempt to replace text within a read-only element.)
- **Highlight all occurrences.** Highlights all occurrences of the searched for text phrase.



Find and replace operations are designed to keep your document valid:

- Text searches do not find a match if part of the text is found in a separate element. For example, if you are searching for 'World Wide Web' and 'Web' is in an <EMPH> element, no match is found.
- In Normal and Tags On views, element replacements that would invalidate the markup do not occur if rules checking is on.

Related Links

[Finding and replacing across files](#) on page 85

You can perform cross-file searches to find text or markup using simple text and pattern matching all the way up to very advance XPath expressions.

Search patterns

When you use pattern matching to find words, the characters in the Find box are interpreted as patterns. That is, the search text can contain special search characters that match a class of text strings, or markup constructs. If your search text does not contain any special characters, the text is searched for exactly as entered.

The following special characters can be used:

```
. *
? + ^ $ [ ]
```

To search for any special character as ordinary text when Use Pattern Matching is selected, precede it with a backslash (\). For example, use '\.' to match a period (.).

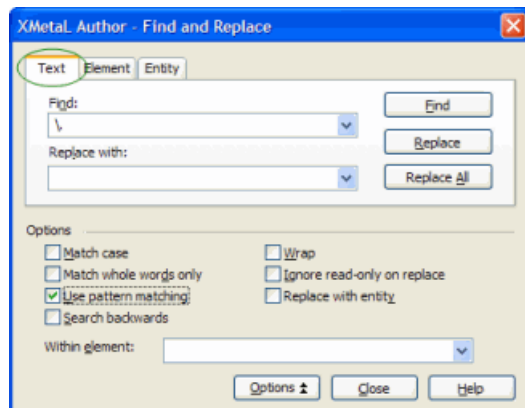


Table 30: Pattern summary

Expression	Matches	Example
ordinary character	itself	"abc" matches "abc"
<name or <name>	the element name	
&name or &name;	the entity name	
.	any single character	"fo.d" matches "food"
x*	0 or more occurrences of the character x	"l*ama" matches "llama"
(pattern)*	0 or more occurrences of the pattern	"b(an)*a" matches "banana"
x+	1 or more occurrences of the character x	"be+n" matches "been"
(pattern)+	1 or more occurrences of the pattern	"b(an)*a" matches "banana"

Expression	Matches	Example
x?	0 or 1 occurrences of the character x	"colou?r" matches "color" and "colour"
(pattern)?	0 or 1 occurrences of the pattern	"b(an)*ale" matches "banale" or "bale"
pattern1 pattern2	pattern1 or pattern2	"(love money)" matches "love" or "money"
^pattern	pattern immediately following markup	"^Note" matches "Note" at the start of a paragraph (as in <p>Note...</p>)
pattern\$	pattern immediately before markup	"sub\$" matches "sub" at the end of a paragraph (as in <p>...sub</p>)
[string]	any single character in the string	"t[ai]n" matches "tan" and "tin"
[^string]	any single character not in the string	"th[^e]n" matches "than", but not "then"
[char1-char2]	any character in the range	"[a-c]" matches "a", "b", or "c"
[^char1-char2]	any character not in the range	"[^a-c]" matches none of the characters "a", "b", or "c"
\n	in a replace string, it is replaced by the text matched by the <i>n</i> th sub-expression in brackets in the search string	If the search text is "(.)read" and the replace text is "\1ox", the result is "box"
\0	in a replace string, it is replaced by the text matched by the entire search string	If the search text is "fish" and the replace text is "gone \0ing", the result is "gone fishing"

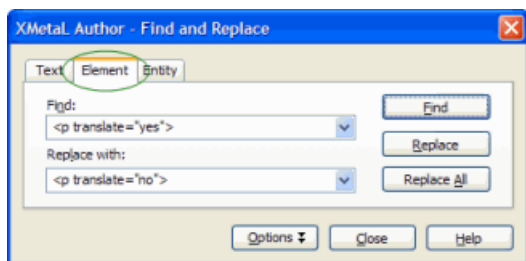
Finding and replacing elements

In Normal and Tags On views, you can search for a specific element in your document and replace it with a different element if doing so does not invalidate the markup. Only the element tags are changed; the element content does not change.

To do this	Follow these steps
Find and replace an element	Click Edit > Find and Replace and click the Element tab

Searching for attribute values

You can search for elements with specific attribute values. For example, you can search only for <p> elements that have a `translate` attribute value of 'yes' and replace them with a value of 'no':



If a found element has more than one attribute value set, only those that are specified in the replacement text are modified.

Removing an attribute

If you need to remove an attribute, you have the following options:

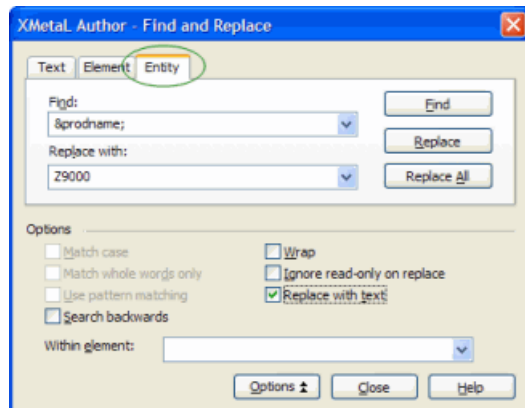
- Delete the attribute value in the Attribute Inspector. If the value is currently set to an empty string, enter a new temporary value, press Enter, and then delete the value.
- Switch to Plain Text view and modify the source.

Finding and replacing entities

In Normal and Tags On views, you can search for an entity reference and replace it with a different entity reference or with text.

To do this	Follow these steps
Find and replace an entity reference	Click Edit > Find and Replace and click the Entity tab.
Find and replace an entity reference with text	Click Edit > Find and Replace and click the Entity tab. From the options, choose Replace with text .

For example, you can search for the product name entity `&prodname;` and replace it with the product name text 'Z9000'.



Checking your spelling

You can check your spelling using the spell checker or as you write by using background spellchecking.

The spell checker in XMetaL helps you eliminate spelling mistakes. The spell checker also includes tools that can help you customize the preferences to create the experience you want. You can spell check a document all at once after finishing a document or you can use background spellchecking that uses wavy red lines to allow you to identify possible mistakes while you work.

Related Links

[Using the spell checker](#) on page 72

You can check your spelling using the spell checker.

[Using the background spell checker](#) on page 76

You can check your spelling as you write using background spell-checking.

[Main word lists](#) on page 78

Main word lists are the built-in word lists for a given language. The default main word list is determined by the language you select. You can use more than one main word list to check your document.

[User word lists](#) on page 79

User word lists are unique to your XMetaL Author setup or document. You can add words to your user word list and tell Spell Checker to skip them, replace them with a different word, or suggest alternatives for them.


Using the spell checker

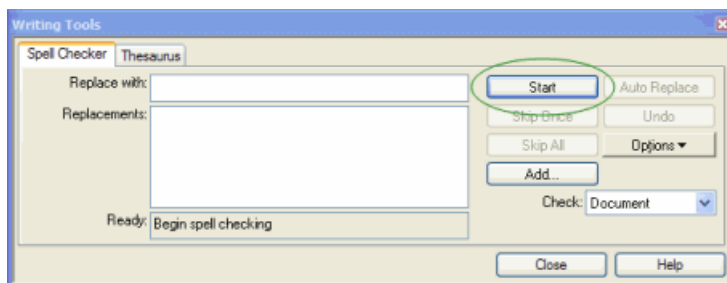
You can check your spelling using the spell checker.

To do this	Follow these steps
Replace a single occurrence of a word	Click Tools > Spell Checker . In the spell checker, click Start . When checking stops at a misspelled word, choose a word from the Replacements box and click Replace .
Replace all occurrences of a word	Click Replace All
Skip an occurrence of a word or phrase	Click Skip Once
Skip all occurrence of a word or phrase (and add it to the user word list for the document)	Click Skip All

You can use the spell checker in the following ways:

- Check the spelling in an entire document, part of a document, or only selected text.
- Manually edit text and then resume checking the document.
- Ignore a spelling error once but flag subsequent occurrences of the problem, or ignore the error for the rest of the proofreading session.
- Replace words by choosing a word from a list of available words, by typing in the correct word, or by defining an automatic replacement for a word (especially useful for words that are regularly misspelled).

 **Note:** The spell checker does not check processing instructions, comments, hidden elements, entity references, or form fields.



Word lists

Spell Checker checks spelling by comparing words in your document with the words in one or more lists of acceptable words. Word lists are categorized as follows:

- [Main word lists](#) on page 78
- [User word lists](#) on page 79

The spell checker checks the user word lists before the main word lists.

Related Links

[Using the background spell checker](#) on page 76

You can check your spelling as you write using background spell-checking.

[Main word lists](#) on page 78

Main word lists are the built-in word lists for a given language. The default main word list is determined by the language you select. You can use more than one main word list to check your document.

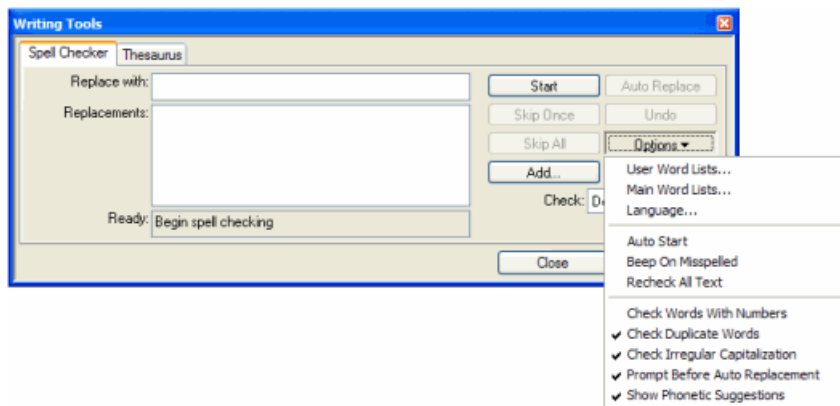
[User word lists](#) on page 79

User word lists are unique to your XMetaL Author setup or document. You can add words to your user word list and tell Spell Checker to skip them, replace them with a different word, or suggest alternatives for them.

Spell checker options

You can specify Spell Checker options through **Tools > Spell Checker**. Your settings are applied the next time you open the spell checker.

Option	Description
Auto Start	Starts spell checking automatically from the beginning of the document when you open the spell checker.
Beep On Misspelled	Sounds an alert when the spell checker finds a word it does not recognize.
Recheck All Text	Re-checks all spelling from the beginning of the document when you interrupt the spell checker and then click Resume .
Check Words With Numbers	Checks for words that contain numbers (for example, postal codes).
Check Duplicate Words	Checks for duplicate words.
Check Irregular Capitalization	Checks for incorrect capitalization (for example, two upper case letters at the beginning of a sentence).
Prompt Before Auto Replacement	Asks for user input before replacing a word.
Show Phonetic Suggestions	Suggests words that sound similar to a flagged word.











Controlling the active dictionary via xml:lang

The xml:lang attribute value can be used to control which dictionary the spell checker uses.

Whenever a spell checking action is in progress, the xml:lang attribute value will be inspected to determine if a different dictionary should be used instead of the default dictionary. The following table described INI variables that correspond to a particular dictionary, setting the INI variable to the xml:lang value you wish to map to that dictionary:

Table 31: Table of INI Variable Names, Default Values, Internal Codes, Standard Codes and Recommended Values

WT INI Variable Name	WT Legacy Internal Language Code Default Value	ISO-639-1	ISO-639-2	Recommended INI Value	WT Files
WT_AFIKAANS	AF	af	afr	af;afr	WT10LDAF.DLL
WT_CATALAN	CA	ca	cat	ca;cat	WT10LDCA.DLL
WT_CZECH	CZ	cs	ces, cze  Note: Both codes are considered synonyms and should be treated equally.	cs;ces;cze	WT10LDCZ.DLL
WT_DANISH	DK	da	dan	da;dan	WT10LDDK.DLL
WT_DUTCH	NL	nl	dut, nld  Note: Both codes are considered synonyms and should be treated equally.	nl;dut;nld	WT10LDNL.DLL
WT_ENGLISH	EN	en	eng	en;eng	WT10LDEN.DLL
WT_FRENCH	FR	fr	fra, fre  Note: Both codes are considered synonyms and should be treated equally.	fr;fra;fre	WT10LDFR.DLL
WT_GALICIAN	GA	gl	glg	gl;glg	WT10LDGA.DLL
WT_GERMAN	DE	de	ger, deu  Note: Both codes are considered synonyms and should be treated equally.	de;deu;ger	WT10LDDE.DLL

WT INI Variable Name	WT Legacy Internal Language Code Default Value	ISO-639-1	ISO-639-2	Recommended INI Value	WT Files
WT_GREEK	GR	el	gre, ell  Note: Both codes are considered synonyms and should be treated equally.  Note: Ancient Greek (before the year 1454) is "grc" and I assume it is not supported by the spell checker.	el;ell;gre	WT10LDGR.DLL
WT_ICELANDIC	IS	is	ice, isl  Note: Both codes are considered synonyms and should be treated equally.	is;ice;isl	WT10LDIS.DLL
WT_ITALIAN	IT	it	ita	it;ita	WT10LDIT.DLL
WT_NORWEGIAN	NO	no	nor	no;nor	WT10LDNO.DLL
WT_PORTUGUESE	PO	pt	por	pt;por	WT10LDPO.DLL
WT_RUSSIAN	RU	ru	rus	ru;rus	WT10LDRU.DLL
WT_SLOVAK	SL	sk	slo, slk  Note: Both codes are considered synonyms and should be treated equally.	sk;slk;slo	WT10LDLSDLL
WT_SOTHO	{NULL}	st	sot	st;sot	WT10LDST.DLL
WT_SPANISH	ES	es	spa	es;spa	WT10LDES.DLL
WT_SWEDISH	SV	sv	swe	sv;swe	WT10LDSV.DLL
WT_TSWANA	{NULL}	tn	tsn	tn;tsn	WT10LDTN.DLL
WT_TURKISH	TR	tr	tur	tr;tur	WT10LDTR.DLL

WT INI Variable Name	WT Legacy Internal Language Code Default Value	ISO-639-1	ISO-639-2	Recommended INI Value	WT Files
WT_XHOSA	{NULL}	xh	xho	xh;xho	WT10LDXH.DLL
WT_ZULU	{NULL}	zu	zul	zu;zul	WT10LDZU.DLL
WT_NOLANGUAGE	{NULL}		zxx	zxx	
WT_ENGLISH_AUS	OZ	en-au	eng-AU	en-AU;eng-AU	
WT_ENGLISH_CAN	CE	en-ca	eng-CA	en-CA;eng-CA	
WT_ENGLISH_UK	UK	en-gb	eng-GB	en-GB;eng-GB	
WT_ENGLISH_US	US	en-us	eng-US	en-US;eng-US	
WT_FRENCH_CAN	CF	fr-ca	fra-CA, fre-CA	fr-CA;fra-CA;fre-CA	
WT_FRENCH_NAT	FR	fr-fr	fra-FR, fre-FR	fr-FR;fra-FR;fre-FR	
WT_GERMAN_NAT	DE	de-de	deu-DE, ger-DE	de-DE;deu-DE;ger-DE	WT10LDDE.DLL
WT_GERMAN_SWI	SD	de-ch	deu-CH, ger-CH	de-CH;deu-CH;ger-CH	WT10LDDE.DLL
WT_PORTUGUESE_BR	BR	pt-br	por-BR	pt-BR;por-BR	WT10LDPO.DLL
WT_PORTUGUESE_PO	PO	pt-pt	por-PT	pt-PT;por-PT	WT10LDPO.DLL
WT_SPANISH_AMER	EA	es-us	spa-US	es-US;spa-US	WT10LDES.DLL
WT_SPANISH_SPAIN	ES	es-es	spa-ES	es-ES;spa-ES	WT10LDES.DLL
WT_NODIALECT	{NULL}		zxx	zxx	

Using the background spell checker

You can check your spelling as you write using background spell-checking.

Background spell-checking displays red, wavy lines for any misspelled word to let you easily see and correct spelling mistakes. You can also choose to correct a word that is highlighted as misspelled. Background spell-checking also includes a feature that automatically replaces misspelled words as you type, using words from the user word lists and main word list (if only one match exists).

You can use background spell-checking in the following ways:

- View misspelled words as soon as you have typed them.
- Allow the background spell-checking feature to automatically correct words that are similar to words in the main or user word lists.
- Manually correct words that are similar to words in the main or user word lists.



Note: Background spell-checking is on by default.

Related Links

[Turning on background spell-checking](#) on page 77

Background spell-checking can be turned on or off. The change affects all documents.

[Automatically correcting spelling](#) on page 77

You can set up XMetaL to automatically correct misspelled words that are similar to words in the main word list or user word lists. This feature is triggered for an individual word only when the spacebar is pressed immediately after that word.

[Manually correcting spelling](#) on page 77

You can manually correct misspelled words with words from the main word list and user word lists.

Turning on background spell-checking

Background spell-checking can be turned on or off. The change affects all documents.

1. Click **Tools > Options**.
2. In the **General** pane, select the **Check spelling while typing** check box.
3. Click **OK**.
The **Options** dialog box closes and changes are made to your settings.

Related Links

[Automatically correcting spelling](#) on page 77

You can set up XMetaL to automatically correct misspelled words that are similar to words in the main word list or user word lists. This feature is triggered for an individual word only when the spacebar is pressed immediately after that word.

[Manually correcting spelling](#) on page 77

You can manually correct misspelled words with words from the main word list and user word lists.

Automatically correcting spelling

You can set up XMetaL to automatically correct misspelled words that are similar to words in the main word list or user word lists. This feature is triggered for an individual word only when the spacebar is pressed immediately after that word.



Note: Text in hyperlinks is not automatically corrected.

1. Click **Tools > Options**.
2. To automatically replace misspelled words, select the **Replace words from my word list while typing** check box.
3. Click **OK**.
The **Options** dialog box closes and changes are made to your settings.

Related Links

[Turning on background spell-checking](#) on page 77

Background spell-checking can be turned on or off. The change affects all documents.

[Manually correcting spelling](#) on page 77

You can manually correct misspelled words with words from the main word list and user word lists.

[Main word lists](#) on page 78

Main word lists are the built-in word lists for a given language. The default main word list is determined by the language you select. You can use more than one main word list to check your document.

[User word lists](#) on page 79

User word lists are unique to your XMetaL Author setup or document. You can add words to your user word list and tell Spell Checker to skip them, replace them with a different word, or suggest alternatives for them.

Manually correcting spelling

You can manually correct misspelled words with words from the main word list and user word lists.

1. Place your mouse cursor over a misspelled word that is highlighted and right-click your mouse.

A menu appears and displays options for correct spelling.

2. Select one of the listed options.

The misspelled word is replaced by the selected word from the main word list or user word lists.

Related Links

[Automatically correcting spelling](#) on page 77

You can set up XMetaL to automatically correct misspelled words that are similar to words in the main word list or user word lists. This feature is triggered for an individual word only when the spacebar is pressed immediately after that word.

[Turning on background spell-checking](#) on page 77

Background spell-checking can be turned on or off. The change affects all documents.

[Main word lists](#) on page 78

Main word lists are the built-in word lists for a given language. The default main word list is determined by the language you select. You can use more than one main word list to check your document.

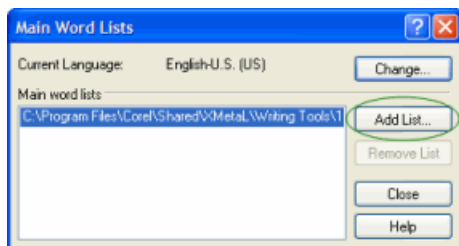
[User word lists](#) on page 79

User word lists are unique to your XMetaL Author setup or document. You can add words to your user word list and tell Spell Checker to skip them, replace them with a different word, or suggest alternatives for them.

Main word lists

Main word lists are the built-in word lists for a given language. The default main word list is determined by the language you select. You can use more than one main word list to check your document.

To do this	Follow these steps
Add a main word list	Click Tools > Spell Checker . In the spell checker, click Options > Main Word Lists . Then click Add List and choose a list.
Remove a main word list	Click Options > Main Word Lists . Then click Remove List and choose a list.



Related Links

[Using the spell checker](#) on page 72

You can check your spelling using the spell checker.

[Using the background spell checker](#) on page 76

You can check your spelling as you write using background spell-checking.

[User word lists](#) on page 79

User word lists are unique to your XMetaL Author setup or document. You can add words to your user word list and tell Spell Checker to skip them, replace them with a different word, or suggest alternatives for them.

User word lists

User word lists are unique to your XMetaL Author setup or document. You can add words to your user word list and tell Spell Checker to skip them, replace them with a different word, or suggest alternatives for them.

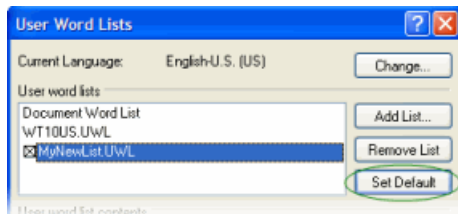
To do this	Follow these steps
Set the default user word list	Click Tools > Spell Checker . In the spell checker, click Options > User Word Lists . Then choose a word list and click Set Default .
Add a user word list	Click Tools > Spell Checker . In the spell checker, click Options > User Word Lists . Then click Add List and choose a word list.

User word list files have the extension '.uwl'. The word list that is installed by default is WT10xx.uwl (where 'xx' is a language code). This file is available to any document created or edited in your setup of XMetaL Author. If you have more than one of these lists installed on your system, you can add or remove them from the set of word lists that the spell checker uses for your document.

The spell checker checks the default user word list before it checks the other user word lists or main word list(s) In addition to the default word list, each document has its own word list.



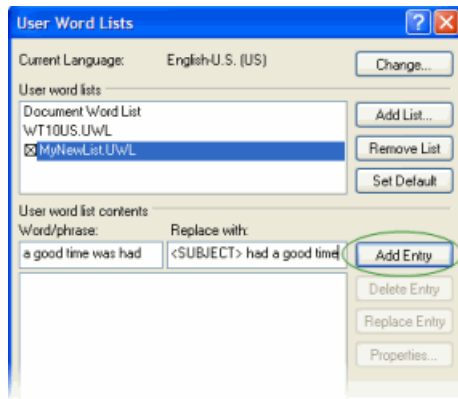
Note: When you ignore a word during spell checking by clicking **Skip All**, that word is added to the document user word list.



Adding an entry

To add an entry to the user word list:

1. Click **Tools > Spell Checker**.
2. Click **Options > User Word Lists** and select a word list.
3. Do one of the following:
 - Enter the word in the **Word/phrase** text box
 - Add a misspelling or a phrase that you want the spell checker to replace automatically and enter the replacement in the **Replace with** text box
4. Click **Add Entry**.



Related Links

[Deleting an entry](#) on page 80

[Changing the replacement text for an entry](#) on page 80

[Changing an entry](#) on page 80

Deleting an entry

To delete an entry in a user word list:

1. Click **Tools > Spell Checker**.
2. Click **Options > User Word Lists** and select a word list.
3. Select an entry in the **Word/phrase** text box and click **Delete Entry**.

Changing the replacement text for an entry

To change the replacement text for an entry in a user word list:

1. Click **Tools > Spell Checker**.
2. Click **Options > User Word Lists** and select a word list.
3. Select an entry in the **Word/phrase** text box and edit the text in the **Replace With** text box.
4. Click **Replace Entry**.

Changing an entry

To change an entry in a user word list:

1. Click **Tools > Spell Checker**.
2. Click **Options > User Word Lists** and select a word list.
3. Select an entry in the **Word/phrase** text box and click **Properties**.
4. Choose an option:
 - **Skip word**. Select this option if you do not want the spell checker to flag the word as incorrect.
 - **Auto-replace entry**. Select this option if you want the spell checker to automatically replace any instance of the word or phrase in your document with the text in the **Replace with** text box.
 - **Exception entry**. Select this option if you have multiple **Replace with** entries for one word and you want the spell checker to ask you which replacement text to use when it encounters the word in a document.
5. Edit the text in the **Word/Phrase** text box as required.

This is the text that the spell checker finds (or ignores).

6. Edit the text in the **Replace with text box as required.**

If you want to enter more than one choice for replacement text (for Exception entry types), each choice must be on a separate line in the **Replace with** text box.



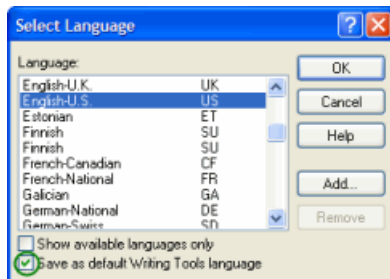
Note: If the Auto-replace entry option is enabled, any text in the **Replace with** text box is ignored.

Language settings

You can choose a language for the current file or set it as the default language for the spell checker and thesaurus. You can also add and remove languages.

To do this	Follow these steps
Set the default language	Click Tools > Spell Checker . In Spell Checker, click Options > Language . Then enable the Save as default Writing Tools language option and choose a language.
Add a language	Click Options > Language . Then click Add and type a two-letter code for the language you want to add (the code must be unique) and a description (the name of the language).
Remove a language	Click Options > Language . Then select a language and click Remove .

You can use the spell checker to format dates, time, currency symbols, and other text according to a language convention (for example, “12 avril 1996” for a French document).



Related Links

[Checking your spelling](#) on page 71

You can check your spelling using the spell checker or as you write by using background spellchecking.

[Using the thesaurus](#) on page 82

You can look up a word and display synonyms, antonyms, and other related information using the thesaurus.

Checking a selected word's spelling and synonyms

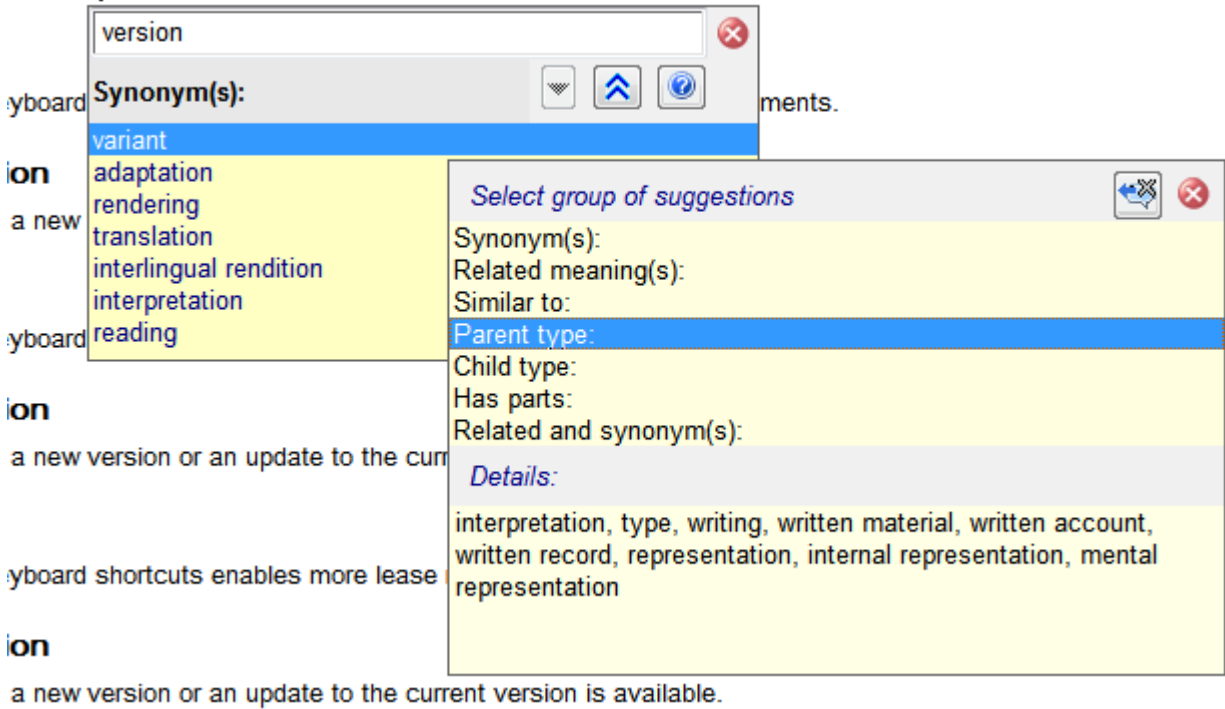
The word that is currently under the cursor can be checked with the hot key **Ctrl + .** (Ctrl + period).

The word is checked as follows:

- If the word is misspelled, correct words are proposed in the dialog that opens.
- If the word is spelled correctly, a list of synonyms, antonyms and groups of related words are displayed.

You can navigate forward and backward between the lists of proposed words. Every related word can have its own list of related words, and it's possible to return back or move forward in the search chain.

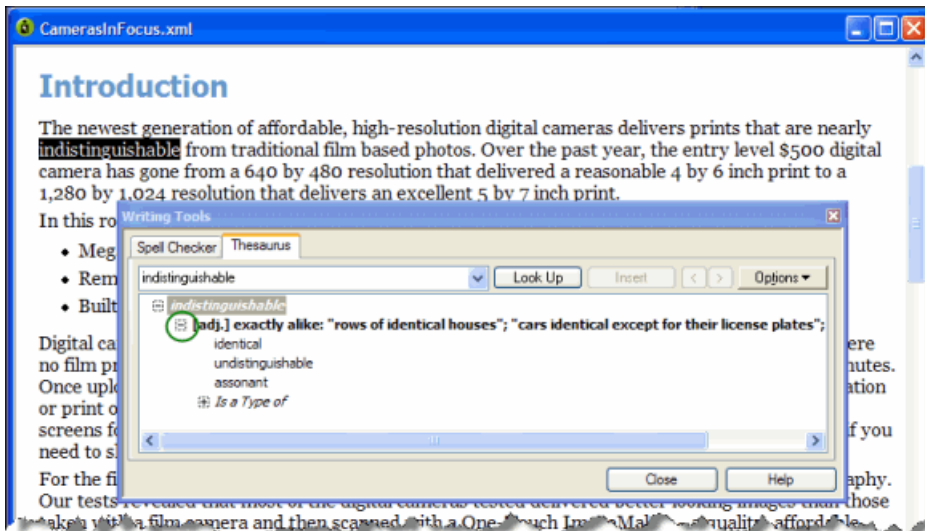
a new version or an update to the current version is available.



Using the thesaurus

You can look up a word and display synonyms, antonyms, and other related information using the thesaurus.

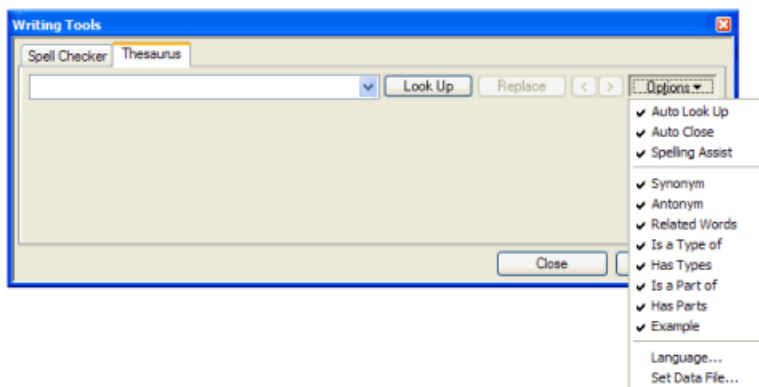
To do this	Follow these steps
Replace a word using the thesaurus	Select a word in your document, click Tools > Thesaurus , and click Look Up . Expand the desired definition to display a list of synonyms and other words. Choose a word and click Replace .
Insert a word from the thesaurus	Look up a word in the thesaurus and expand the desired definition to display a list of synonyms and other words. Choose a word and click Insert .



Thesaurus options

You can specify thesaurus options through **Tools > Thesaurus**. Your settings are applied the next time you open the thesaurus.

Option	Description
Auto look-up	Displays the thesaurus entry for the current word when the thesaurus is opened.
Auto close	Closes the thesaurus after you insert a word in your document.
Spelling assist	Suggests alternate spellings if the word is spelled incorrectly or not found in the thesaurus.
Synonyms	Displays words that have the same or similar meaning as the word being looked up.
Antonyms	Displays words that have an opposite meaning.
Set data file	Sets a language-specific data file for the thesaurus.



Tracking your changes

In Normal and Tags On views, you can display changes as marked insertions or deletions. When change tracking is active, text that is inserted in a document appears in a distinctive color or formatting. You can hide text that has been deleted, or you can display it in a distinctive color and with strikethrough formatting.

To do this	Follow these steps
Turn on (off) track changes	Click Tools > Track Changes
Scroll through changes	Click Tools > Accept or Reject Changes . Then click Find previous (Find next) .
Accept (reject) all changes	Click Tools > Accept or Reject Changes . Then click Accept all (Reject all) .
Accept (reject) changes one at a time	Click Tools > Accept or Reject Changes . Then click Accept (Reject) .

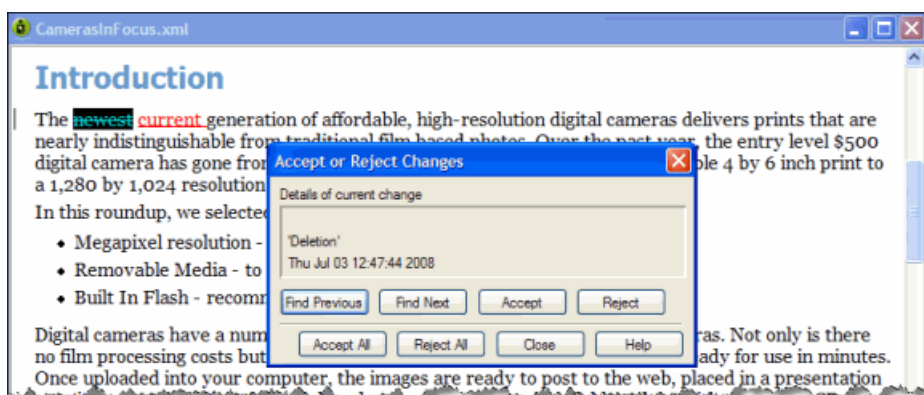
The following types of changes can be tracked:

- Text inserted or pasted
- Text deleted or cut
- Text moved by drag-and-drop

Changes can be accepted or rejected on an individual or global basis. When marked changes are accepted, the changes are incorporated into the document and the revision marks are removed. When marked changes are rejected, the changes are removed, and the deleted text (if any) is restored to the document.



Note: When rules checking is active, changes that are necessary to make the document valid are not rejected.



Related Links

[Options](#) on page 47

You can set options through the **Tools** menu.

Cross-file Operations

You can perform certain actions or operations, such as finding text or spell checking, across multiple files.

You can perform certain actions or operations, such as finding text or spell checking, across multiple files.

You will have the option to choose from several different locations, including the DITA Maps currently open, all open documents, and the current document.

Finding and replacing across files

You can perform cross-file searches to find text or markup using simple text and pattern matching all the way up to very advance XPath expressions.

You can search for text, markup, and XPath expressions with the **Find in Files** feature. The results will be displayed in the **Results** pane. The results will be sorted alphabetically by filename. You can remove, select, highlight and replace results, as well as perform new searches on the results.

Double-clicking on a search result opens the containing document.

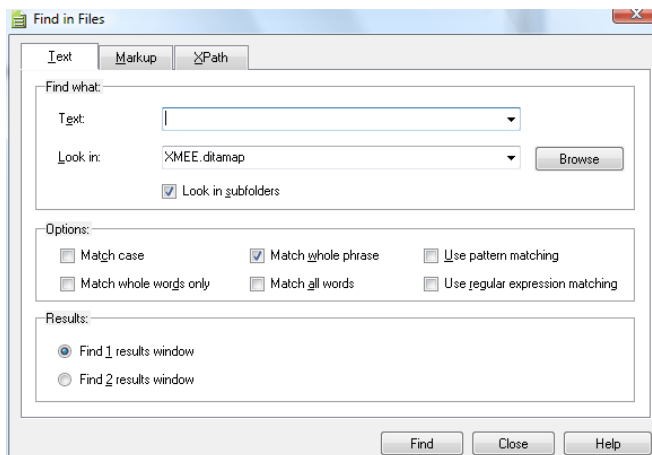
Find text across files

You can search across files for text. The **Find in Files** dialog box can be opened from the editing pane.

Results can be displayed on one of two pages, allowing you to keep the results of two searches displayed at one time.

1. Click **Edit > Find in Files**.

The **Find in Files** dialog box opens.



2. Enter the search string in the Text field.

3. Select the search location from the **Look In** drop-down list. Alternatively, click **Browse** to browse for the search location. The following options are available in the **Look In** drop-down list:

- **All Open Documents** - searches all documents that are currently open
- **Current Document** - searches the topic file you have currently open
- **Checked files in: Find [1 or 2] Results pane** - searches the already checked files in the Find 1 or 2 Results pane (Note: This option is only available when initiating a search from the Find 1 or 2 Results pane)

4. Select **Look in subfolders** to include in the search all subfolders located under the folder of the file you are searching.

5. (Optional) Select from one of the following options:

- **Match case** - search results include only words that have the same capitalization as the search word
- **Match whole words only** - search results will only be returned for word matches with a whitespace occurring on either side of the word. (For example, if searching for 'use', only occurrences of the word 'use' are found, and search results will not return words such as 'user' or 'uses'.)
- **Match whole phrase** - when searching for a phrase, results are returned only for the exact series of words being searched
- **Match all words** - search results only include files that contain all the search words in any location within the searchable document(s). The words can be in any order, and do not have to be displayed in any sequence.
- **Use pattern matching** - see [Search patterns](#) on page 69
- **Use regular expression matching** - see [definition of regular expression](#)

6. Select the **Find 1** or **Find 2** results pane to display results.

7. Click **Find**.

Results are displayed in the selected window in the **Results** pane. Double-clicking on a search result opens the containing document.

Related Links

[Finding and replacing text](#) on page 68

You can search for a text string and replace it with different text or with a text entity. You can also restrict your search to a text string that occurs within a specific element.

[Find markup across files](#) on page 86

You can search for occurrences of specific elements or attributes across files.

[Find markup using XPath expressions](#) on page 87

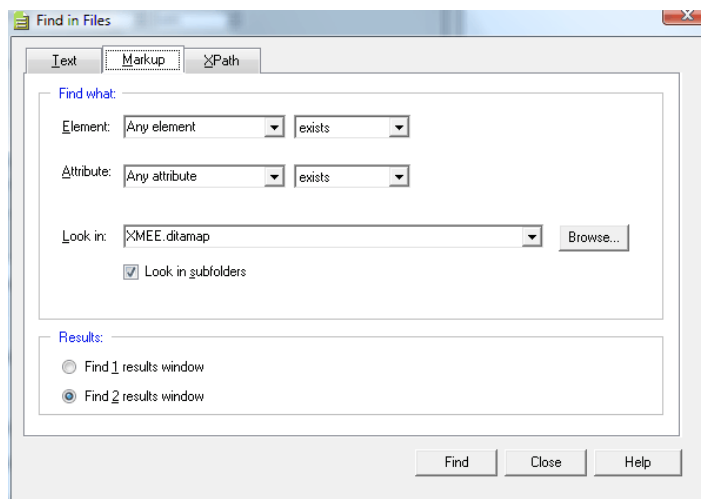
Find markup using XPath expressions.

Find markup across files

You can search for occurrences of specific elements or attributes across files.

1. Click **Edit > Find in Files**.

The **Find in Files** window opens.



2. Click the **Markup** tab.

3. Specify the **Elements** or **Attributes** you want to find, along with one of the following options:

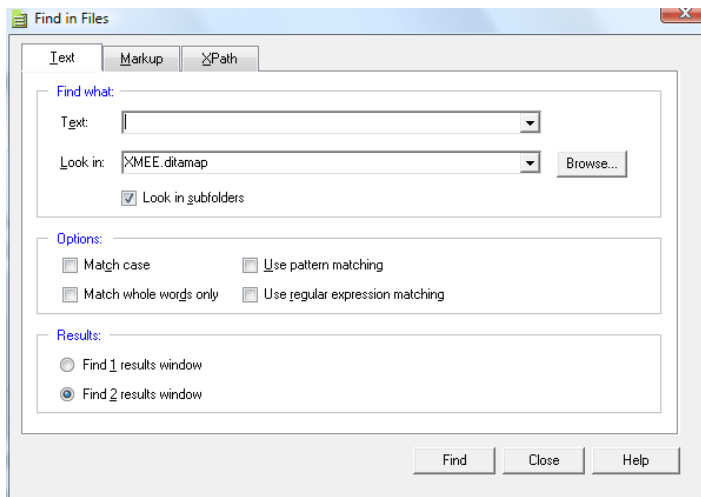
- exists

- contains
 - equals
 - does not equal
 - does not exist
4. Select the search location from the **Look In** drop down menu. Alternatively, click **Browse** to browse for the search location.
 5. Select **Look in subfolders** to include all subfolders in the search.
 6. Select the **Find 1** or **Find 2** window to display results.
 7. Click **Find**.
Results are displayed in the selected window in the **Results** pane.

Find markup using XPath expressions

Find markup using XPath expressions.

1. Click **Edit > Find and Replace**.
The **Find in Files** window opens.
2. Click the **XPath** tab.



3. Enter a path expression in the **XPath** field, or select a path expression from the **History** drop-down list.
4. Select the search location from the **Look In** drop-down list. Alternatively, click **Browse** to browse for the search location.
5. Select **Look in subfolders** to include all subfolders in the search.
6. Select the window, **Find 1** or **Find 2**, in which you want your results displayed.
7. Click **Find**.
The results are displayed in the selected window in the **Results** pane.

Related Links

[W3C Schools XPath Tutorial](#)

Spell checking across files

You can spell check across files by using the **Spell Check in Files** feature. You will need to select the folder you want to spell check.


To do this:

1. Click **Tools > Spell Check in Files**.
2. Enter the name of the folder you want to spell check.
3. Select the 'include subfolders' check box to spell check content in all subfolders.
4. Select from any of the following output options:
 - **Show markup attributes** - Displays markup attributes in the results
 - **Show suggestions** - Displays replacement options for correct spelling with the results. Tapping on a replacement option inserts it in place of the original text
 - **Fast spell check** - The spell check does not load the DTD or XSD for each XML document being spell checked.

NOTE: If your documents have DTD-inferred attributes such as `xml:lang="fr-FR"`, you may get the wrong dictionary applied during the spell check when using Fast Spell Check.


5. Click **Spell Check** to perform the spell check across files.

Results are displayed in a tab in the Results pane.

 **Note:** The Spell Check in Files feature will not differentiate between markup and text.




Replacing results across files


After you have performed a cross-file search or spell check, you can replace any or all of the results.

1. In the Results pane, select the check boxes of the results you want to replace, OR click the **Check all items** button () to select all results.




Note: You can click **Uncheck all items** () to clear all check boxes.

2. In the **Replace with:** field, enter the replacement text or markup.
3. (optional) Click the **Set Replacement Options** button () to set replacement options. For instructions, see [Setting replacement options](#) on page 88.
4. Click the **Replace all checked items** button () to replace only the items you have checked, OR click the **Replace all highlighted items** button ()

After you have replaced text or markup, you can click the **New search in checked files** button (), or press F7, to perform a new search on the already searched files for which results are displayed in the current tab of the Results pane.

Setting replacement options

1. In the Results pane, click the **Set replacement options** button ().
The Replace Options dialog appears.
2. In the General section, set the following:
 - **Open files** - when a replacement is performed, the affected file is opened. When **Open files** is checked, you can perform undo operations for each open file to undo text replaced using the 'Replace with' feature.
 - **Track changes** - all changes made by the replacement operation will be displayed
 - **Make backup files** - Create backup files. if you chose to make backup files, enter the default file extension for the backup files.
3. In the Replace All Checked Options section, set the following parameters:

- Don't redo prior replacement even if checked - if an identical replacement operation has been performed on a checked field, it will not be repeated even if that file is again checked
 - Uncheck items after replacement - the results that are checked will be unchecked after the replacement operation has finished
4. In the Interpret-as-markup strictness section, select one of the following options:
- **Full** - checks the markup compatibility of the replacement value and the location into which it is inserted as well as its children
 - **Partial** - checks the markup compatibility of the replacement value and the location into which it is inserted
 - **None** - markup is not checked
5. Click **OK**.
The new settings now apply to all future replace actions in the Results pane.

Running cross-file operations

The Run Cross-File Operation feature allows you to run other cross-file operations that may have developed specifically for your needs.

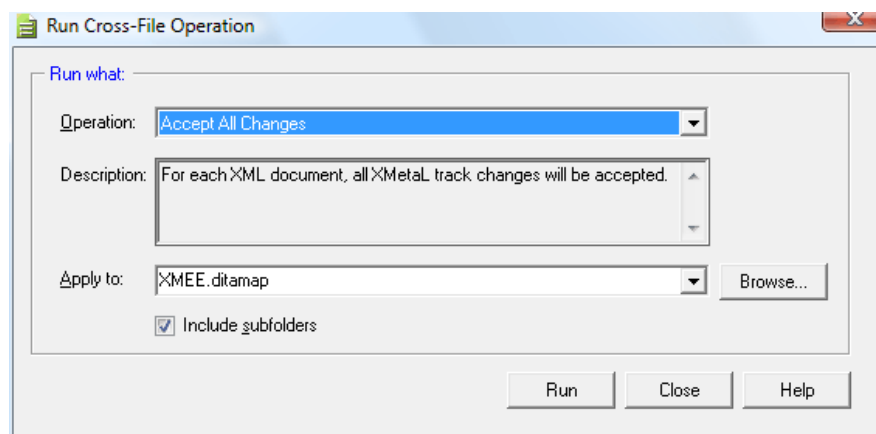
To do this	Follow these steps
Run cross-file operation	Click Tools > Run Cross-File Operation

The Run Cross-File Operation feature allows you to run the chosen cross-file operations:

- **Accept All Changes** - accepts all the changes tracked in the selected folder or given set of files
- **Detect Duplicate IDs** - looks for duplicate attribute values for specific attribute type within each document
- **Validate References** - validates all the cross references by asserting if the file is present or not; it will report any broken links
- **Word Count** - counts the words in each file and report the number of words in each file and the total number of words

You can apply the cross-file operation to any of the following:

- **All Open Documents** - searches all documents (topic files) that are currently open
- **Current Document** - searches the topic file you have currently open
- You can also click **Browse** to select a specific folder on which to run the cross-file operation. The cross-file operation will apply to all files in the folder (and subfolders, if the **Include subfolders** check box is selected).



Cross-file operations

Cross-file operations provide searching, spell checking and other operations across multiple files in a folder or references from a ditamap.

Cross-file operations can be limited to a defined set of files. By default, xml, sgml, sgm, dita, and ditamap file types are selected.

To set cross-file operation preferences:

1. Select **Tools > Options** from the main menu.

The Options dialog box opens.

2. Under **Cross-File Operations**, select **General** to add or remove file types whose processing you want to limit.
3. You can optionally choose to include or exclude attributes from the DTD.



Note: Selecting this check box causes cross-file operations to run slower.

4. Click **OK** to save changes.

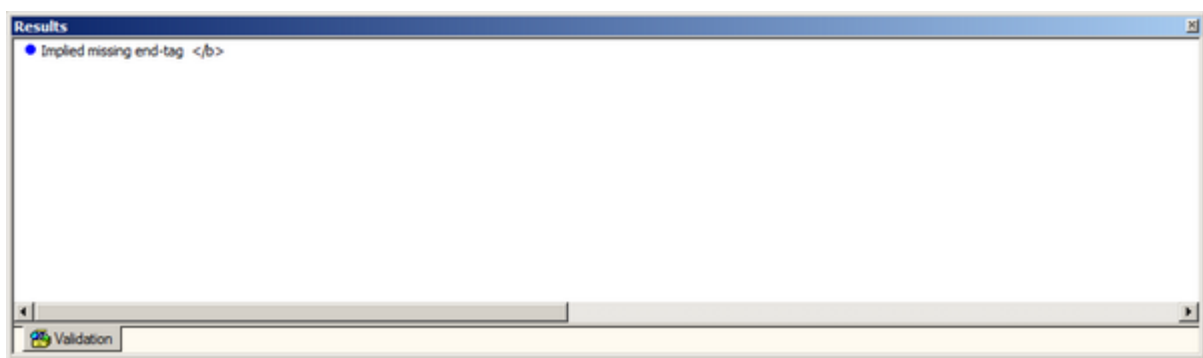
Results pane

The Results pane displays the results of cross-file operations, such as the Find in Files feature, and error-reporting features, such as the Validation Log.

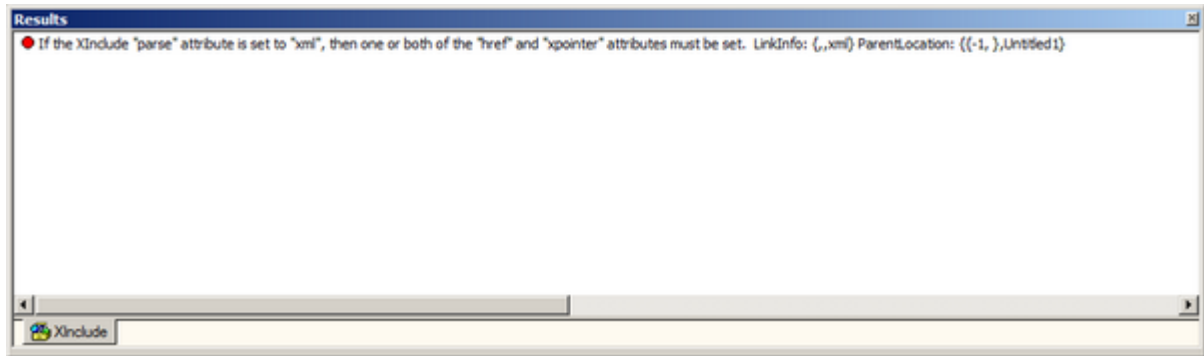
To do this	Follow these steps
Show Validation log	Click View > Results > Validation
Show XInclude link errors log	Click View > Results > XInclude
Show Find 1 results	Click View > Results > Find 1
Show Find 2 results	Click View > Results > Find 2
Show Spell Checking results	Click View > Results > Spell Checking
Show Cross-File Operation results	Click View > Results > Cross-File Operation

Results for the following features will be displayed in the Results pane:

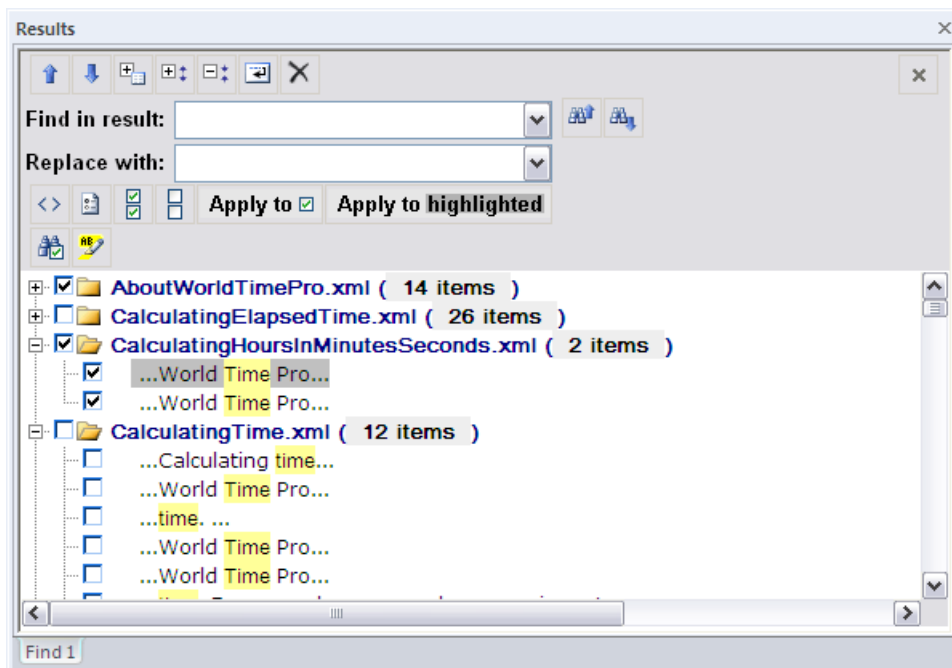
- **Validation** - Lists markup errors



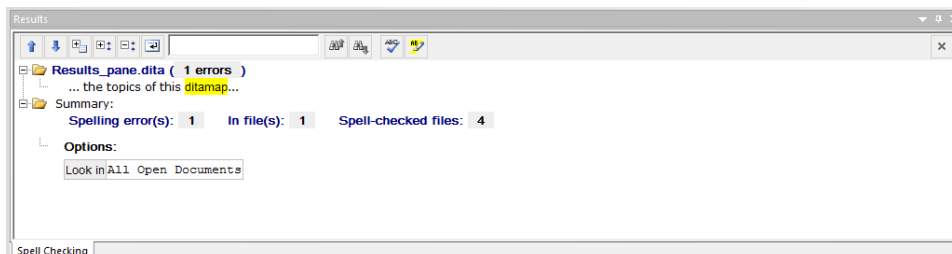
- **XInclude** - Displays XML inclusion link errors



- **Find 1 and 2** - Lists search results for the **Find in Files** feature



- **Spell Checking** - Lists all spelling errors



- **Cross-File Operation** - Lists results for the **Run Cross-File Operation** feature
 - **Accept All Changes** - For each XML document, all XMetaL track changes will be accepted
 - **Detect Duplicate Ids** - Look for duplicate occurrences of ID attribute values within each document
 - **Validate Cross References** - For each XML document, check for broken references

- **Word Count** - Count all the words in all the topics of this ditamap

Related Links






[Panels](#) on page 13

Panels provide access to the markup in your document and let you organize resources. You can have one or more panels open in your work area at any time. You can dock a panel so that it is attached to the work area border, or the panel can float. You can pin a panel to keep it open, or un-pin a panel to hide it.

Results pane actions

A list of actions, including the their button, name, and description. Most of the features will have similar actions, such as previous and next.

Table 32: Common actions

Button	Name	Description
	Previous	Select the previous location in the results list (Shortcut: Shift+F4)
	Next	Select the next location in the results list (Shortcut: F4)
	Wrap	Toggle line wrapping (applies to list view only)
	Switch View	Switch view (tree versus list)
	Expand All	Expand all the results to display in a tree view
	Collapse All	Collapse all the results to display in a folder view
	Find in result	Text to search for amongst result items
	Replace with	Text to replace searched for result
	Find previous phrase	Find previous occurrence of the phrase



Button	Name	Description
	Find next phrase	Find next occurrence of phrase
	Close Tab	Close results

Table 33: Actions specific to Find in Files













Button	Name	Description
	Toggle highlighting	Highlight all results in the active document
	Remove selected item(s) from results	Remove results that are highlighted and that have their check boxes selected
	Set replacement options	Open the Replace Options dialog to set replacement options
	Check all items	Select all check boxes
	Uncheck all items	Unselect all check boxes
	Replace as markup	Denote that the replacement you are using is an element
Apply to highlighted	Replace highlighted text	Replace all results that are highlighted with the text from the Replace With text field
Apply to <input checked="" type="checkbox"/>	Replace all checked items	Replace all results that are checked with the text from the Replace With text field
	New search in checked files	Perform a new search only in the files that you have checked and for which results are displayed in the current tab of the Results pane. (Shortcut: F7)

Table 34: Actions specific to Spell Check in Files

Button	Name	Description
	Add to dictionary	Add the word to the dictionary


Button	Name	Description
	Re-check found files only	Re-check spelling in those files only in which spelling errors were found in the initial spell check (Keyboard shortcut: F7)
	Show Spell Checker	Show spell checker after jumping to result
	Toggle Highlighting	Highlight all results in the active document
Apply to highlighted	Replace highlighted text	Replace all results that are highlighted with the text from the Replace With text field
	Set replacement options	Open the Replace Options dialog to set replacement options

Text case assistant

The text case assistant provides text casing adjustment options for selected text.


To change text case, select the text for which you want to change the case, and then either click **Ctrl + F3** (by default) or right-click to open the context menu and select Text Case and one of the available options. The options are:

- Sentence case. - only the first letter of the sentence is in upper case when a full stop is included in the selection
- lowercase - all letters in the selection are displayed in lower case
- UPPER CASE - every letter in the selection is capitalized
- Capitalize Each Word - the first letter of every word in the selection is capitalized
- tOGGLE cASE - the case is inverted for each word in the selection

 **Note:** The tOGGLE cASE option is only available in the right-click menu and not when using **Ctrl + F3**.

To set text case assistant preferences:

1. Select **Tools > Options** from the main menu. The Options dialog box opens.
2. Under **Assistants**, select **Text Case**.
3. In the Display section,
 - select **Show in context menu** to include the text case assistant in the right-click menu or select, or
 - select **Show in Format toolbar** to display the text assistant in the Formatting toolbar.

 **Note:** For this change to take effect, a system restart is required.

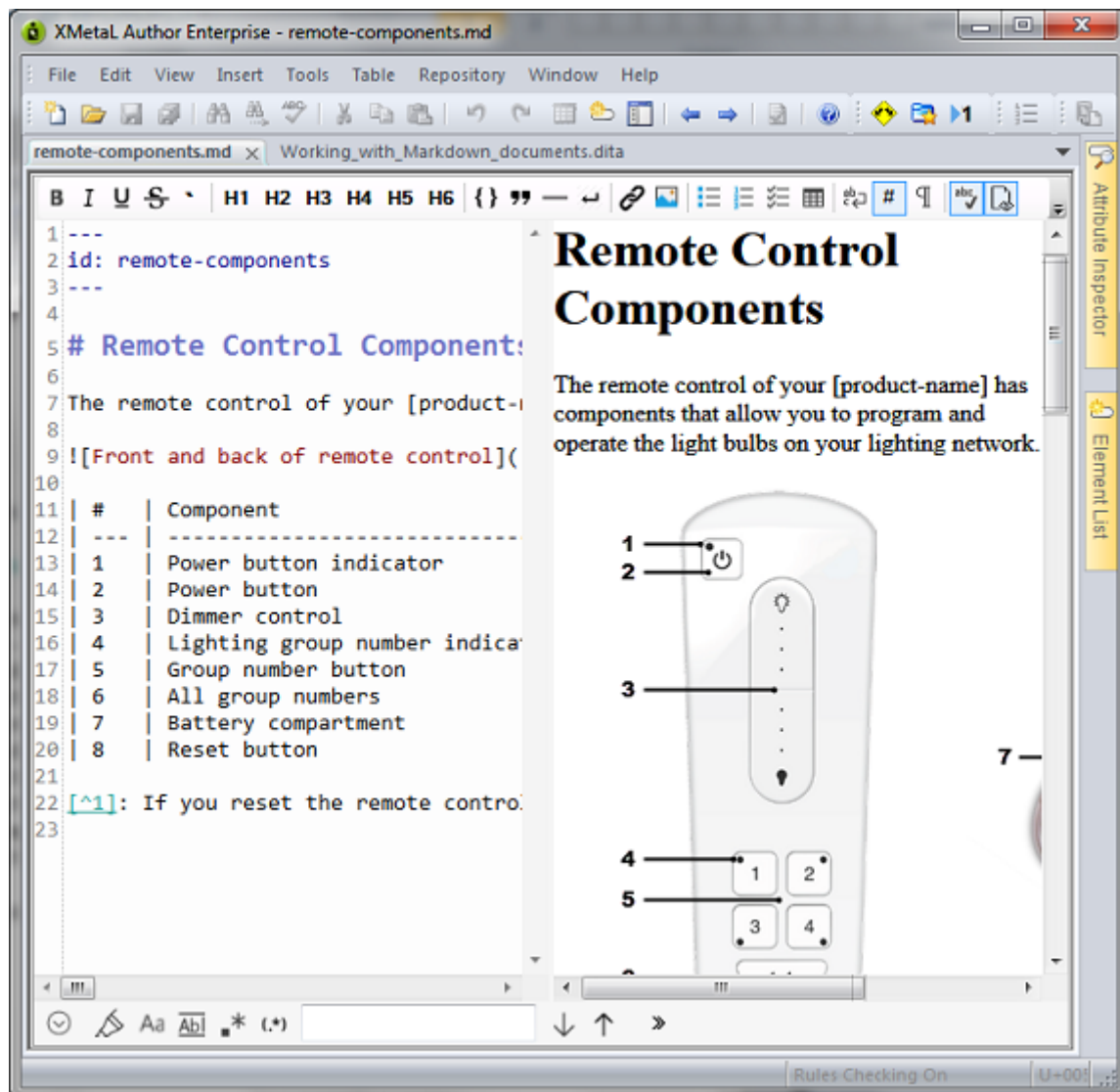
4. The trigger is, by default, **Ctrl + F3**. This trigger key can be edited in the Trigger section by selecting a keyboard trigger from the list.
5. Click **OK** to save changes.

Working with Markdown documents

XMetaL supports the Markdown syntax and provides an easy to use split-screen editor. You can write documents in Markdown as well as convert documents into Markdown and convert Markdown documents into HTML and MS Word Document.

When editing a Markdown document, the editor has two panels. The Markdown syntax is highlighted in the editor's left pane. *GitHub Flavored Markdown* (which is a strict superset of CommonMark) rules are used. The right side is a web preview that is synchronized in real-time. For reference, see the remote-components topic in the **Remote Lighting (LwDita)** sample document in **Help > Samples**.

The Markdown document can be converted to HTML and MS Word Document.



Authoring structured content

When you create a document instance of a DTD or Schema in Normal or Tags On view, XMetaL Author ensures that your content is valid by guiding you through the authoring process. You do not need to have a complete understanding of XML to begin authoring structured content.

Here are some of the ways in which XMetaL Author helps you create documents that conform to a DTD or Schema:

- The Element List displays only elements that are valid at the current element. Required elements are displayed in bold.
- The Attribute Inspector displays the attributes for the current element. Attributes that require a value are displayed in bold.
- Commands and menu items are unavailable if using them would result in an invalid document.
- You are prevented from typing text in the current location if the DTD or Schema does not allow it. If you type at a location where text is not allowed, text is wrapped in the first valid paragraph element (if available).
- You are prevented from deleting an element if it is required by the DTD or Schema.
- You are prevented from inserting a CDATA section or other marked section that would result in an invalid document.
- You are prevented from pasting elements or text at an invalid location. The Smart Insert feature inserts them at the next valid location in the document or the paste operation is not completed.
- You are prevented from dropping assets from the Resource Manager at an invalid location. The Smart Insert feature inserts them at the next valid location in the document or the paste operation is not completed.
- You are prevented from inserting elements at an invalid location. The Smart Insert feature inserts them at the next valid location in the document.
- When working with change tracking, you cannot reject a change that is necessary to make the document valid.
- When using Find and Replace, you cannot make an element replacement that would make the document invalid.

Related Links

[Appendix A: XML basics](#) on page 217

XML (Extensible Markup Language) is a recommendation of the World Wide Web Consortium (W3C). It is a language for describing the structure and content of a document. Authors use XML to “mark up” their documents for a consuming application such as a Web browser or print formatting engine. XML is an application of SGML (Standard Generalized Markup Language). XML is more flexible than other markup languages such as HTML because it allows you to create your own markup. This makes it better suited to describing and processing complex information.

Validation and rules checking

Validation checks to see if the markup is correct and complete with reference to your DTD or Schema. Rules checking ensures that you do not break the required structure as you edit your document by allowing you to insert only valid elements.

To do this	Follow these steps
Validate a document	Click Tools > Validate Document

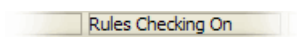
Validation occurs automatically when you save your document or when you switch from Plain Text view to Normal or Tags On view. You can validate an entire document, or you can select a selection of your document to validate. Errors are displayed in the Validation Log.

Validation checks that the following conditions have been met:

- All elements, attributes, and entities used in the document have been declared.
- All required elements are present.
- All required attributes are present.
- All attributes are in the correct form.
- All ID attribute values are unique, and each IDREF attribute value matches an ID attribute value.

Rules checking is less stringent than validation in that it checks that no errors have been made, but does not check that the markup is complete. For example, rules checking does not check required elements, undeclared entities, or missing ID values.

Rules checking occurs in Normal and Tags On views only.



Validation using Schematron

The Schematron differs in basic concept from other schema languages in that it is not based on grammars but on finding tree patterns in the parsed document. This approach allows many kinds of structures to be represented which are inconvenient and difficult in grammar-based schema languages.

NOTE: XMetaL now supports XSLT 2.0 for Schematron validation using Saxon-CE version 1.1. Saxon-CE implements XSLT 2.0 at a minimum conformance level meaning it is a "Basic XSLT 2.0 Processor" as defined by the W3C XSLT 2.0 Specification.

To validate using the Schematron:

1. From the **Tools** menu, select **Validate using Schematron** (or hit **CTRL + F9**).
2. In the **Schematron** results pane, use the drop-down list to select a Schematron file to apply, and then click the Schematron button to run the validation.
3. You can also adjust the Schematron processing settings by going to the unified **Options** pane and clicking on the **Tools > Schematron** option.

For more information on Schematron validation, see <http://schematron.com/>.

Schematron Options

You can control options for global parameters, processing and debugging in the **Tools > Schematron** section of the **Options** dialog box.

Table 35: Global Parameters

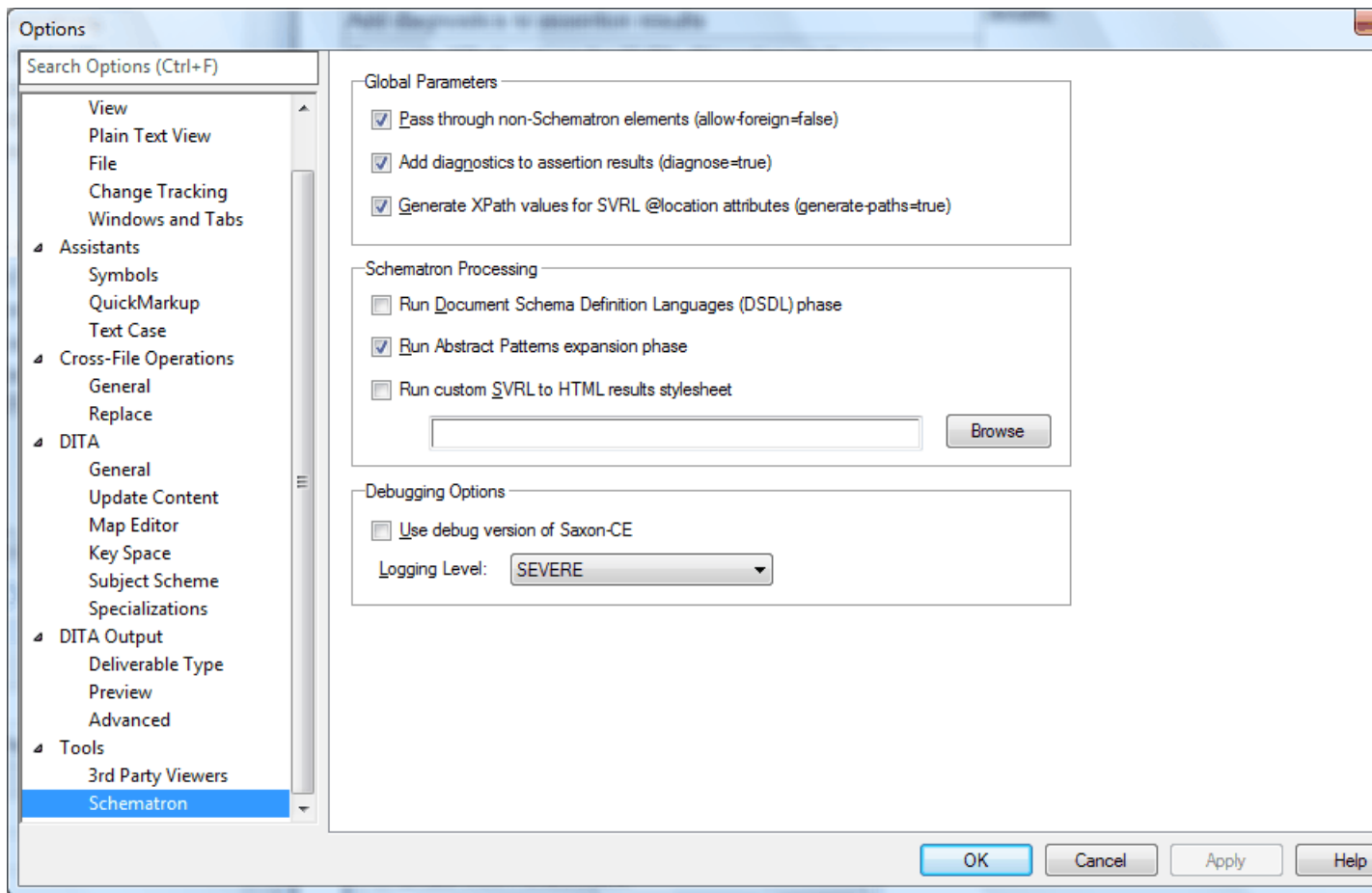
Option	Description
Pass through non-Schematron elements	Please refer to http://www.schematron.com for more details.
Add diagnostics to assertion results	
Generate XPath values for SVRL @location attributes	

Table 36: Schematron Processing

Option	Description
Run Document Schema Definition Languages (DSDL) phase	Please refer to http://www.schematron.com for more details.
Run Abstract Patterns expansion phase	
Run custom SVRL to HTML results stylesheet	

Table 37: Debugging Options

Option	Description
Use debug version of Saxon-CE	The debug version of Saxon-CE provides error and event logging capabilities with a configurable logging threshold.
Logging Level	For definitions of the logging levels, see http://www.saxonica.com/ce/userdoc/1.1/html/coding/logging.html The default logging level is set to SEVERE.



XMetaL customizations

Formatting and authoring functionality are provided by an *XMetaL customization*. The basis for an XMetaL customization is the DTD or Schema. Journalist is provided as an example customization. For detailed information about creating and deploying customizations, see the *XMetaL Customization Guide*.

Table 38: Customization files

Name	Description
<dtdname>.ctm	The customization file. Contains authoring behaviors that are based on the elements and attributes in your DTD or Schema (for example, some keyboard shortcuts, Enter key behavior, and mini-templates).
<dtdname>.css	The style sheet for documents. Styles are based on element names. By default, XMetaL recognizes many elements defined in XHTML, DocBook and the Journalist DTD.
<dtdname>_structure.css	The style sheet for the structure view.
<dtdname>.tbr	Contains toolbars and menus.
<dtdname>.mcr	Contains macros.

When you open a document, XMetaL searches for customization files in the following locations, in the following order:

1. The same folder as the DTD or Schema
2. Your personal settings folder (usually %APPDATA%\SoftQuad\XMetaL\- 3. The XMetaL Author installation folder (usually ..\XMetaL <version>\Author\) and sub-folders

If the customization file or style sheets are not found, they are created in the same folder as the DTD or Schema.

When you work on a shared computer, you may want to save your customization files to your personal settings folder. Customization files that are saved in your personal settings folder are not deleted when you uninstall XMetaL Author.

Journalist customization

The Journalist customization is shipped with XMetaL Author to give you an introduction to authoring structured documents. This customization is designed to support the authoring of article-type documents. Templates have been provided.

The Journalist customization is based on the following DTD:

```
..\XMetaL <version>\Author\Rules\journalist.dtd
```

Some of the formatting and behaviors in this customization include the following:

- A mini-template consisting of an Article Title, Section 1 Title, and paragraph. Special formatting is applied to each.
- Type a title and press Enter. A paragraph element is inserted.
- If the selection or insertion point is inside a sequence of nested block elements, pressing Enter repeatedly moves the insertion point up the hierarchy of nested elements.

- Follow the prompts in the replacement text that is displayed when you create an element.
- Clicking to the right of a table moves the insertion point outside of the table. This is particularly useful when the table is at the bottom of the document.
- If you are editing a `<pre>`-like element (one in which whitespace is preserved), press Enter to insert a line break, and Shift + Enter to close the element and start a new paragraph.
- To see the context of the current element, check the context bar to the left of the horizontal scrollbar.
- Followed-by elements are defined for some elements. For example, when your cursor is positioned before the end tag of an ordered list (`</OrderedList>`) and you press Enter, a `<Para>` element is inserted.

Related Links

[Custom toolbars and menus](#) on page 23

You can create new toolbars and menus and customize existing ones. You can assign buttons and menus to built-in commands or user-defined macros.

[Macros](#) on page 43

A macro is a sequence of operations that can be run as a unit. Macros can be associated with a shortcut key, toolbar button, or menu item. They are useful when you need to repeatedly execute a task that does not have a built-in shortcut key or command.

[Options](#) on page 47

You can set options through the **Tools** menu.

[Creating documents](#) on page 51

You can create a document from a template, create a blank XML or SGML document, or create a blank, well-formed XML document. You can set file options, including a default template, filename extensions, and autosave intervals through **Tools > Options**.

[Images](#) on page 105

You can insert images into your documents if your XMetaL customization recognizes elements in your DTD or Schema as image elements.

Working with elements

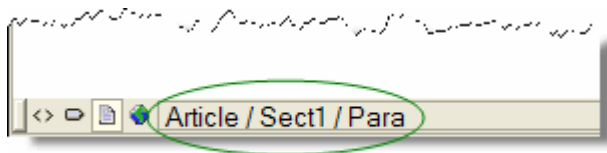
Elements are the building-blocks of your documents. They are defined in your DTD or Schema. Authoring in Normal view is similar to applying styles, whereas Tags On view lets you work with elements as structural objects. You can insert elements using the Element List, the **Insert** menu, or the **In-place, look-ahead element list**.

To do this	Follow these steps
Insert an element or wrap a selection in an element	In the Element List, click the Insert option, select an element and click Apply or double-click an element
Change an element	In the Element List, click the Change option, select an element and click Apply
Split an element	Click Edit > Split Element or press Enter
Join two adjacent elements	Click Edit > Join Element to Preceding
Remove tags (Unwrap an element)	Click Edit > Remove Tags


Some elements include a *mini-template*, which contains elements and *prompt text* that you can replace with your own content. For example, the `<OrderedList>` element in the Journalist customization contains a mini-template.



The *current element* refers to the element containing the insertion point or selection. If an entire element is selected, the current element is the parent of that element, not the selected element itself. In Normal and Tags On views, the context of the current element (that is, its position in the element hierarchy) is displayed in the document status bar.



Elements are categorized as follows:

- **Block elements.** These elements are preceded by and followed by line breaks, such as `<Para>` in the Journalist DTD.
- **Inline elements.** These elements are not preceded or followed by line breaks. They are often used for typeface modifications, such as `` and `<Emphasis>` in the Journalist DTD. In some customizations, these elements can be inserted using the Formatting toolbar.
- **Empty elements.** These elements cannot have any text content. They are designated by the  icon in Normal and Tags On views. Empty elements are often used to reference images.
- **Read-only elements.** The content or attributes of these elements cannot be edited, for example, `<LastModDate>` in the Journalist DTD.

Related Links

[Panels](#) on page 13

Panels provide access to the markup in your document and let you organize resources. You can have one or more panels open in your work area at any time. You can dock a panel so that it is attached to the work area border, or the panel can float. You can pin a panel to keep it open, or un-pin a panel to hide it.

[Toolbars](#) on page 16

You can show/hide toolbars, create new toolbars, or modify existing ones through **View > Toolbars**.

[Creating well-formed XML documents](#) on page 60

When you create a blank well-formed XML document, you must define elements and attributes before you can create content. Because the document is not based on a DTD or Schema no rules checking or validation occurs.

[Keyboard shortcuts](#) on page 125

Shortcut keys for menu commands are indicated in the menus. All menus, menu items, and dialog box controls are accessible by pressing the Alt key and the underlined letter (also called an access key or mnemonic) associated with that control. XMetaL Author also supports shortcut keys for window and dialog box navigation and other functions.

In-place, look-ahead element list

The in-place, look-ahead element list is a popup list of candidate elements to insert in Normal View. You may bring it up by pressing Ctrl+Enter.

The in-place, look-ahead element list contains elements that are valid, by default, within three containers of the current one. The element list pane only contains valid elements for the current container.



Editing the in-place, look-ahead element list

The display properties, insert actions, and keyboard combination for triggering the in-place, look-ahead element list can be edited using the QuickMarkup Assistant Preferences window.

To edit the in-place, look-ahead element list:

1. Select **Tools > Options** from the main menu.

The Options dialog box opens.

2. Under **Assistants**, select **QuickMarkup**.

3. In the **Display** section, customize the following display properties of the list:

- **Width** - edit the width of the list
- **Height** - edit the height of the list
- **Position** - select whether the list appear above or below the cursor
- **Depth** - select the number of container levels of valid elements that are displayed
- **Include table elements** - include table-specific elements in the list

4. In the **Insert Action** section, select the action to be taken when inserting an element.

- **Element-only** - XMetaL inserts only the selected quick-insert element
- **Using mini-template** - XMetaL inserts the element using the mini-template defined in the customization (.ctm) file used to customize XMetaL for the DTD
- **With required elements** - XMetaL analyzes the DTD or XSD and, based on the selected quick-insert element, inserts any additional elements that are required to make the document valid in that area of insertion

5. In the **Trigger** section, customize which CTRL+ keyboard combination opens the in-place, look-ahead element list.

6. Click **OK** to save changes.

Setting attribute values

You can set attribute values through the Attribute Inspector.

To do this	Follow these steps
Set an attribute value for an element	In the Attribute Inspector , type or select an attribute value

The Attribute Inspector panel will, whenever possible, automatically suggest an attribute value if the same attribute already has a value assigned elsewhere in the document on the same element type. This can greatly speed up the repetitive task of assigning the same value to the same attribute throughout the document.



Tip: You can select any ancestor of the current element from the list at the top of the Attribute Inspector.

Special characters in attribute values

The following characters must be escaped.

Character	Escape sequence
<	<
>	>
"	"
'	'
&	&

Related Links

[Panels](#) on page 13

Panels provide access to the markup in your document and let you organize resources. You can have one or more panels open in your work area at any time. You can dock a panel so that it is attached to the work area border, or the panel can float. You can pin a panel to keep it open, or un-pin a panel to hide it.

[Options](#) on page 47

You can set options through the **Tools** menu.

Inserting and editing lists

You can insert lists into your documents if your XMetaL customization recognizes elements in your DTD or Schema as list elements.





To do this	Follow these steps
Insert a numbered list	Click  (Numbered List) on the Formatting toolbar
Insert a bulleted list	Click  (Bulleted List) on the Formatting toolbar
Convert paragraphs to a list or change list type	Select one or more paragraphs and click  or 

Table 39: Keyboard shortcuts

To do this	Follow these steps
Insert a list item	Position the cursor in a list item and press Enter (press Enter twice if the contents are surrounded by a sub-element such as a paragraph)
Insert a list within a list	Insert a list item and press Tab
Convert list items to a nested list	Select one or more list items and press Tab
Convert list items to paragraphs	Select one or more list items and press Shift+Tab
Demote one or more items to a sub-list	Position the cursor in a list item and press Tab
Promote a sub-list up one level to its containing list	Position the cursor in a list item and press Shift+Tab
Terminate a list	Position the cursor in a list item and press Enter twice (once if you are already in an empty list item and three times if the list item contents are surrounded by a sub-element)



Tip: You may find Tags On view preferable when working with lists.

If your DTD or Schema declares the HTML or elements, XMetaL Author recognizes them as list elements. Your DTD should also declare the (list item) element. The Journalist DTD declares the <ItemizedList> and <OrderedList> elements.

Definition lists consist of pairs of terms and definitions. You can use definition lists for any purpose that is suited to two-part lists. The <VariableList> element in the Journalist DTD is an example of a definition list:

```
<VariableList> <VarListEntry>
<Term>Term1</Term> <ListItem>Definition1</ListItem>
</VarListEntry> <VarListEntry> <Term>Term2</Term>
<ListItem>Definition2</ListItem> </VarListEntry>
</VariableList>
```

Sort a list

You can sort an entire list, or selected list items in a list.

- (optional) If you only want to sort certain list items, highlight the items you want sorted in the list.
- Click **Edit > Sort**.
The Sort List dialog box opens.
- If you selected list items to sort in step 1, select to sort either **Selected Items** or the **Entire List**.
- In the **Type** field, select to sort by one of the following:
 - Text** - sorts columns in order, alphabetically and by numerical value
 - Number** - sorts columns in order by number. Sorting pays only attention to numerical values, and entries beginning with letters are not sorted and instead appear at the beginning or end of the range depending on your sorting direction.
 - Natural** - sorts values in a natural order, numerically and alphabetically
 - Date** - sorts values by date
- Select either **Ascending** or **Descending** sorting direction.
- Click **OK**.
The list is sorted.

Images

You can insert images into your documents if your XMetaL customization recognizes elements in your DTD or Schema as image elements.

To do this	Follow these steps
Insert an image	<p>Click Insert > Image and select an image.</p> <p>- OR -</p> <p>Drag and drop an image (from within or outside XMetaL) to where you want to place it. It will be automatically placed in an image element.</p> <p>File navigation options are available in the Choose Image File dialog as follows:</p> <ul style="list-style-type: none"> • Show Folder - displays the folder for a selected file to allows users to navigate to the folder where the image is located. • Find all files in folders - allows users to view all files in a selected directory, including sub-folders, in one list. The file extensions filter allows, including sub-folders, to narrow down list of file specific types. • A powerful file preview feature.
Insert an image represented by an entity	Insert an image element using the Element List, then specify the entity name as the value of the source attribute (or attribute that represents the image file)

If your DTD or Schema declares the HTML element, XMetaL Author recognizes it as an image element. Your DTD should also declare the following attributes of the element: SRC, ALT, HEIGHT, and WIDTH. The Journalist DTD declares the <Graphic> and <InlineGraphic> elements.

Related Links

[Assets \(unsupported\)](#) on page 42

You can organize frequently used objects as assets through the Resource Manager. Assets can be single files, such as images, text, or markup blocks. You can drag and drop assets into your document.

[XMetaL customizations](#) on page 99

Formatting and authoring functionality are provided by an *XMetaL customization*. The basis for an XMetaL customization is the DTD or Schema. Journalist is provided as an example customization. For detailed information about creating and deploying customizations, see the *XMetaL Customization Guide*.

Supported display formats

XMetaL Author can display several image formats.

Table 40: Supported display formats

Name	File extension	Notes
Windows Bitmap	BMP	Only the Windows BMP format is supported.

Name	File extension	Notes
Encapsulated PostScript	EPS	EPS files must contain an embedded TIFF header.
Graphic Interchange Format (CompuServe)	GIF	Only the first image in an animated GIF is displayed.
Joint Photographic Experts Group	JPG (or JPEG, JPE, JFIF, JIF)	
Windows Icon	ICO	
Windows Metafile	WMF	WMF files must include a placeable header.
Enhanced Metafile	EMF	
Portable Network Graphics	PNG	
Tagged Image File Format	TIF (or TIFF)	Only the first image in a file containing multiple images is displayed.
PC Paintbrush	PCX	
Truevision Graphics Adapter or TARGA	TGA	
Scalable Vector Graphics	SVG	Requires installation of an SVG viewer (for example, Adobe SVG Viewer).


Related Links

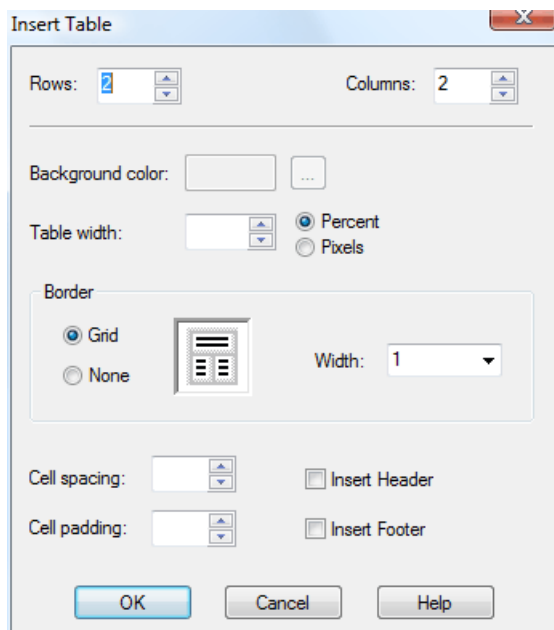
[Options](#) on page 47

You can set options through the **Tools** menu.

Tables

XMetaL Author supports the HTML and CALS table models. If your DTD or Schema uses either of these models, you can use the **Table** menu to insert and edit tables.

 **Note:** XMetaL Author does not support both table models in the same DTD or Schema.



Appropriately formatted content from other applications can be pasted or dragged and dropped into an XMetaL document as a table.

You can choose to display or hide table grid lines for tables that do not have set borders through the **View** menu.

Navigating within tables

Here are some convenient ways to navigate between table cells:

- To move between cells, press an arrow key
- To move to the next cell in a row, press Tab
- To move to the previous cell in a row, press Shift+Tab

Related Links

[Keyboard shortcuts](#) on page 125

Shortcut keys for menu commands are indicated in the menus. All menus, menu items, and dialog box controls are accessible by pressing the Alt key and the underlined letter (also called an access key or mnemonic) associated with that control. XMetaL Author also supports shortcut keys for window and dialog box navigation and other functions.

HTML tables

If your DTD or Schema declares the <TR> and <TD> elements, XMetaL Author assumes the HTML table model.

HTML tables consist of rows and cells. Table rows (as denoted by <TR> elements) may be grouped into header, footer, and body sections (<THEAD>, <TFOOT>, and <TBODY>). Table cells may contain header-type or data-type information (<TH> or <TD>).

Here is an example of an HTML table:

```
<TABLE><CAPTION>Live births,
Feb to Mar</CAPTION> <THEAD>
<TR><TH>Gender</TH><TH>Number</TH><TH>%</TH></TR>
</THEAD> <TBODY>
<TR><TD>Female</TD><TD>62</TD><TD>50.8</TD></TR>
<TR><TD>Male</TD><TD>60</TD><TD>49.2</TD></TR>
</TBODY> </TABLE>
```

CALS tables

If your DTD or Schema declares the <tgroup> element, XMetaL Author assumes the CALS table model. XMetaL supports a definition of the CALS DTD developed by OASIS.

CALS tables contain the <tgroup> grouping element. <tgroup> elements contain a table header, table body, and table footer (as denoted by <thead>, <tbody>, and <tfoot> elements, respectively). Headers and footers are optional. You can insert a header when you insert the table, or you can change the row type (for example, change a body row to a header row) through the Row tab of the **Table Properties** dialog.

You can insert a CALS table with a maximum of 150 rows and 150 columns. If you need more, you can add them after you create the table.

Here is an example of a CALS table:

```
<table><title>Live births, Feb to
Mar</title> <tgroup cols="3"> <thead>
<row><entry>Gender</entry><entry>Number</entry><entry>%</entry></row>
```

```
</thead> <tbody>
<row><entry>Female</entry><entry>62</entry><entry>50.8</entry></row>
<row><entry>Male</entry><entry>60</entry><entry>49.2</entry></row>
</tbody> </tgroup> </table>
```

Inserting and editing tables

You can insert and edit tables from the **Table** menu. When you insert a table, you specify basic table layout including the number of rows and columns. You can add or remove rows or columns and split or merge cells in a table. These operations affect the table structure.

When editing tables, the auto-suggest table cell feature will, whenever possible, automatically suggest a text value for a table cell. This can greatly speed up the repetitive task of filling in table column values throughout the document.

Insert a table

1. Place the cursor in the location you want to insert the table.
2. Click **Table > Insert Table**.
The Insert Table window opens.
3. Select a table type (CALs only).
4. Select the number of rows and columns in the table.
5. Click **OK**.
The table is inserted into the selected location.

To add a caption:

 **Note:** For HTML tables only

1. Place the cursor in the table.
2. Click **Table > Insert Caption**

Insert a cell, row, or column


Insert a cell

You can add a cell by splitting an existing cell into two rows or columns.

1. Place the cursor in a table.
2. Click **Table > Split Cell Into Columns** or **Split Cell Into Rows**

Insert a row

1. Place the cursor in a table.
2. Click **Table > Insert Rows or Columns**

 **Note:** To add a row to at the bottom of a table, you can also place the cursor in the last cell in a table and press the Tab key.

Insert a column

1. Place the cursor in a table.
2. Click **Table > Insert Rows or Columns**

Edit a cell, row, or column

Move a row or column

1. Place the cursor in a row or column.
2. Click **Table > Move Row or Column**.
The **Move Row or Column** dialog opens.
3. Choose an option.
4. Click **Apply** to apply the action and continue with more actions, or click **OK** to apply the action and close the dialog.

Move a cell

You can move cells by cutting (or copying) and pasting them.

1. Select a block of cells.
2. Click **Edit > Cut (Copy)**.
3. Place the cursor in the location you want to paste the cells.
4. Click **Edit > Paste**.



Tip: You can copy your selection by holding down the Ctrl key while you drag and drop the selected block of cells to its new location.



Note: You can use the cut (copy) and paste operations to re-position a selected block of table cells. However, the paste location must have the same configuration as the block of cells you are cutting. If you are cutting and pasting between tables in different documents, both documents must use the same DTD or Schema. Content in the target cell block is overwritten with the pasted content.

Merge cells

1. Place the cursor in a cell.
2. Click **Table > Merge cell**.
The **Merge Cell** dialog opens.
3. Select a merge option.
4. Click **Apply** to apply the action and continue with more actions, or click **OK** to apply the action and close the dialog.

Contract a cell

If a cell spans two or more rows or columns, you can contract it to the proportions of the adjacent rows or columns.

1. Place the cursor in the cell that spans two or more rows or columns.
2. On the Table Advanced toolbar, click one of the following options:
 - **Contract Cell from Left**
 - **Contract Cell from Right**
 - **Contract Cell from Bottom**
 - **Contract Cell from Top**
3. The cell is split, and the border is aligned with adjacent borders.

Delete a cell, row, or column

Delete a cell

You can add a cell by merging it with another existing cell.

1. Place the cursor in a table.
2. Click **Table > Merge Cell**.

Insert a row



Note: The row is deleted without a prompt.

1. Place the cursor in a table.
2. Click **Table > Delete Row**.



Note: To add a row to at the bottom of a table, you can also place the cursor in the last cell in a table and press the Tab key.

-OR-

1. Select the entire row of a table.
2. Press the Shift key and the Right Arrow key.

The row is highlighted blue.

3. Press the Delete key.

Delete multiple rows

1. Select the entire rows that you want to delete.
2. Press the Shift key and the Right Arrow key.

The rows are highlighted blue.

3. Press the Delete key.

Delete a single column



Note: The column is deleted without a prompt.

1. Place the cursor in a table.
2. Click **Table > Delete Column**

Copy a cell

The contents of a table cell can be quickly copied to other selected cells in the same table.

1. Beginning the cell from which you want to copy content, select all the cells which you want to include the same content of that initial cell.
2. Select **Table > Copy Cells**.

The content is copied to all selected cells.




Note: If any of the other cells contain content, it will be overwritten by the copied content.

Fill series of table cells

A cell with numerical content can be used to create a numerical series in a table. The content of the anchor cell that is being used to initiate the series must be a number (e.g., 123) or end in a number (e.g., loremipsum123). The series proceeds left to right, top to bottom in the table. The series affects whole numbers only so, for example, an initial value of 1.9 creates a series with values 1.9, 2.9, 3.9, and so on.

1. Enter the initial value in the anchor cell.

 **Note:** The anchor cell must be the top left cell in the table.

2. Select the cell(s) for which you want to fill the numerical series, starting with the anchor cell.

 **Note:** If any of the other cells contain text content, it will be overwritten by the series.

3. Select **Table > Fill Series**.

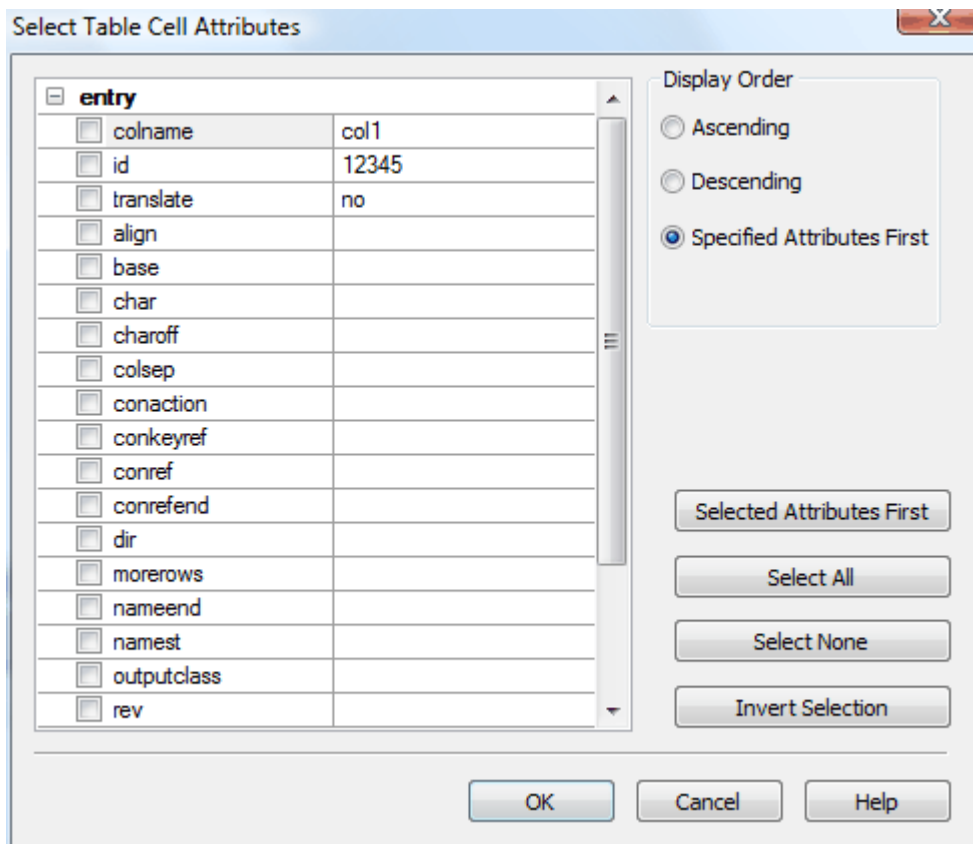
The series is displayed in selected cells in the table.

Fill cell attributes

Cell attributes can be copied from an anchor cell to other cells in the table in one operation. The anchor cell is the cell in which you start a multi-cell selection.

1. Select the cell(s) for which you want to fill cell attributes, starting with the anchor cell.
2. Select **Table > Fill Cell Attributes**.

The **Select Table Cell Attributes** dialog opens.



3. Select the check boxes for the attributes you want to copy to the other cells, or click **Select All** to select all attributes.
4. Select the display order:
 - **Ascending** - alphabetical order

- **Descending** - reverse alphabetical order
 - **Specified Attributes First** - Displays the attributes with content first in alphabetical order, and then all empty attribute sin alphabetical order
5. (optional) After you have made selections, you can click **Selected Attributes First** to bring all selected attributes to the top of the list.
 6. (optional) Click **Select None** to remove all selections, or click **Invert Selection** to select all unselected attributes, and unselect all currently selected attributes.
 7. Click **OK** to apply all changes.

Split a table

CALS and custom tables can be split into two or more individual tables at the table element level.

1. Place the cursor in the table you want to split.
2. Click **Table > Split Table** to split above the cursor location or **Table > Split Table (Below)** to split a table below the cursor location.
The table is split into two tables immediately above or below the row where the cursor is located. The split location is identified by dotted lines in both tables.

Related Links

[Merge a table](#) on page 112

Tables that have been split from each other can be merged back into one table.

[CALS tables](#) on page 107

If your DTD or Schema declares the `<tgroup>` element, XMetaL Author assumes the CALS table model. XMetaL supports a definition of the CALS DTD developed by OASIS.

Split a table group

CALS and custom tables can be split into two or more individual table group at the tgroup element level.

1. Place the cursor where you want to split the table (either above or below the cursor).
2. Click **Table > Split Table Group** to split above the cursor location or **Table > Split Table Group (Below)** to split a table below the cursor location.
The table is split into two tables immediately above or below the row where the cursor is located. The split location is identified by dotted lines in both tables.

Related Links

[Merge a table](#) on page 112

Tables that have been split from each other can be merged back into one table.

[CALS tables](#) on page 107

If your DTD or Schema declares the `<tgroup>` element, XMetaL Author assumes the CALS table model. XMetaL supports a definition of the CALS DTD developed by OASIS.

Merge a table

Tables that have been split from each other can be merged back into one table.

1. Place the cursor in the table you want to merge.
2. Click **Table > Merge Table (Below)** if the split is below the cursor location, or click **Table > Merge Table** if the split is above the cursor location.

Related Links

[Sort a table](#) on page 112

You can sort tables, or selected rows in a table. Sorting is available for HTML and CALS tables as well as custom table models.

Sort a table

You can sort tables, or selected rows in a table. Sorting is available for HTML and CALS tables as well as custom table models.

1. (optional) If you only want to sort certain rows, highlight the rows you want sorted in the table.
2. Place the cursor in the table, and then select **Table > Sort...**
The Sort dialog box opens.
3. (If you selected rows to sort in step 1) In the Scope section, select to sort either **Selected Rows** or the **Entire Table**.
4. Select the **@colname** check box to view the columns by the @colname tag. Otherwise, the columns will be identified by number and text content.
5. In the Sort By section, select the sort type from the available options (as below), and then select either **Ascending** or **Descending** and **Case Sensitive** or **Case Insensitive**.

Note: Although the attribute colname can be changed in the <entry> element in the table, the name of the column is not changed and it is the same as specified in the <colspec> element. That name is used when @colname is checked in 'Sort Table'.

- **Text** - sorts columns in order, alphabetically and by numerical value
- **Number** - sorts columns in order by number. Sorting pays only attention to numerical values, and entries beginning with letters are not sorted and instead appear at the beginning or end of the range depending on your sorting direction.
- **Natural** - sorts columns in a natural order, numerically and alphabetically
- **Microsoft® Excel Style** - sorts columns in the same way that Excel sorts values alphanumerically
- **Date** - sorts values by date

6. In the Then Sort By sections, select additional criteria.

Example: If you sorted by Number above, and you have identical number values in your table, you can use a second sort that places the values into a hierarchy of your choosing.

7. Click **OK**.
The table is sorted.

Enter a tab character in a table cell

You can insert a tab inside of an element in which whitespace is preserved (for example, the HTML <PRE> element) using a macro.

1. Switch to Plain Text view.
2. Click in a location where text is allowed.
3. Click **Tools > Record New Macro**.
4. Press Tab.
5. Click **Tools > Stop Recording**.
6. Complete the macro.
7. Switch back to Normal or Tags On view.
8. Position the cursor inside a table within a <PRE>-like element.
9. Run the macro.

Related Links

[Macros](#) on page 43

A macro is a sequence of operations that can be run as a unit. Macros can be associated with a shortcut key, toolbar button, or menu item. They are useful when you need to repeatedly execute a task that does not have a built-in shortcut key or command.

Inserting tables from other applications

You can copy content from other applications, such as spreadsheets and text editors, and paste it into your document as a table.


Pasted selections are converted into a table if the following conditions are met:

- There are at least two lines in the selection
- Each line consists of items separated by tabs
- Each line has at least two items
- Each line has the same number of items


Formatting table properties

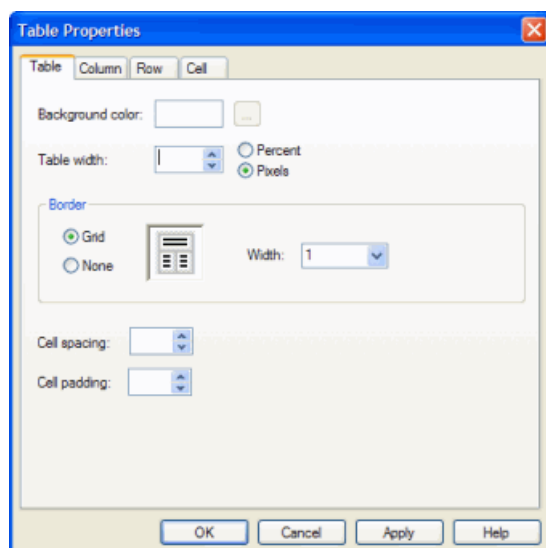
You can set formatting properties in the **Table Properties** dialog or the Attribute Inspector. You can also set some formatting properties when you insert a table (HTML tables only).

To do this	Follow these steps
Format a table	Place the cursor anywhere inside a table, click Table > Table Properties , and select the Table tab
Format a column	Place the cursor in a column, click Table > Table Properties , and select the Column tab
Format a row	Place the cursor in a row, click Table > Table Properties , and select the Row tab
Format a cell	Place the cursor in a cell, click Table > Table Properties , and select the Cell tab
Format a selection	Select cells within a column or row, click Table > Table Properties , and select the Selection tab

 **Note:** The availability of properties depends on the table model in your DTD or Schema. Changing some of the properties may not yield visible changes to the tables.

In HTML tables, you can resize rows and columns from the Table Properties dialog box or by dragging the row and column boundaries. In CALS tables, only columns can be resized. CALS tables support absolute and proportional column widths, or a mix of the two. Proportional values are expressed as a number followed by an asterisk (*).


 **Tip:** You can change the width of a column without affecting the width of other columns in the table by holding down the Shift key while you drag the right edge of the column to the desired width.



Working with entities

You can create and manage entities through the **Tools** menu and insert entity references through the **Insert** menu. When you create an entity, an entity declaration is added to your document's internal subset. Entities are organized in entity sets. The list of entity sets contains all of the entities defined in the internal subset and the DTD.

To do this	Follow these steps
Create an entity	Click Tools > Text Entities, External Entities, or Graphic Entities . Then complete the required fields and click New .
Modify an entity	Select an entity, make the required modifications, and click Change .
Delete an entity	Select an entity and click Delete .
Insert an entity reference	Click Insert > Entity Reference , select an entity from the available sets and click Insert .
Open a document represented by an external entity	Double-click the entity icon

Text entities are displayed as icons (for example, ) in Tags On view, and as the entity's replacement text (the content) in Normal view.

External entities are displayed as icons in Tags On and Normal views. You can double-click this icon to open the corresponding file. The contents of the referenced file are parsed just as if they occurred in the current document. Therefore, you need to ensure that the contents are valid at the location in your document.

Graphic entities are displayed as icons in Tags On and Normal views.

Graphic entities have the following content types:

- **Notation.** The graphic entity consists of non-SGML characters. (Almost all graphic entities are of this type.)
- **Char. Data.** The data in the graphic entity is not system-specific.
- **Specific Char. Data.** The graphic entity contains characters understood only by a local formatting system.

Entity naming conventions

Follow these rules for entity names:

- The first character of the name must be a letter.
- In SGML files, the remaining characters must be letters, digits, or the period (.) or hyphen (-). In XML files, The underscore (_) and colon (:) are also allowed, but the colon should be avoided unless you are indicating a namespace.
- In SGML files, names cannot be longer than 128 characters.
- A document cannot declare more than one entity with the same name, even if they are different types. If the document declares an entity that has already been declared in the DTD, the declaration in the document takes precedence.
- Entity names are case-sensitive. For example, 'ProdName' and 'Prodname' are considered to be different names.

Create a text entity

Before you begin, switch to Normal or Tags On view.

1. Click **Tools > Text Entities**.
2. Enter a name in the Name field.
You will use this name to refer to the entity in your document.
3. Enter the text content in the Content field.
4. Click **New**.
The new text entity is listed in the Text Entities field.

Create an external entity

Before you begin, switch to Normal or Tags On view.

1. Click **Tools > External Entities**.
2. Enter a name in the Name field.
You will use this name to refer to the entity in your document.
3. Click **Choose** and select a file.
4. (Optional) Enter a public identifier in the Public Name field.
5. Click **New**.
The new entity is listed in the File Entities field.

Create a graphic entity

Before you begin, switch to Normal or Tags On view.



Note: This procedure applies to SGML documents only. In order to declare a graphic entity, your DTD must contain a corresponding NOTATION declaration.

1. Click **Tools > Graphic Entities**.
2. Enter a name.
You will use this name to refer to the entity in your document.
3. Click **Choose** and select a file.
4. Specify a content type and graphic format.
Graphic types correspond to NOTATION declarations in the DTD.
5. Click **New**.

Special characters and symbols

You can use the Special Characters and Symbols toolbars, or the Insert Symbols menu (displayed by using the keyboard shortcut **CTRL + Shift + S**), to enter characters and symbols that do not have corresponding keys on US English keyboards. If your document's encoding supports it, the characters and symbols themselves (not the character entities) are saved with your document.

The character/entity conversion table (`..\XMetaL <version>\Author\charentmap.xml`) is used for mapping entity references to characters.

XML files with Unicode encoding

When you open an XML file with Unicode encoding in Tags On and Normal views, the following rules apply, in the following order:

1. The entity references for the characters '<', '>', and '&' are rendered as characters.
2. Other entity references are rendered as characters if they are included in the character/entity conversion table, and if your operating system and version of XMetaL Author are capable of displaying the character.

When you save an XML file with Unicode encoding, the following rules apply, in the following order:

1. The characters '<', '>', and '&' are converted to entity references.
2. If the document encoding allows it, other characters are saved as actual characters.
3. If not, and if the character/entity conversion table has a corresponding entity reference, the character is saved as an entity reference.
4. If none of the above apply, the character is saved as a character reference.

SGML files with Unicode encoding

When you open an SGML file with Unicode encoding, entity references are converted to actual characters if they are included in the character/entity conversion table, and if your operating system and version of XMetaL Author are capable of displaying the character.

When you save an SGML file with Unicode encoding, the characters are saved according to the following rules, in the following order:

1. If the character/entity conversion table has an corresponding entity reference, the character is saved as an entity reference.
2. If not, and if the document encoding allows for it, characters are saved as actual characters.
3. If neither of the above applies, the character is saved as a character reference.

Files with ASCII or ISO-8859-1 encoding

For files with ASCII or ISO-8859-1 encoding, non-ASCII or non-ISO-8859-1 characters are saved as entity references if they are in the character/entity conversion table, and as character references if they are not.

Related Links

[Character encoding](#) on page 58

XMetaL Author supports US-ASCII, ISO-8859-1 (Latin-1), and Unicode™ (UTF-8 or UTF-16) character encoding. By default, XML files that you create with XMetaL Author use UTF-8 encoding.

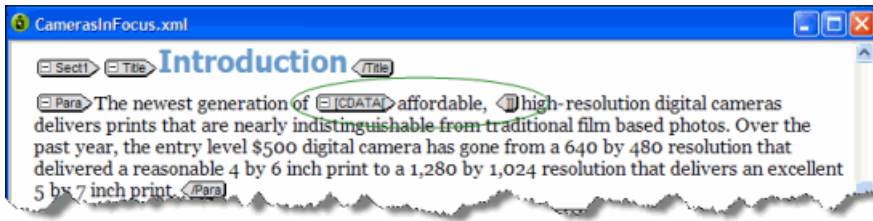
Inserting CDATA sections

You can insert CDATA sections using the **Insert** menu.

To do this	Follow these steps
Insert a CDATA section	Click Insert > CDATA Section



Tip: You can also wrap selected text in a CDATA section using the procedures above.



Other marked sections

In SGML documents, you can change the CDATA keyword or add other keywords in Plain Text view. When you use keywords concurrently, the following order of precedence applies:

1. IGNORE
2. CDATA
3. RCDATA
4. INCLUDE

TEMP is not overridden by any other keyword.

INCLUDE is the default for all marked sections.

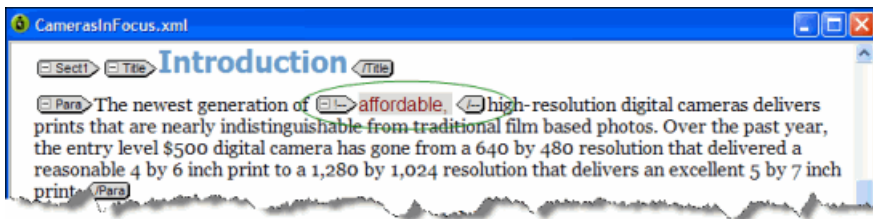
Inserting comments

You can insert comments using the **Insert** menu. Comments can be viewed in Tags On view if the Show comments option is active.

To do this	Follow these steps
Insert a comment	Click Insert > Comment



Tip: You can also change selected text to a comment using the procedures above.



Related Links

[Options](#) on page 47

You can set options through the **Tools** menu.

Inserting processing instructions

You can insert processing instructions using the **Insert** menu. Processing instructions are commonly used to store prompt text.

To do this	Follow these steps
Insert a processing instruction	Click Insert > Processing Instruction

Importing databases

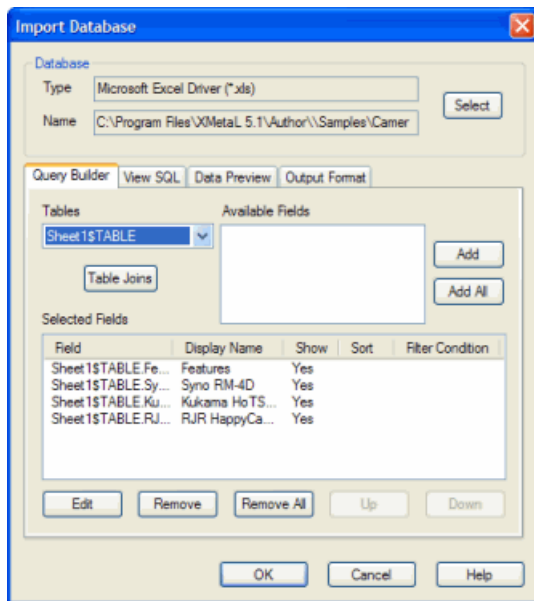
You can import the contents of a database or spreadsheet file into your structured document as a table. When you import a database, you create an SQL query that allows you to import only the data you need and in the format you want. When you import data, you apply elements and attributes that are used in your DTD or Schema.

Most customizations include a menu command or a toolbar button you can use to open the Import Database dialog box. For example, the Journalist customization includes the following macros:

- Import Table
- Update Table

When you run the Import Table macro, the Import Database dialog box opens. This is the interface for selecting your data, creating your query, and formatting output.

After you import data into your XMetaL Author document, you can update it (reload the data from the source database) using the Update Table macro.



Related Links

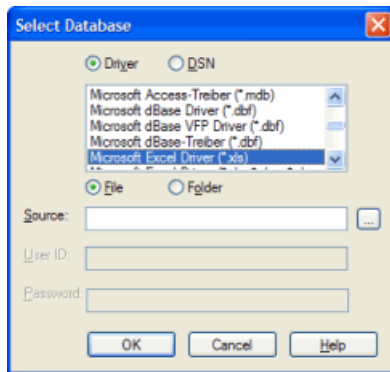
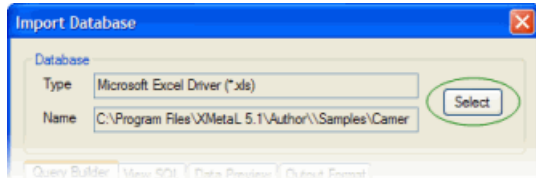
[Macros](#) on page 43

A macro is a sequence of operations that can be run as a unit. Macros can be associated with a shortcut key, toolbar button, or menu item. They are useful when you need to repeatedly execute a task that does not have a built-in shortcut key or command.

Choosing a database

The source database can be a file, a folder, or a DSN (Data Source Name). You can choose a database from the Select Database dialog box.

To do this	Follow these steps
Select a database file or folder	In the Import Database dialog, click Select . Select the Driver option and choose a driver. If you select a Microsoft Access or Microsoft Excel driver, choose the File option. If you select any other driver, select the Folder option. Then click the browse button and select the database file or folder.
Select a DSN	Select the DSN option, and then choose a DSN.



Creating a query

Once you have selected a database or DSN, you need to select fields to import. You do this by creating a query. You can specify a display name, sort order, and filters through the Field Properties dialog box. You can also perform table joins.

To do this	Follow these steps
Choose fields to import	In the Import Database dialog box, click the Query Builder tab and select a table. Then select fields from the Available Fields list and click Add .
Set field properties	In the Selected Fields list, choose a field and click Edit .

You can specify the following field properties:

- **Display name** - The name for the field as you want it to appear in your table.
- **Show** - Choose an option to show or hide the field in the table.



Note: Hiding a field is not the same as removing it. A hidden field can still be used in a filter condition.

- **Sort order** - Choose Ascending or Descending.



Note: Lowercase letters are considered to be lower in order than uppercase letters.

- **Filter condition** - If you selected any option other than None, specify value(s) to match.



Note: Text strings must be enclosed within single quotes.

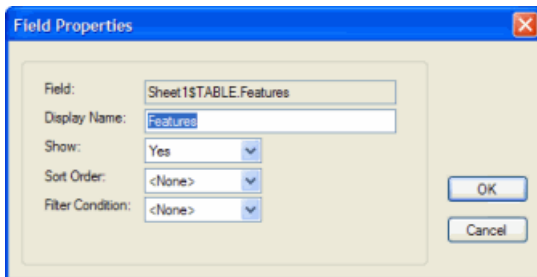
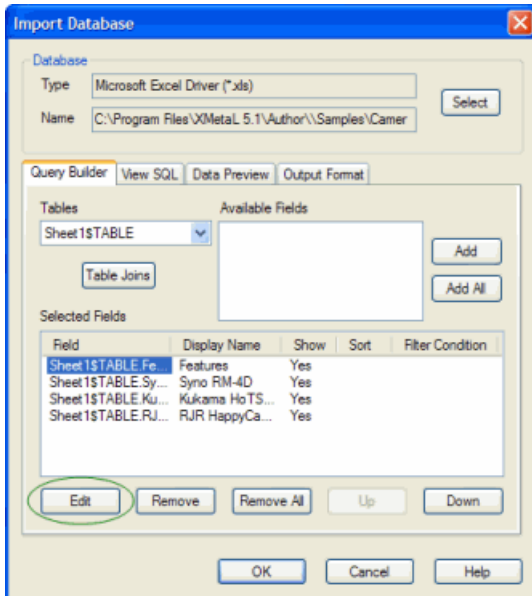


Table joins

You can retrieve data from two or more tables using a table join. The two tables must have at least one field in common.

For example, two tables of employee information (a payroll table and an employee information table) could both have an employee ID field. (The field names do not have to be identical, but the type of data must be the same.) You can create a new output record that joins records in the two tables by matching up values in the shared field. For example, you could create records consisting of a salary value from the payroll table and a name from the employee information table. The salary is paired with the correct name because their employee ID values match.



Note: A field does not have to be in the Selected Fields list in order to be used in a join. An unselected field can be the field that is matched to the corresponding field in the second table, but that does not appear in the final table.

Creating a joined table query

To create a joined table query:

1. In the Import Database dialog box, click the **Query Builder** tab.
2. From the **Table** list box, select a table from the current database.
This is the primary table (the table to which you want to join a second table).
3. Click **Table Joins**.
4. From the **Select Join Field** list, choose the field that to use to join the data from the two tables.
This field must contain data common to both tables.
5. Choose the equivalent field from the **Join Onto** list.
6. Click **Add**.

Formatting table output

Once you have defined your query, you need to determine the formatting for your table data in XMetaL Author. You apply elements and attributes that are used in your DTD or Schema. You can specify formatting through the **Output Format** tab in the Import Database dialog.

Options

Choose from the following options:

- The table model supported by your DTD.
- An orientation. Choose **Vertical** if you want the fields to be imported as columns (as in the original database) or **Horizontal** if you want the fields to be imported as rows.
- Headers. Choose **Show** to include the table header (the first row) in the output, or **Hide** to suppress it.

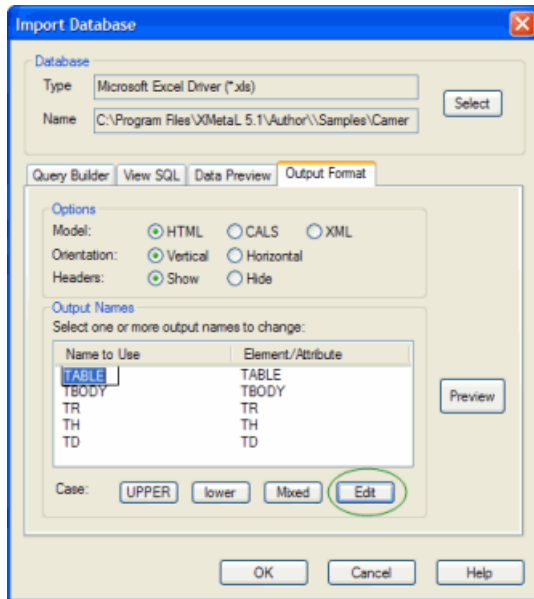
Output names

You can edit the element names in the **Name to Use** column. These are the element names that are used when the data is written in your document.



Note: The elements must be declared in your DTD.

You can also specify a case for the element you are editing.



Keyboard shortcuts

Shortcut keys for menu commands are indicated in the menus. All menus, menu items, and dialog box controls are accessible by pressing the Alt key and the underlined letter (also called an access key or mnemonic) associated with that control. XMetaL Author also supports shortcut keys for window and dialog box navigation and other functions.


 **Note:** If a keyboard shortcut listed here does not work in your document, check to see if the keystroke combination has been assigned to a macro.

Table 41: Working with files


Action	Shortcut
Create a new document from the default template	Ctrl+N
Create a new document by choosing a template	Ctrl+T
Open a document	Ctrl+O
Open a document from the recently-opened list	Alt+F + number key
Close a document	Ctrl+W OR Ctrl+F4  Note: You can also click the middle mouse button to close a document.
Save a document	Ctrl+S
Save all documents	Ctrl+Q
Print	Ctrl+P
Quit XMetaL Author	Alt+F4
Preview document in a browser	Ctrl+M
Display online help	F1
Next Results Pane selection	F4
Previous Results Pane selection	Shift+F4
View recently used and favorite documents	Ctrl+'
View opened documents	Ctrl+D

Table 42: Editing documents

Action	Shortcut
Find and Replace	Ctrl+F
Find Next Forwards	F3
Find Next Backwards	Shift+F3
Find Selection Forwards	Ctrl+F3
Find Selection Backwards	Ctrl+Shift+F3
Undo an action	Ctrl+Z OR Alt+Backspace

Action	Shortcut
Redo an action	Ctrl+Y
Cancel an action	Esc
Check spelling	F7
Open thesaurus	Shift+F7
Validate Document	F9
Select all	Ctrl+A
Quick access to all available commands	Ctrl+?
Quick word correction/replacement	Ctrl+.

Table 43: Switching views and display modes

Action	Shortcut
Toggle between Normal and Tags On views	Ctrl + Space bar
Switch to Plain Text view	Ctrl+Shift+H
Switch to Tags On view	Ctrl+Shift+O
Switch to Normal view	Ctrl+Shift+W
Switch to Page Preview	Ctrl+Shift+V
Hide/show HTML table grid outlines (if no grid selected).	Ctrl+Shift+Q

Table 44: Inserting, deleting, and moving text and markup

Action	Shortcut
Delete one character to the left	Backspace
Delete one character to the right	Delete
Cut selection (copy to clipboard)	Ctrl+X OR Shift+Delete
Delete selection (do not copy to clipboard)	Delete
Copy selection	Ctrl+C OR Ctrl+Insert
Paste from clipboard	Ctrl+V OR Shift+Insert
Insert special character	Ctrl+Shift+E
Insert newline in PRE-like element	Enter
Terminate a PRE-like element	Shift+Enter
Open or close the Attribute Inspector	Shift+F6
Open and place active cursor in the Attribute Inspector	F6
Split element (where allowed by the DTD)	Enter OR Ctrl+Shift+P
Join to preceding element (where allowed by the DTD)	Backspace (at beginning of element) OR Ctrl+Shift+J
Join to following element (where allowed by the DTD)	Delete (at end of element)
Remove markup	Ctrl+Shift+D
Open or switch Element List to "Change element" mode	Ctrl+Shift+L
Select element	Ctrl+Shift+T
Open or switch Element List to "Insert element" mode	Ctrl+Shift+I

Action	Shortcut
In-place, look-ahead Element List	Ctrl+Enter
Insert a comment	F8

Table 45: List formatting

Action	Shortcut
Demote selected list items to sub-list	Tab
Promote selected list items out of list	Shift+Tab

Table 46: Navigating within a document

Action	Shortcut
One character to the left	Left arrow
One character to the right	Right arrow
One word to the left	Ctrl + Left arrow
One word to the right	Ctrl + Right arrow
Up one line	Up arrow
Down one line	Down arrow
To the end of a line	End
To the beginning of a line	Home
Up one screen (scrolling)	Page Up
Down one screen (scrolling)	Page Down
To the end of a document	Ctrl+End
To the beginning of a document	Ctrl+Home

Table 47: Navigating within tables

Action	Shortcut
Next cell in a row	Tab OR Right arrow
Previous cell in a row	Shift+Tab OR Left arrow
First cell in a row	Alt+Home
Last cell in a row	Alt+End
First cell in a column	Alt+Page Up
Last cell in a column	Alt+Page Down
Previous row	Up arrow
Next row	Down arrow
Outside the table	Click to right of the table

Table 48: Working with selections in a document

Action	Shortcut
One character to the right	Shift + Right arrow

Action	Shortcut
One character to the left	Shift + Left arrow
To the end of a word	Ctrl+Shift + Right arrow
To the beginning of a word	Ctrl+Shift + Left arrow
To the end of a line	Shift+End
To the beginning of a line	Shift+Home
One line down	Shift + Down arrow
One line up	Shift + Up arrow
To the beginning of a document	Ctrl+Shift+Home
Select the current element	Ctrl+Shift+T
Select the entire document	Ctrl+A
Select the contents of the next cell in the table	Tab
Select the contents of the preceding cell in the table	Shift+Tab

Table 49: Working with selections in a table

Action	Shortcut
Extend selected cell block by one cell to the right	Shift + Right arrow
Extend selected cell block by one cell to the left	Shift + Left arrow
Extend selected cell block by one cell down	Shift + Down arrow
Extend selected cell block by one cell up	Shift + Up arrow

Table 50: Choosing menu commands

Action	Shortcut
Show the shortcut (right mouse) menu	Shift+F10
Show the program icon menu (on the program title bar)	Alt + Space bar
Select the next or previous command on the displayed menu or sub-menu	Down arrow, Up arrow
Select the menu to the left or right; or, with a sub-menu visible, switch between the main menu and the sub-menu	Left arrow, Right arrow
Close the visible menu and sub-menu at the same time	Alt
Close the visible menu; or, with a sub-menu visible, close the sub-menu only	Esc
Show the Insert Symbol menu	CTRL + Shift + S
Show the Quick Writing Tools menu	CTRL + . (period)

Table 51: Moving between panes, documents, and dialogs

Action	Shortcut
Open a dialog to select where to move the active cursor	Hold Ctrl + Tab to open the dialog and press Tab again until the pane you want to activate is highlighted
Switch to the next active program	Alt+Tab
Switch to the previous active program	Alt+Shift+Tab

Action	Shortcut
Move the active cursor to the next document	Ctrl+F6
Move the active cursor to the previous document	Ctrl+Shift+F6 OR Ctrl+Shift+Tab
Show the Windows Start menu	Ctrl+Esc
Close the active document pane	Ctrl+W
Toggle between the active document and the most recently active modeless dialog box	Alt+F6
Cycle through the active document and any open modeless dialog boxes	Alt+Shift+F6


Table 52: Navigating in a dialog

Action	Shortcut
Switch to the next tab in a tabbed dialog	Ctrl+Tab OR Ctrl+Page Down
Switch to the previous tab in a tabbed dialog	Ctrl+Shift+Tab OR Ctrl+Page Up
Move to the next control	Tab
Move to the previous control	Shift+Tab
Move to control	Alt + underlined letter
Move between options in the selected drop-down list box	Arrow keys
Move between radio buttons in selected group	Arrow keys
Perform the action assigned to the selected button	Space bar OR Enter
Turn selected check box on or off	Space bar
Turn any check box on or off	Alt + underlined letter
Move to an option a selected drop-down list box	First letter in option name
Open selected drop-down list box	Alt + Down arrow
Close selected drop-down list box	Esc
Perform the action assigned to the default button in the dialog (if no other push button is selected)	Enter
Select a folder in a folder list	Arrow keys
Update the files visible in the Open or Save As dialog box	F5
Cancel the command and close the dialog	Esc

Quick navigation tool

XMetaL exposes over 700 commands that you can run when you have documents and maps open. Most of these commands are exposed via menus, toolbars, macros, scripts, keyboard shortcuts, but finding the commands can be difficult as it requires switching between keyboard and mouse, memorizing commands, toolbar images, macro names, etc.

Finding and executing XMetaL commands

Tapping the  icon in the Whiteboard toolbar, or by entering the **CTRL + ?** on the keyboard, opens the dialog where you can find and execute all available XMetaL commands.

The following features will help users quickly navigate in XMetaL:

- A hot key for showing popup menu with commands titles and context sensitive search option.
- If commands are organized in groups - allowing filtering commands by groups (Active Document macros group, Insert group, help group etc.)
- Showing commands descriptions when it is defined
- Search filtering options "word contains", "word start with", search in "titles and keywords" or "titles, keywords and descriptions"
- Customer defined group of commands. Any command can be in one click added/deleted to/from "My group of commands"
- Optional settings for sorting results
- Easy navigation between command groups and dialog controls (Up/Down/Enter keys and short cuts) - mouse is not required, easy run in full screen editor mode
- You can extend menu and groups content by dropping actions definition text files to predefined folder. Customer extensions define "title" - "descriptions" - "text or hex symbol - of paste content" - "showing in menu priority" - "keywords for fast search". For example inserting mathml symbols, unicode symbols or frequently used phrases.
- The Whiteboard toolbar provides easy access to your favorite and recently used documents, all XMetaL commands, and application utilities.

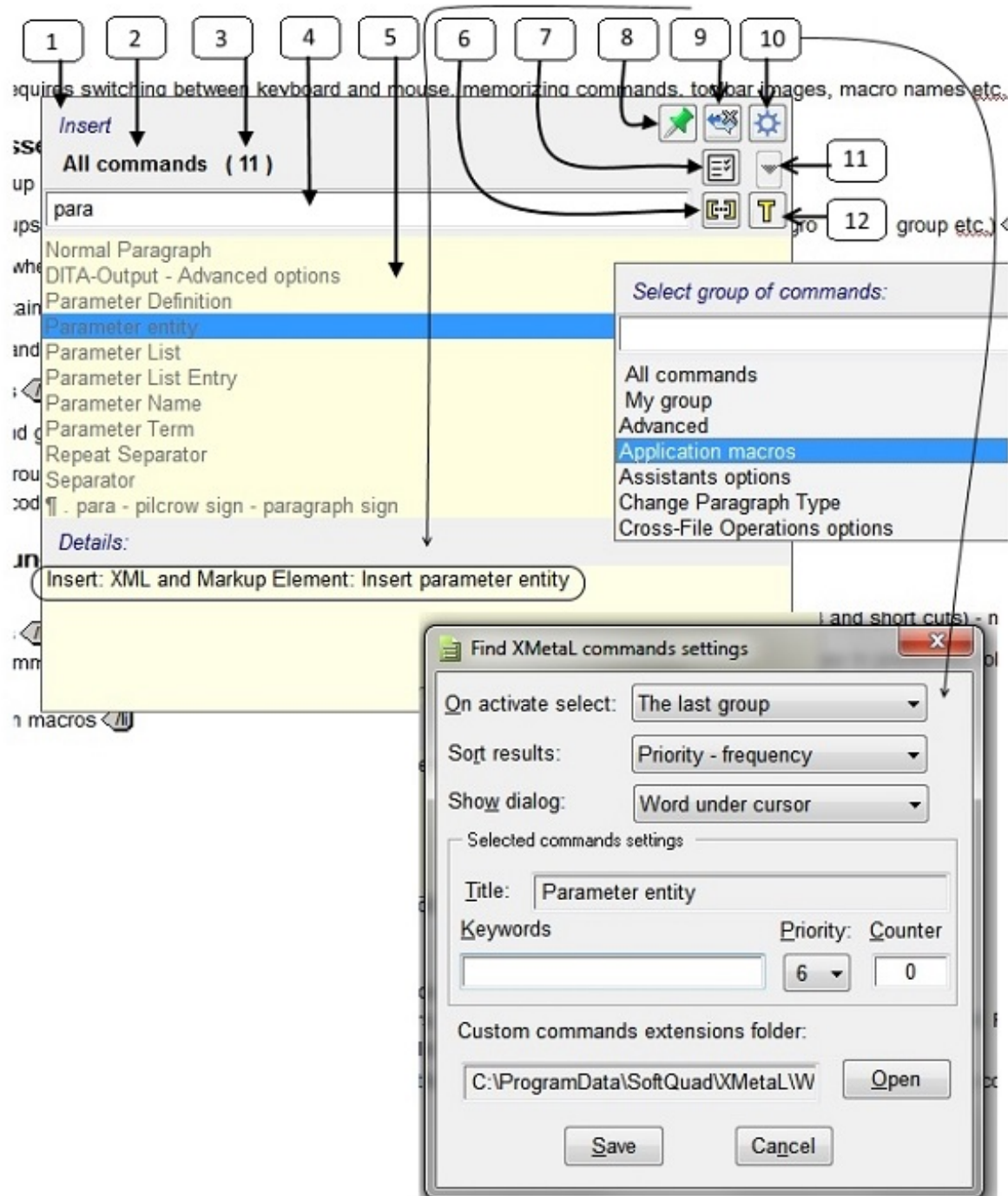
The following commands, macros, documents and applications can be found:

- XMetaL main menu commands
- XMetaL default or customer commands surfaced via customization scripts
- Application level macros
- Active Document customization macros
- Toolbars commands
- XMetaL document templates
- Active DITA MAP menu and toolbars command
- Favorite and predefined XMetaL folders. You can mark a folder as a "favorite" in the XMetaL environment. Folder and subfolder content will be shown in a special file openEx dialog or selected on the XMetaL desktop explorer
- Favorite and predefined XMetaL applications.

Favorite actions can include calls to third-party applications where the parameter can contain a path, word under cursor, or selected text in an active document. XMetaL includes examples, some of which show how to, for example, find selected text on the web or pass text to free web translation services.

XMetaL contains command-line examples of opening an active document, map or referenced files in Notepad++ and Paint, searching a word or selected text in Google or Wiki as well as translating document content to different languages via free online services.

The following image and table explains the main components of the quick navigation dialog, as well as shortcuts and key that will help you with quick navigation.













# on image	Shortcut or key	Description
1		Name of subgroup command (if available)
2		Name of active group of commands
3		Number of available filtered commands in the group
4	Ctrl+F (or Ctrl+Up when in commands list)	Search edit box
5	Down or Ctrl+Down	When focus is on the search box, set the focus to the selected command in the list. If Ctrl, select first item in the list
6	Ctrl+Space	Switch search type; either "word contains" or "word starts with"
7	Ctrl+> or Ctrl+<	Switch between "All commands" and "Selected command" groups
8	Ctrl+Insert	Add/delete command to/from "My group commands"
9	Ctrl+I	Show/hide command description. The description starts with a group titles chain.
10	Ctrl+P	Activate the user preferences dialog
11	Ctrl+G	Activate popup menu with the list of command groups
12	Ctrl+D	Switch search type "in titles and keywords" or "in titles, keywords and command descriptions"
	Ctrl+U	Show/Hide search box text
	Enter	Run selected command
	Shift+Enter	If selected command is "Favorite Folder" or "Favorite Library", then activate XMetaL explorer folder and select this folder
	Ctrl+Shift+<	Selected parent group of the active group
	Delete	If My group of commands is selected, then remove it from the group
	<ul style="list-style-type: none"> • Shift+Up • Shift+Down 	If My group of commands is selected, move the selected command up or down
	Esc	Close menu
	<ul style="list-style-type: none"> • Ctrl++ • Ctrl+- • Ctrl+Shift++ • Ctrl+Shift+- 	Resize dialog
	<ul style="list-style-type: none"> • Alt+Space 	Move dialog

Tips


- If you don't remember a command name but you do remember other commands in the group or group name, start to type it. When you see it in the list, use the Down key to select it and click Ctrl+> to see all commands in the group.
- If you frequently use some of the commands, go to Preferences and add a short keyword for command (for example, the abbreviation 'qln' for "Quick Insert references") and use it to search.

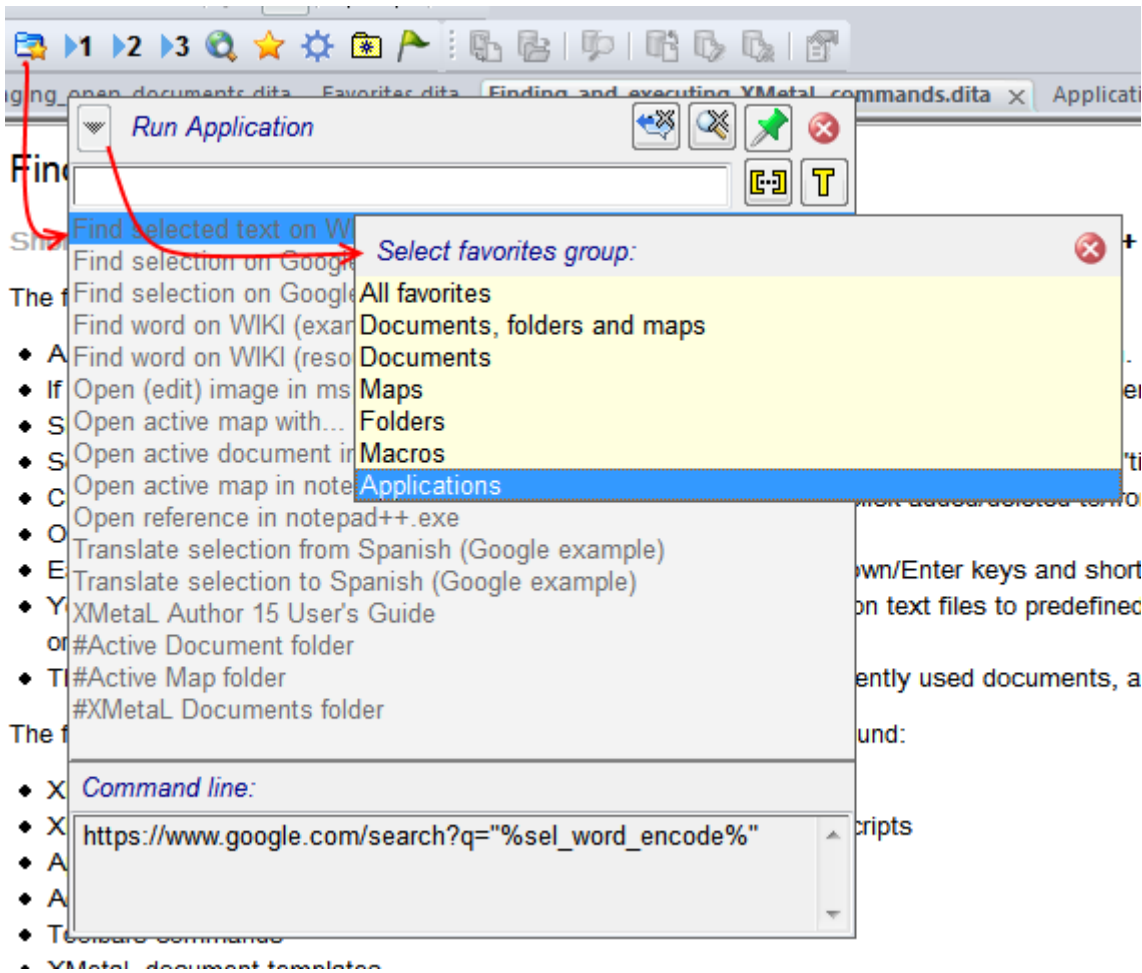
- If you frequently use some of the commands, go to Preferences and change the command priority (default is "6"), "1" is highest and the command will appear either close to the top or bottom of the list depending on the set value.
- if you search for your favorite folder, type the "[" character in the search box (all folders contain them).
- if you search for XMetaL predefined folders, enter the "#" character (all folders contain them).

To do this	Click this
Add selected item to 'My Group'	
Hide and show details	
Open command settings	
Show commands related to the selected item in the command list	
Show all available commands	
Select to show only a group of commands	
In the search, the entered word is contained in the name of the action	
In the search, the entered word is at the beginning of the name of the action	
Apply the search only to the title name of the action	
Apply the search to both the title and the details of the action	

Viewing and customizing favorites


Viewing and adding favorites

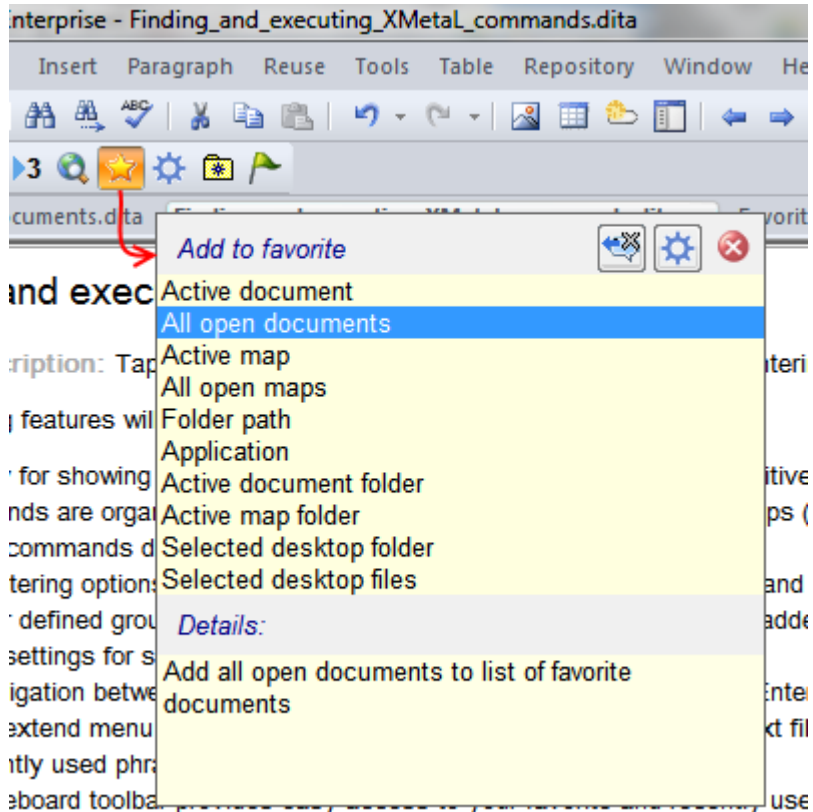
Tapping the  icon in the Whiteboard toolbar or using the **Ctrl+Shift+?** hot key opens a dialog where you can access favorite actions. In this dialog, you can apply your favorite and recently used actions in XMetaL.



In the 'favorites' dialog, all actions are easy to find and run using hot-keys via context sensitive search and filtering groups. All controls have tooltips containing the associated hot-keys.

To do this	Click this
Hide or show the command line or full path	
Hide or show the search field	
Pin or unpin the dialog to stay open after performing the action	
In the search, the entered word is contained in the name of the action	
In the search, the entered word is at the beginning of the name of the action	
Apply the search only to the title name of the action	
Apply the search to both the title and the details of the action	

You can add favorite actions by clicking the  icon in the Whiteboard toolbar and then selecting one of the options in the **Add to favorites** dialog.

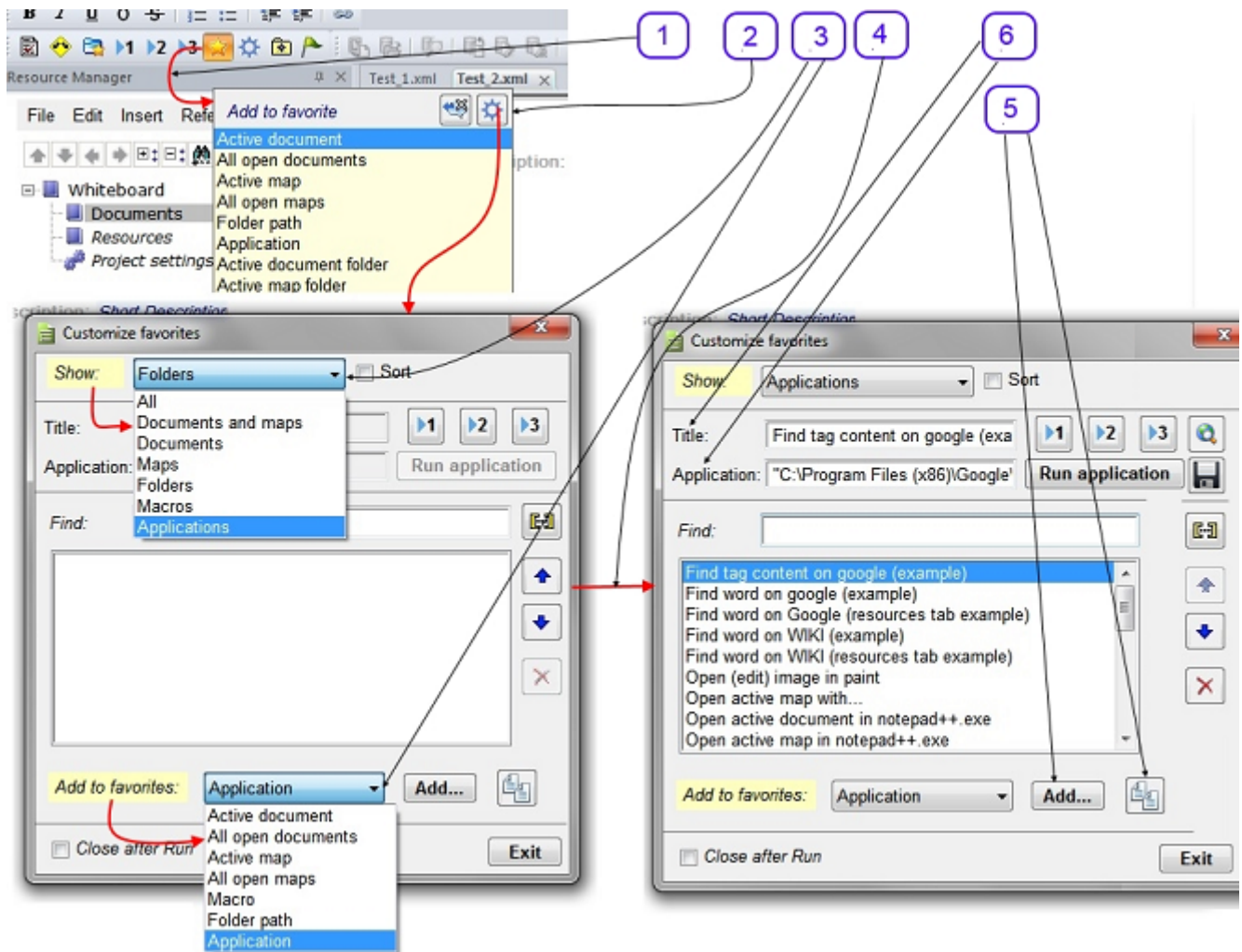


Customizing favorite applications


You can select a Windows application that can be run from the command line, assign title to it, and specify command-line parameters. The title will appear in the list of commands in "Run application" group. The command line will appear in the command details. Based on the active map or document and document selection, there is a list of predefined command-line keywords that XMetaL resolves in the command line.

- Word currently under the cursor
- Selected text
- The text content of a tag currently under the cursor
- Specific attribute value of an element under the cursor
- Active document path
- Active map path

Favorite applications can be customized in the **Customize Favorites** dialog.







Here are some tips and guidelines for customizing favorites:

- In the **Title** edit box, when you change existing title, you must press **Enter** to complete/update application settings
- In the **Application** edit box, the command line works the same as for the title. Be careful with *application path* as it will be executed as is. So if you have a space in the path, use double quotes around it.
- You can use the  (Duplicate) button as an easy way to duplicate a selected application that is close to what you want and change the parameters or application.

XMetaL resolves the following parameters:

- %sel_tag_encode% - active document - tag content where cursor – escaped for use in browsers
- %sel_word_encode% - active document – word under cursor – escaped for use in browsers
- %WEB_TAB% - use IE application on XMetaL desktop resource manager
- "%REFATTR_ %" active document attribute(s) of element where cursor is – example
"%REFATTR_FileRef;href;fileref%"
- %REFATTR_NOID_ %" - the same - except id part starting with ("#...") is removed when it presents,
%REFATTR_NOID_href;URL;Linkend;conref;FileRef;fileref;src;xlink:href%"
- %DOC% - full path to active document


- %MAP% - full path to active map








Four customizable quick access buttons in the Whiteboard toolbar ( ,  ,  and ) can be assigned any favorite action as needed. The buttons' tooltips display the title of the assigned action. The predefined hot-keys for the buttons are Ctrl+1, Ctrl+2, Ctrl+3 and Ctrl+4.

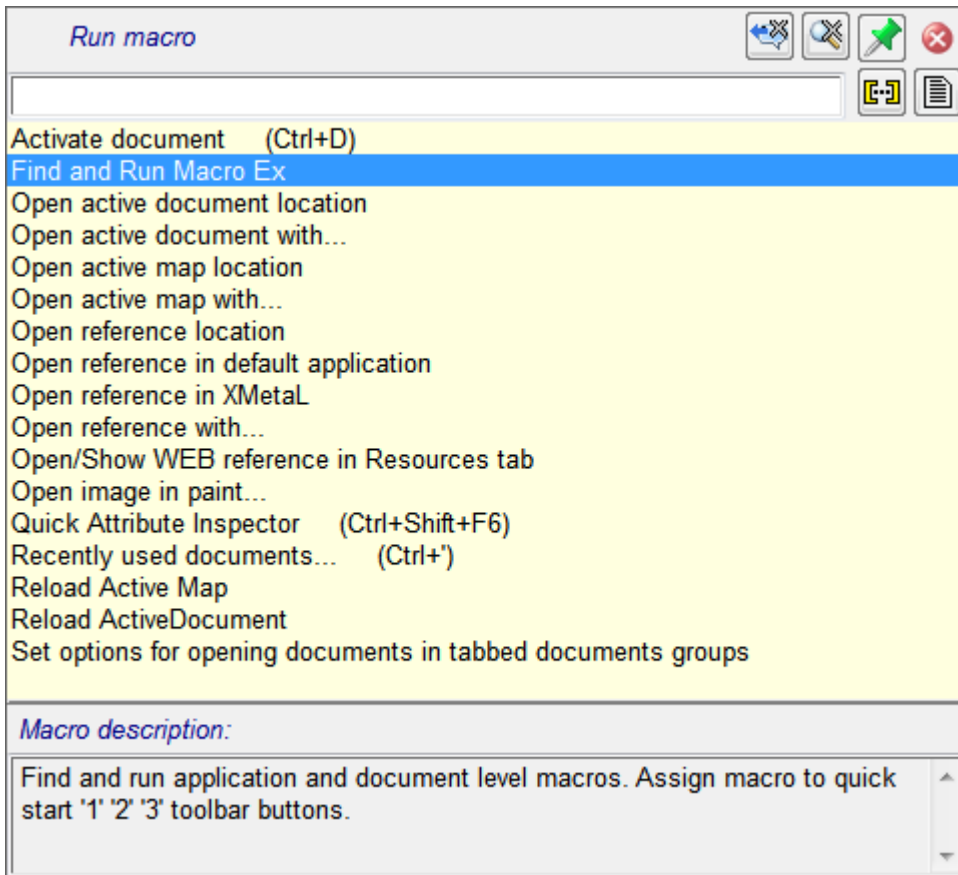
For more customizing the buttons:

- Select the item you want to relate to one of the buttons. The selected function is displayed in the **Title** field.
- Click the button to which you want to relate the function. The function is now set for the selected button.
- Click **Run Application** to test the function in the Title field.


Application utilities

Tapping the  icon in the Whiteboard toolbar opens a dialog where you can run XMetaL macros.

To do this	Click this
Hide or show the command line or macro description	
Hide or show the search field	
Pin or unpin the dialog to stay open after performing the action	
In the search, the entered word is contained in the name of the action	
In the search, the entered word is at the beginning of the name of the action	
Apply the search only to the title name of the action	
Apply the search to both the title and the details of the action	



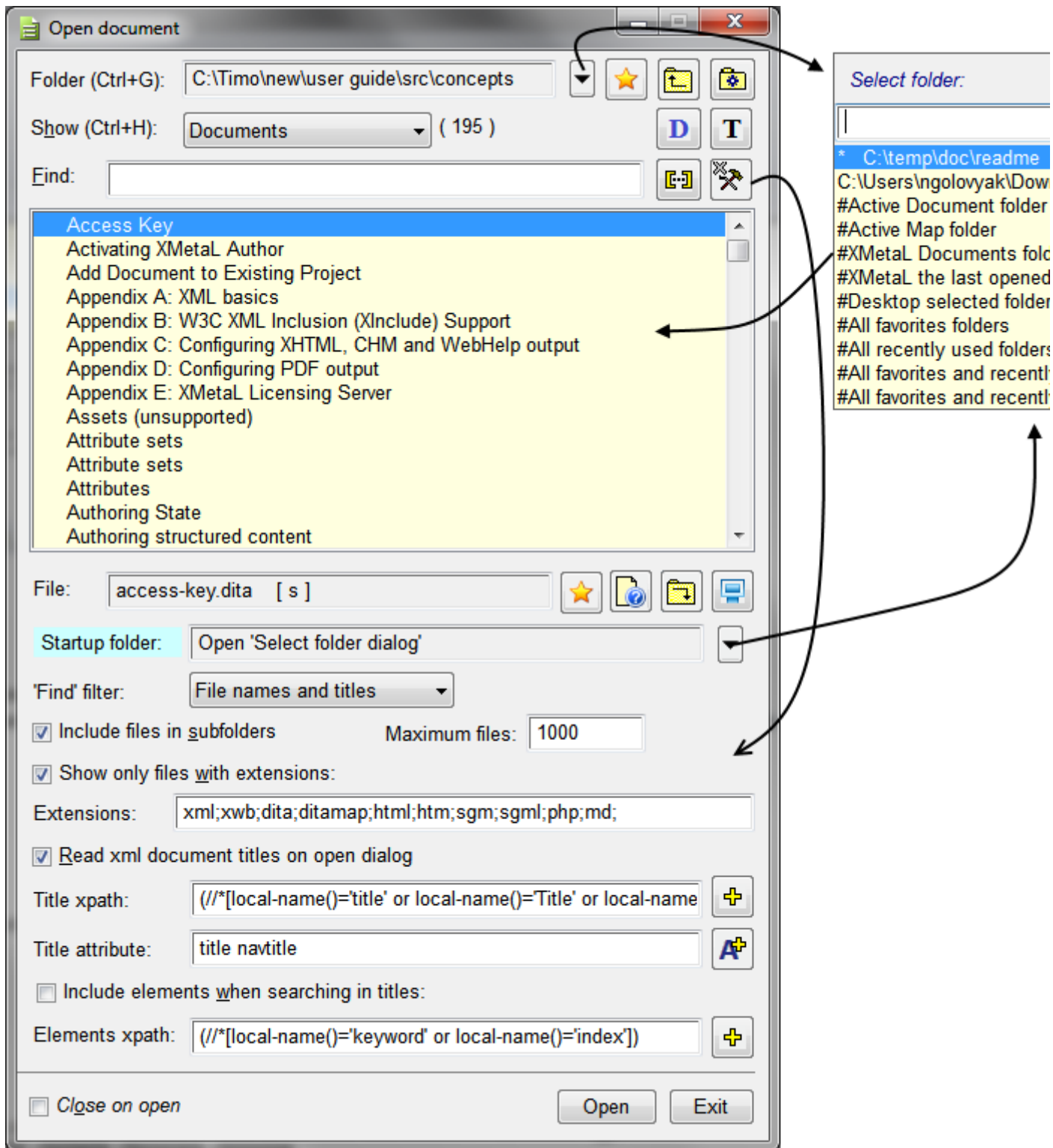
Document Ex commands

The following document Ex features can be accessed by tapping the  button in the Whiteboard toolbar.

Find document Ex feature

The Find feature allows you to:

- view a file's name and a document's titles in favorite, predefined and recently used folders as well as Windows libraries,
- find and open documents in favorite, predefined and recently used folders as well as Windows libraries by title, file name or content of specific XML document elements, and
- add and remove favorite folders.



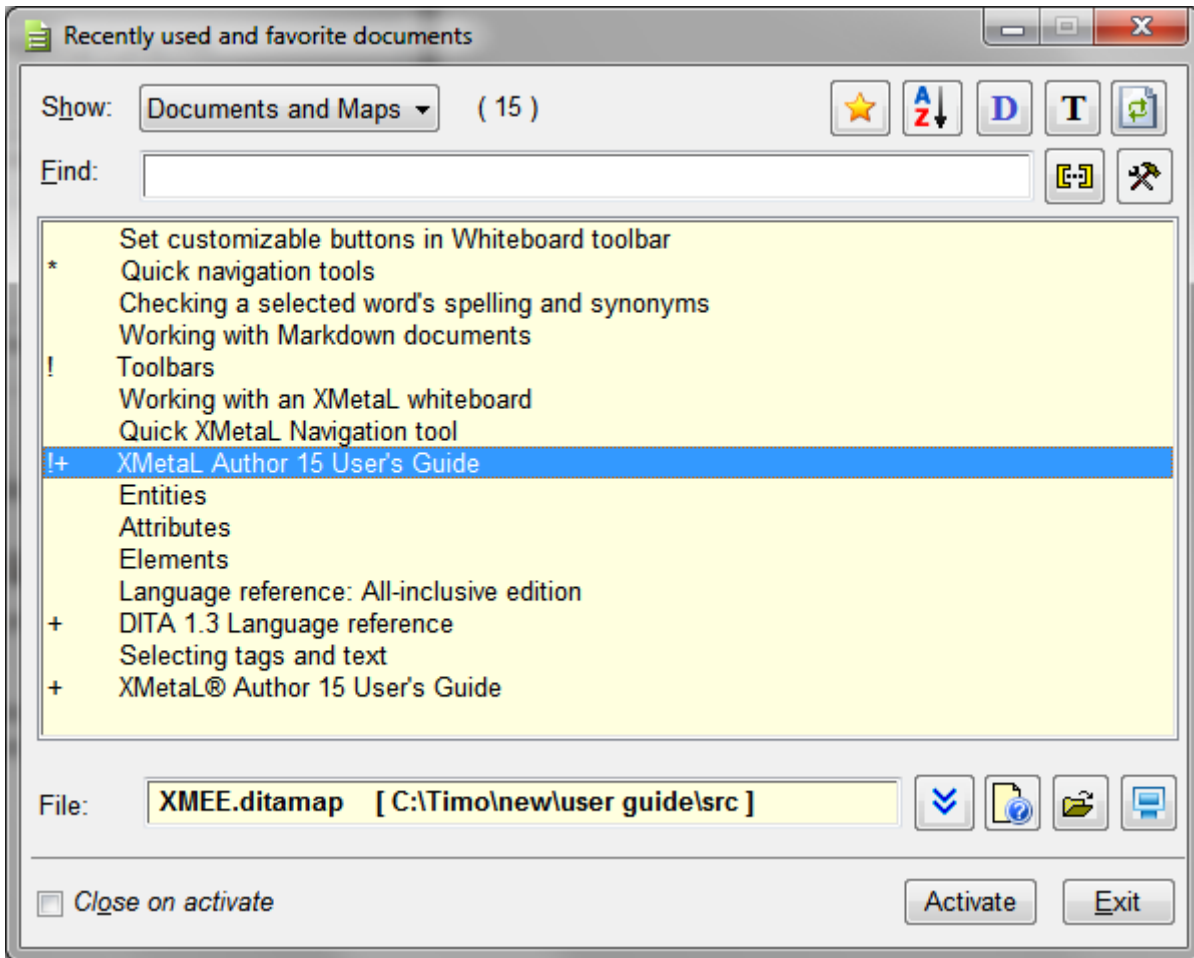
Recently Used documents Ex feature

It is invoked by Ctrl+' or selecting "#All favorites and recently used files" in "Open Document dialog.

The list of favorite and recently used documents allows you to:

- view documents titles of recently used and favorite documents,

- find and open documents by title, file name or content of specific XML document elements, and
- add and remove favorite documents.

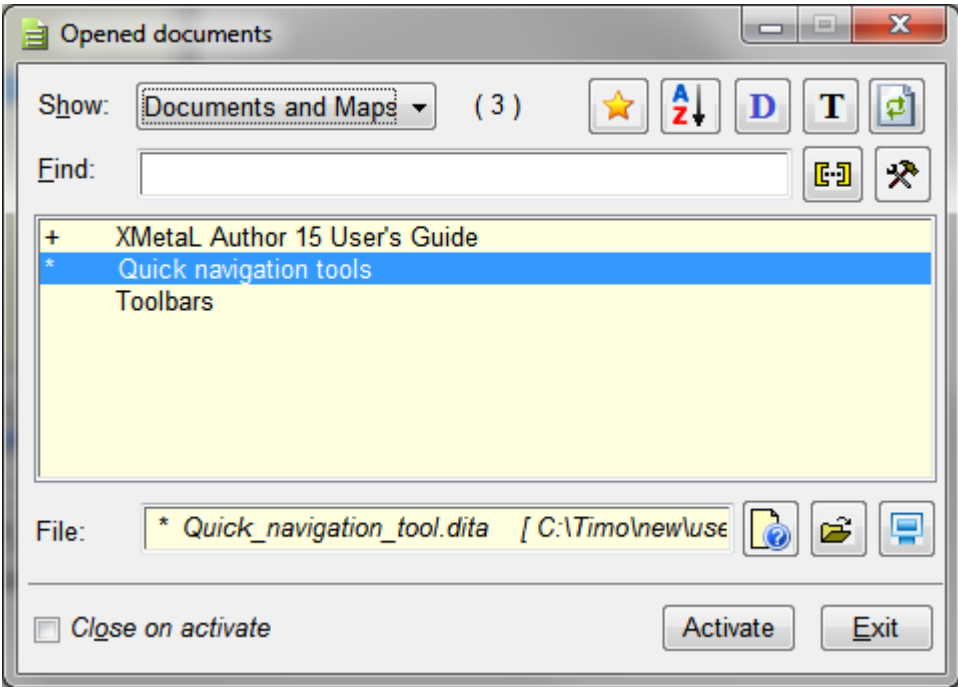


Opened documents Ex feature

It is invoked by Ctrl+D.

This feature allows you to:

- view documents titles of all opened documents,
- open document to select, close, open in alternative applications, find documents by title, file name or content of specific XML document elements, and
- add and remove selected documents to/from favorite document list.



Bookmarks and comments

This tool allows users to store active document selected text as a bookmark, add or modify bookmark's comments, find bookmarks by titles or comments, and open the document and move selection to the corresponding bookmark.

Bookmarks and comments feature includes:

- Allows marking active document text as a bookmark without changing document content
- Allows adding/modifying bookmark comments without changing document content
- Contains four predefined groups of bookmarks
- Bookmark can be assigned (or reassigned) to any group.
- Every group of bookmarks has a designated highlighting color.
- Every group of bookmarks can be shown or hidden.
- Bookmarks can be sorted or ordered manually.
- Allows finding bookmarks by bookmark or comments text, opening the document, and scrolling to the selected bookmark
- Context popup menu and bookmark macros with connection to "Find and Execute XMetaL Command" allow fast access and efficient bookmarks and comments management.
- Allows fast navigation between bookmarks
- Allows showing only bookmarks of specific document
- Contains three types of user interfaces for flexible and efficient work with document bookmarks and comments:
 - Bookmarks manager - basic
 - Comments basic
 - Bookmarks manager - advanced

Adding bookmarks and comments

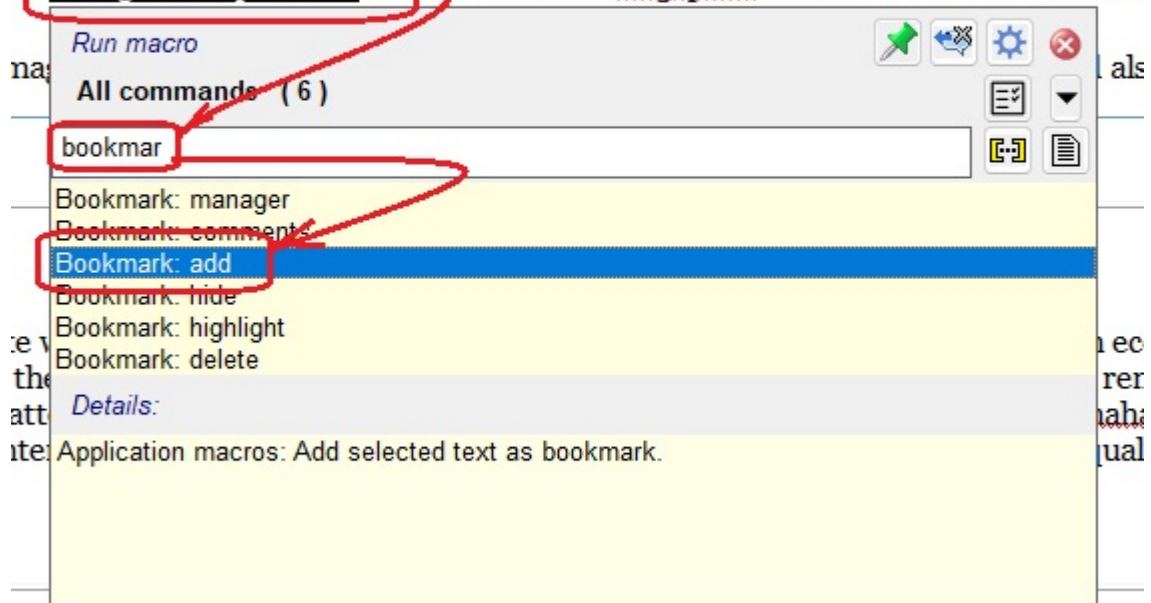
Bookmarks can be added via calling the XMetaL macro silently or through the user interface.

For the silent scenario, you select text in the active document and use the XMetaL quick navigation tool for calling the "Bookmark: add" macro:

1. Press Ctrl+?
2. Start to type "bookmark"
3. Select "Bookmark: add" macro

petition to film-based photography. Our tests revealed that most of the digital camera
Scanner Shoot-Out last month.

less to recent prices of less than \$300, but we strongly recommend that most users
or **Charged-Coupled Device** found in these megapixel cameras. The CCD is the el



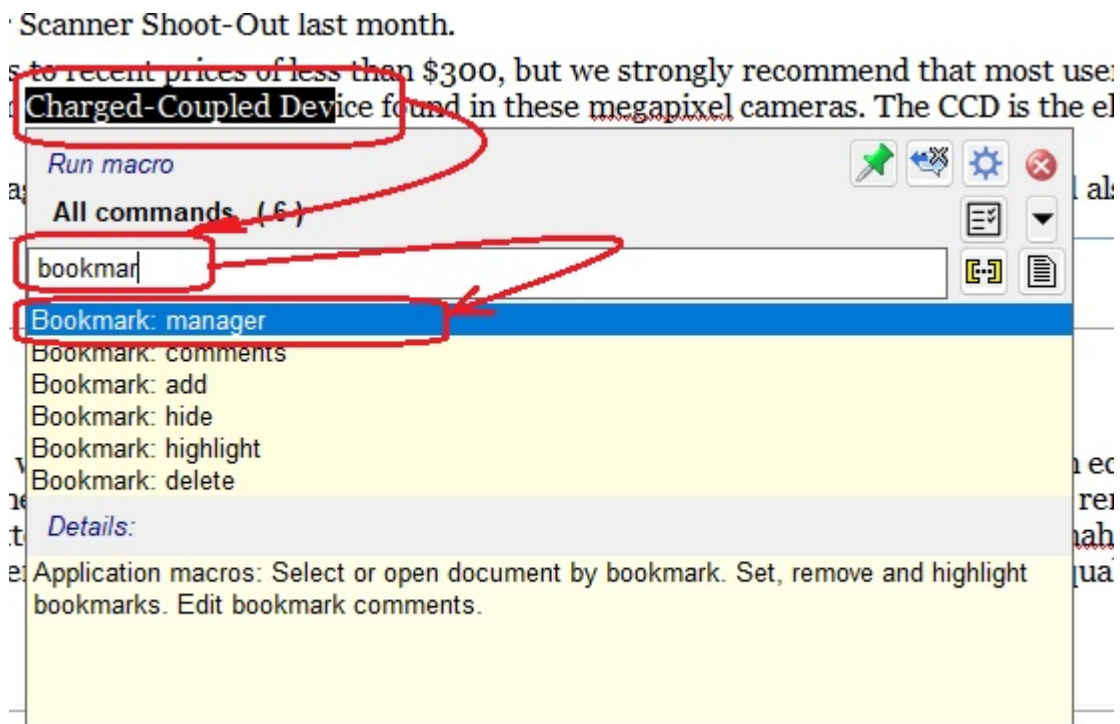
4. Press "Enter"

Scanner Shoot-Out last month.

less to recent prices of less than \$300, but we strongly recommend
Charged-Coupled Device found in these megapixel cameras.

For the user interface scenario, use the XMetaL quick navigation tool for calling the "Bookmark: manager" macro:

1. Press Ctrl+?
2. Start to type "bookmark "
3. Select "Bookmark: manager" macro



4. Press "Enter" to open the Bookmarks manager dlg

The easiest way to add bookmark is through the "Add Bookmark" context menu.

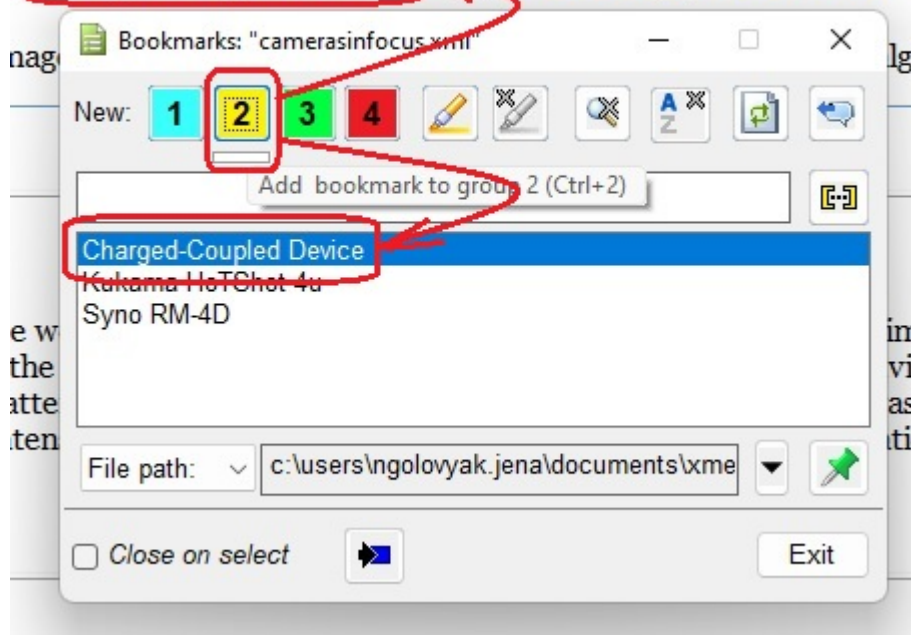
Bookmark manager

Basic UI

The basic UI of bookmark manager allows users to do basic actions for adding, finding and maintaining bookmarks, opening document corresponding to bookmark, and selecting bookmark locations.

After activating the bookmark manager dialog, clicking on "New" group of bookmarks adds a bookmark to the list of bookmarks and highlights it in the document with corresponding color .

ks to recent prices of less than \$300, but we strongly recommend
 or **Charged-Coupled Device** found in these megapixel cameras. T



Note: All bookmark manager buttons have tool tips when the dialog is activated.

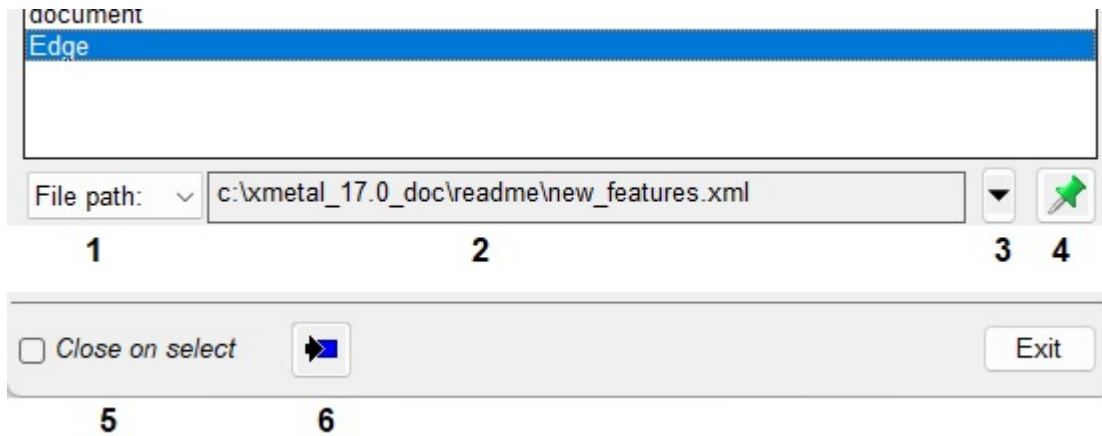


# on image	Description
1	Assign bookmark to group of bookmarks "1". Cyan is the highlighting color of the group.
2	Assign bookmark to group of bookmarks "2". Yellow is the highlighting color of the group.
3	Assign bookmark to group of bookmarks "3". Green is the highlighting color of the group.
4	Assign bookmark to group of bookmarks "4". Red is the highlighting color of the group.
5	Highlight all bookmarks in active document.
6	Hide all bookmarks in active document.
7	Show filtering edit box. It allows to show in bookmarks list only items that contain (or start with) specific text in title or assigned comments.
8	Sort/Unsort bookmarks list. The order in unsorted bookmarks list can be changed via using keyboard keys Shift+Up Arrow and Shift+Down Arrow.
9	Refresh list of bookmarks.
10	Switch Bookmark manager with advanced UI.

In the bookmarks list, you can do the following:

- For navigation to a bookmark location in the document , double click on a bookmark item in the list.
- Press the Delete key for deleting a single bookmark and press Ctrl+Delete key for deleting all bookmarks.
- For fast navigation between bookmark locations, use keyboard in combination Ctrl key and Up Arrow and Down Arrow in bookmarks list.

At the bottom of the bookmark manager dialog, the following features are available:

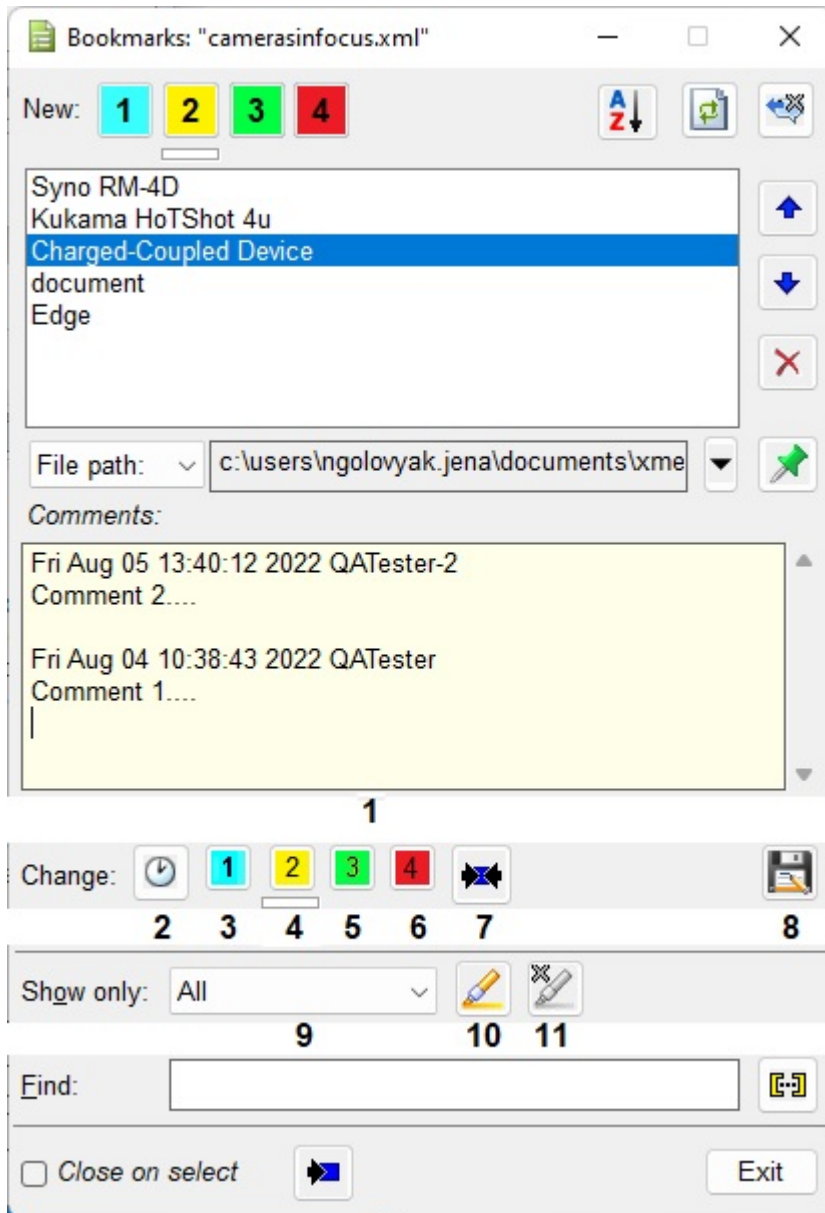


# on image	Description
1	Select type of the selected bookmark information; full path of the document or XPath of bookmark location in the document.
2	Bookmark info
3	Show list of files containing bookmarks and select first bookmark associated with file.
4	Allows showing only bookmarks located in "Bookmark info" file.
5	Force to close bookmark manager after navigation to bookmark location.
6	Allows synchronizing active document bookmark under cursor with the list of bookmarks.

Advanced UI

In addition to basic UI, the advanced UI of bookmark manager allows users to:

- add/delete/modify comments to bookmark
- add user name and time of comment modification
- reassign bookmark to other group
- change bookmark location in document
- show/hide only specific group of bookmarks in the list
- highlight /un-highlight specific group of bookmarks in the document



# on image	Description
1	Comments window. Use combination of Ctrl key and "+" "-" full keyboard keys for vertical resizing of comments window.
2	Insert date and user name.
3	Reassign selected to group of bookmarks "1". Cyan is the highlighting color of the group.
4	Reassign selected to group of bookmarks "2". Yellow is the highlighting color of the group.
5	Reassign selected to group of bookmarks "3". Green is the highlighting color of the group.
6	Reassign selected to group of bookmarks "4". Red is the highlighting color of the group.
7	Reassign Active document selected text location to selected bookmark.
8	Save bookmark comments.

# on image	Description
9	Combobox of bookmarks groups. List of bookmarks shows only bookmarks in the selected group.
10	Highlight bookmarks selected in "Combobox of bookmarks groups".
11	Hide bookmarks selected in "Combobox of bookmarks groups".

Comments UI

Comments basic UI

The Comments basic UI allows users to:

- add/edit/view comments for existing bookmarks
- perform all actions of "Bookmarks Advanced UI" for selected bookmark
- allow/disallow activating a dialog after adding bookmark in silent mode
- control dialog positioning on the screen after activation

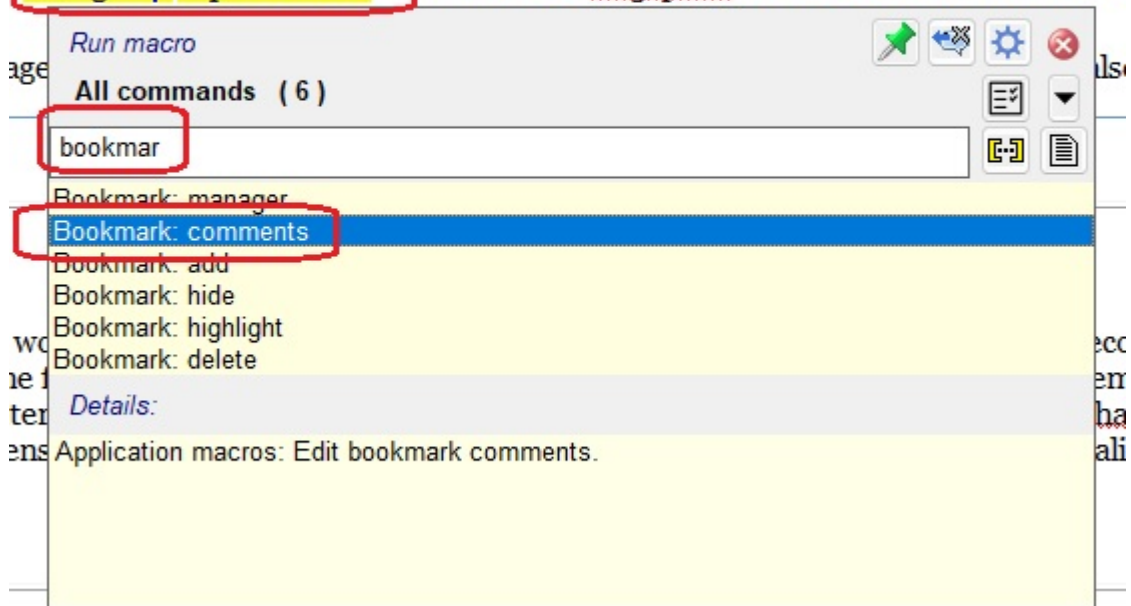
How to activate the Comments basic UI

The Comments basic UI can be activated via the XMetaL quick navigation tool by calling the "Bookmark: comments" macro:

1. Move a cursor to the bookmark location in active document
2. Press Ctrl+?
3. Start to type "bookmark"
4. Select "Bookmark: comments" macro

ition to film-based photography. Our tests revealed that most of the digital cam
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s to recent prices of less than \$300, but we strongly recommend that most user:
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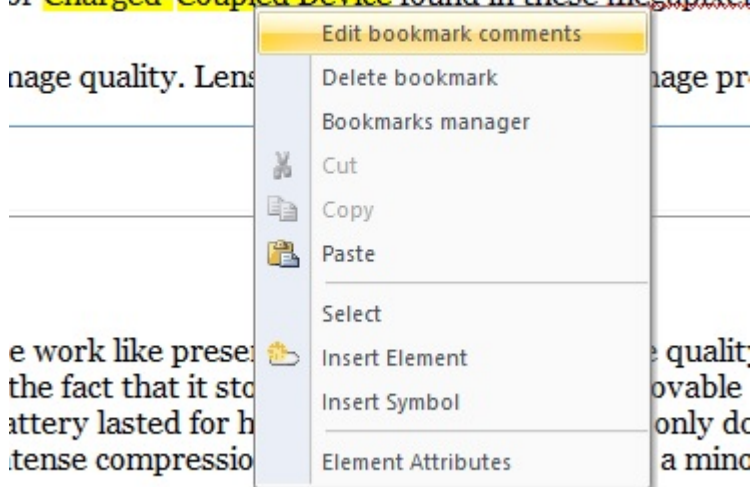
5. Press "Enter" to open the Comments basic UI dialog

The other way to activate the Comments basic UI dialog is using the context popup menu:

1. Move a cursor to the bookmark location in an active document
2. Activate the context menu and select "Edit bookmark comments" (if comments are exist already) or "Add bookmark comments"

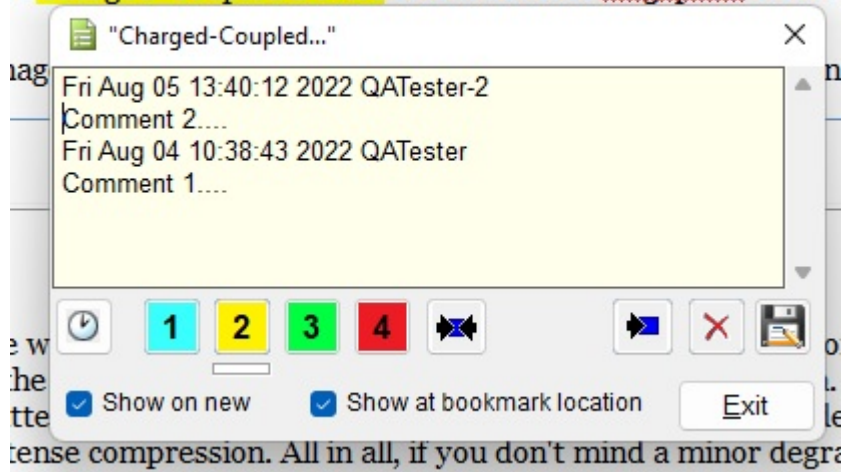
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The Comments basic UI dialog is:

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 or **Charged-Coupled Device** found in these megapixel camer



Toolbar buttons and options in the Comments basic UI dialog

The Comments basic UI allows you to perform all actions of "Bookmark manager - advanced UI" limited to only one bookmark as follows.



# on image	Description
1	Insert date and user name.
2	Reassign selected to group of bookmarks "1". Cyan is the highlighting color of the group.
3	Reassign selected to group of bookmarks "2". Yellow is the highlighting color of the group.
4	Reassign selected to group of bookmarks "3". Green is the highlighting color of the group.
5	Reassign selected to group of bookmarks "4". Red is the highlighting color of the group.
6	Reassign Active document selected text location to selected bookmark.
7	Synchronize active document bookmark under cursor with the Comments dialog if a cursor was moved to another bookmark.
8	Delete bookmark.
9	Save bookmark comments.
10	Always show the Comments basic UI dialog after adding bookmark in silent mode.
11	Show the Comments basic UI dialog at bookmark location in active document.

Context Menu for Bookmark

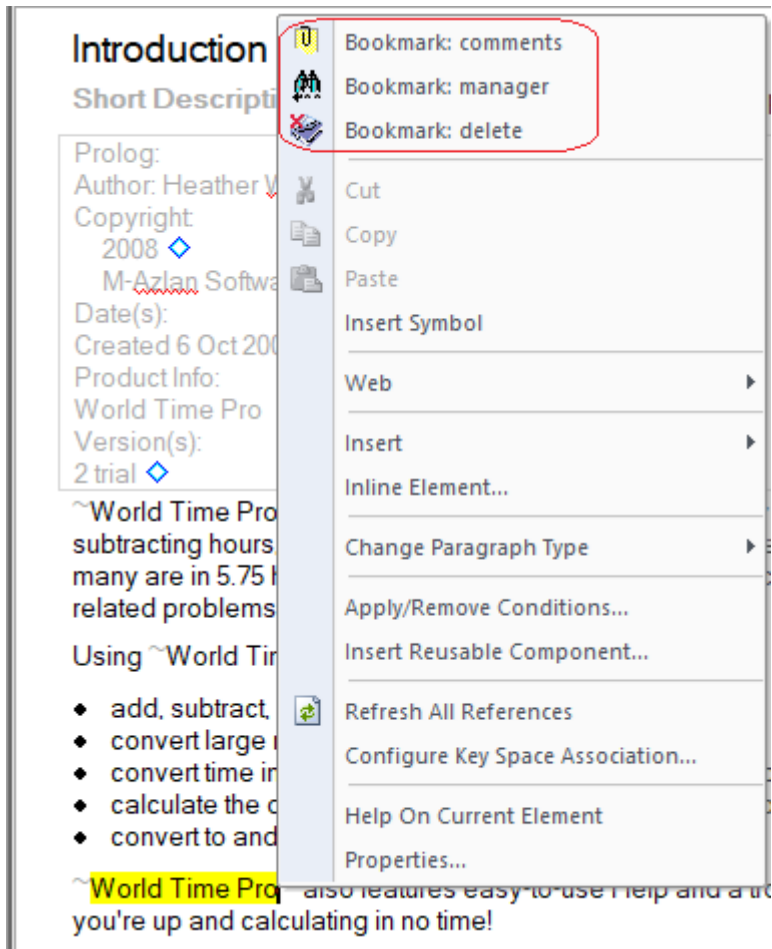
The Bookmark context menu provides easy access to features like creating new bookmarks, opening the comments dialog, managing bookmarks, and deleting bookmarks.

Bookmark Context Menu

When the text with a bookmark is selected:

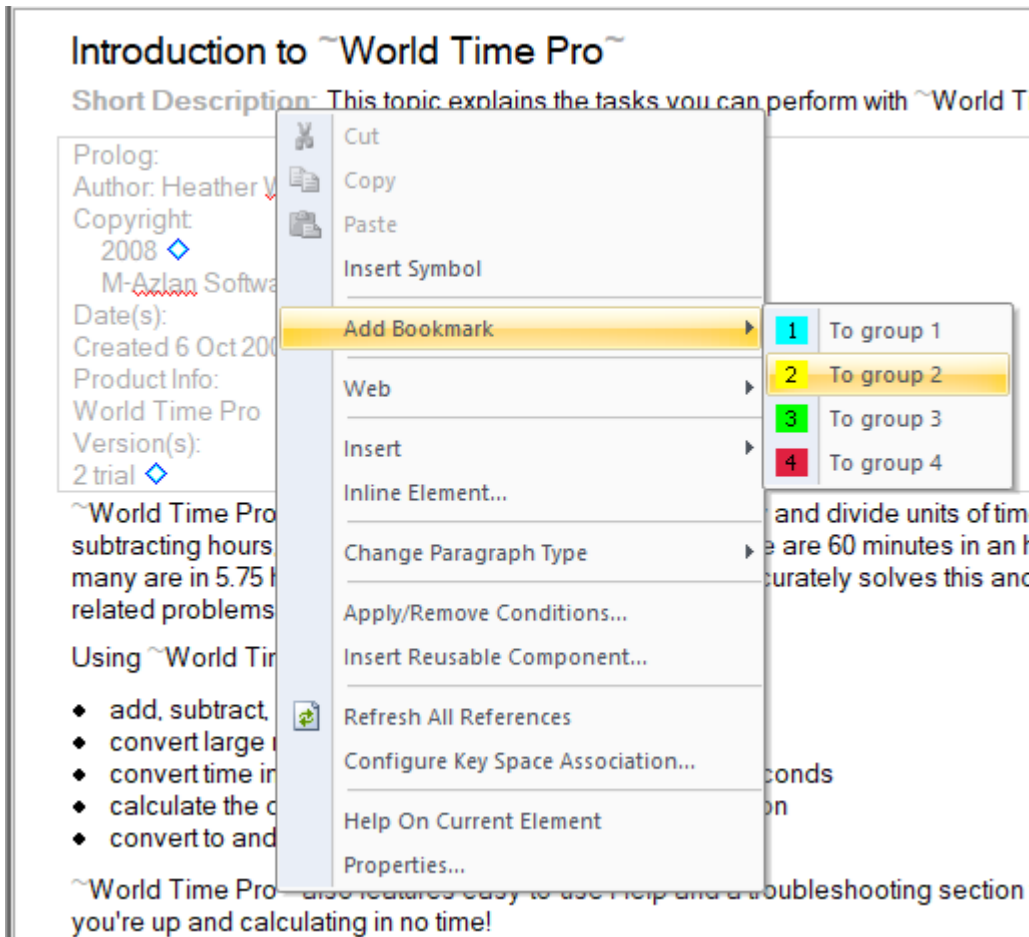
The following bookmark-related options are available:

1. **"Bookmark: comments"** opens the comments dialog.
2. **"Bookmark: manager"** opens the Bookmark manager tab within the Resource Manager.
3. **"Bookmark: delete"** removes the selected bookmark.



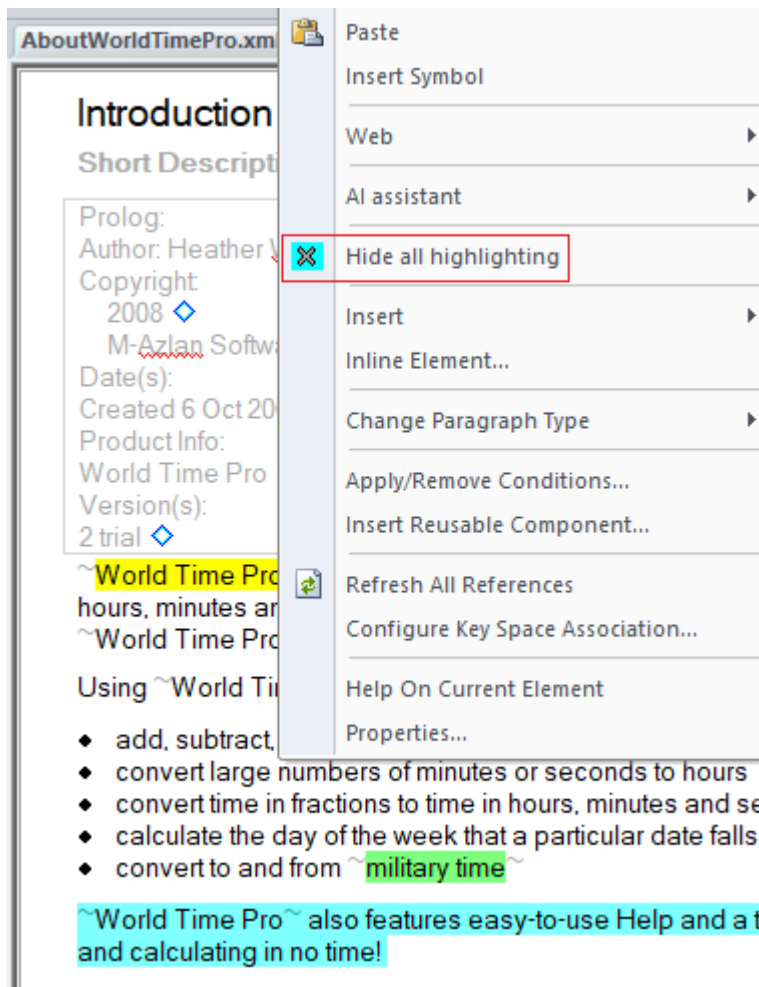
When the text without a bookmark is selected:

The following bookmark context menu allows you to add a new bookmark to one of four color groups (1-4).



Hide all highlights:

To hide all highlights in the active document generated by bookmarks, select any highlight and then use the specific context menu item provided for hiding all highlights.



- ➔ **Note:** Selecting this context menu item hides highlights from Bookmark as well as from XChatbot, XGrammarly, and the Web. To make hidden bookmarks visible, open the Bookmark manager and click the "Show all Active Document bookmarks" button.

XMetaL utilities

XMetaL offers customers valuable features, including "Find text on WEB", "Integration with ChatGPT", and "Integration with Grammarly". The "Find text on WEB" utility assists authors in efficiently searching relevant information. The "Integration with ChatGPT" and "Integration with Grammarly" utilities help authors to enhance the quality of documentation, resulting in a significantly improved authoring experience within the XMetaL platform.

Find text on WEB

This feature enables authors to search the internet within the XMetaL environment quickly. Instead of switching to a separate browser, authors can perform research, verify facts, and access up-to-date information within the XMetaL platform. This saves time and ensures the accuracy of the content being created.


Integration with ChatGPT, Bing AI and Google Gemini

XMetaL has integrated with ChatGPT, Bing AI and Google Gemini web services into the XMetaL environment to offer enhanced writing assistance. Authors now have the capability to utilize advanced AI-powered suggestions, context-aware prompts, and real-time feedback to enhance and improve their content. This utility makes it easier for authors to articulate complex ideas, improve sentence structures, and enhance the overall clarity of their writing.

Integration with Grammarly

With this integration, XMetaL users can leverage the comprehensive grammar and spelling-checking capabilities of Grammarly within the XMetaL environment. This ensures that the content is free from errors, adheres to language conventions, and maintains a high level of professionalism. Grammarly also offers suggestions to improve writing style and readability, leading to polished and refined documentation.


Find text on WEB

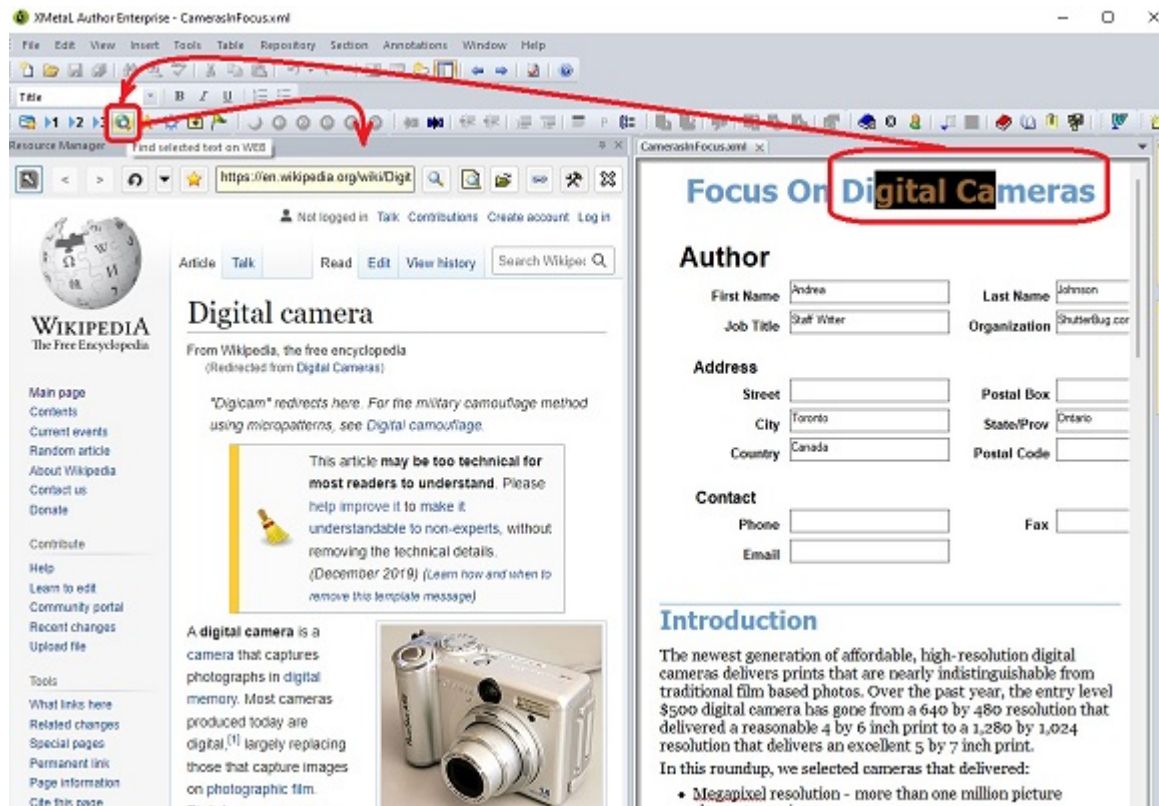
Tapping the  icon in the Whiteboard toolbar, or entering the **CTRL + ?** to locate the "Find selected text on WEB" macro, opens the WEB Browser tab in the Resource Manager.

This utility demonstrates XMetaL script customization based on integration with Microsoft Edge. The following features help users to find the selected text and more:

- Allows finding Active document selected text on the WEB or passing selected text as a URI parameter to online WEB services
- Allows maintaining home page, search engines and favorite sites
- Allows defining xml template and pasting it to an XMetaL active document. Parameters of the xml template are web page title, web page URI, clipboard content, and active document selection
- Allows running XMetaL macro scripts. Macro script has full access to XMEdge ActiveX control interfaces, web page scripts, and the XMetaL script environment
- Contains examples of Google, Bing and WIKI search engines, Google online translate service, paste templates, and test macro

Opening WEB Browser Page in Resource Manager

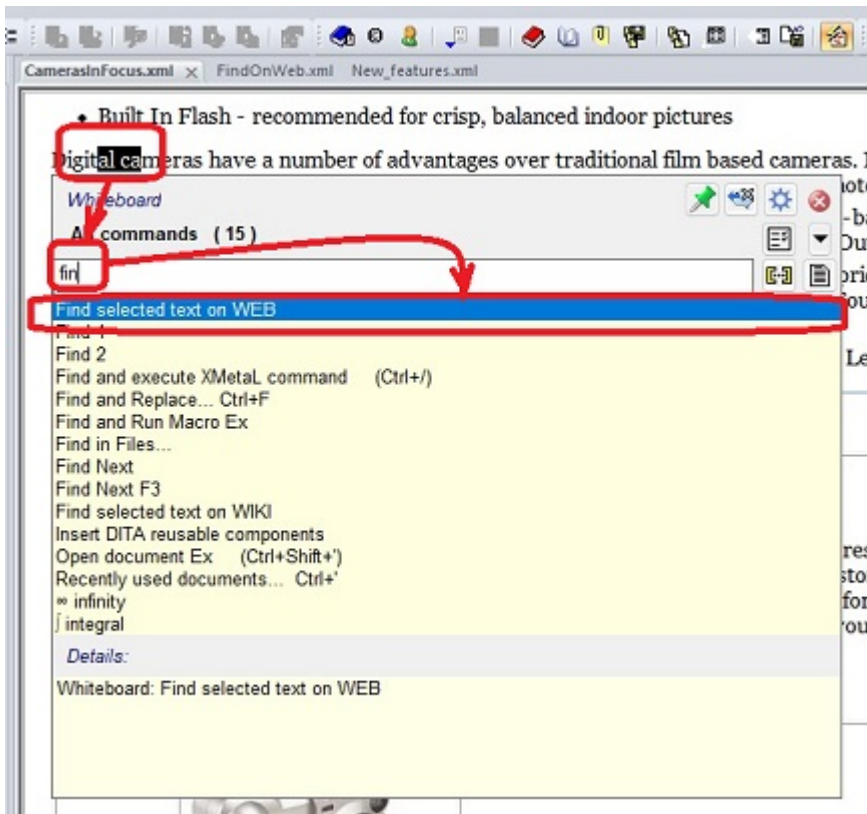
There are multiple methods to utilize the utility. To begin, you can select text within the active document and click the "Find selected text on WEB" button  in the whiteboard toolbar, as shown below.



Another convenient option is to open the web browser page through the Web context menu.

Additionally, users can employ the XMetaL quick navigation tool to activate the "Find selected text on WEB" macro:

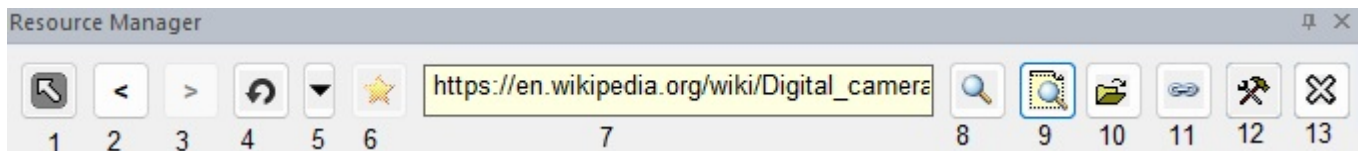
1. Select text in active document
2. Ctrl+?
3. Start typing "find"
4. Select macro and press "Enter"



Find text on WEB utility toolbar

The utility's toolbar buttons similar to generic web browser buttons are displayed on the WEB Browser tab in the Resource Manager.

The following utility's toolbar buttons let you do multiple actions:



# on image	Shortcut or key	Description
1	Ctrl+H	Home Page
2	Ctrl+<	Previous
3	Ctrl+>	Next
4	Ctrl+R	Reload
5	Ctrl+G	Show Favorites
6	Ctrl+Insert	Add to Favorites
7		Navigation URI or "Find text" edit box
8		Find text or open URI located in "Navigation URI or "Find text" edit box"
9		Find Active Document selected text on WEB
10		Browse for file in file system

# on image	Shortcut or key	Description
11		Insert link to Active Document
12		Settings
13		Close Tab

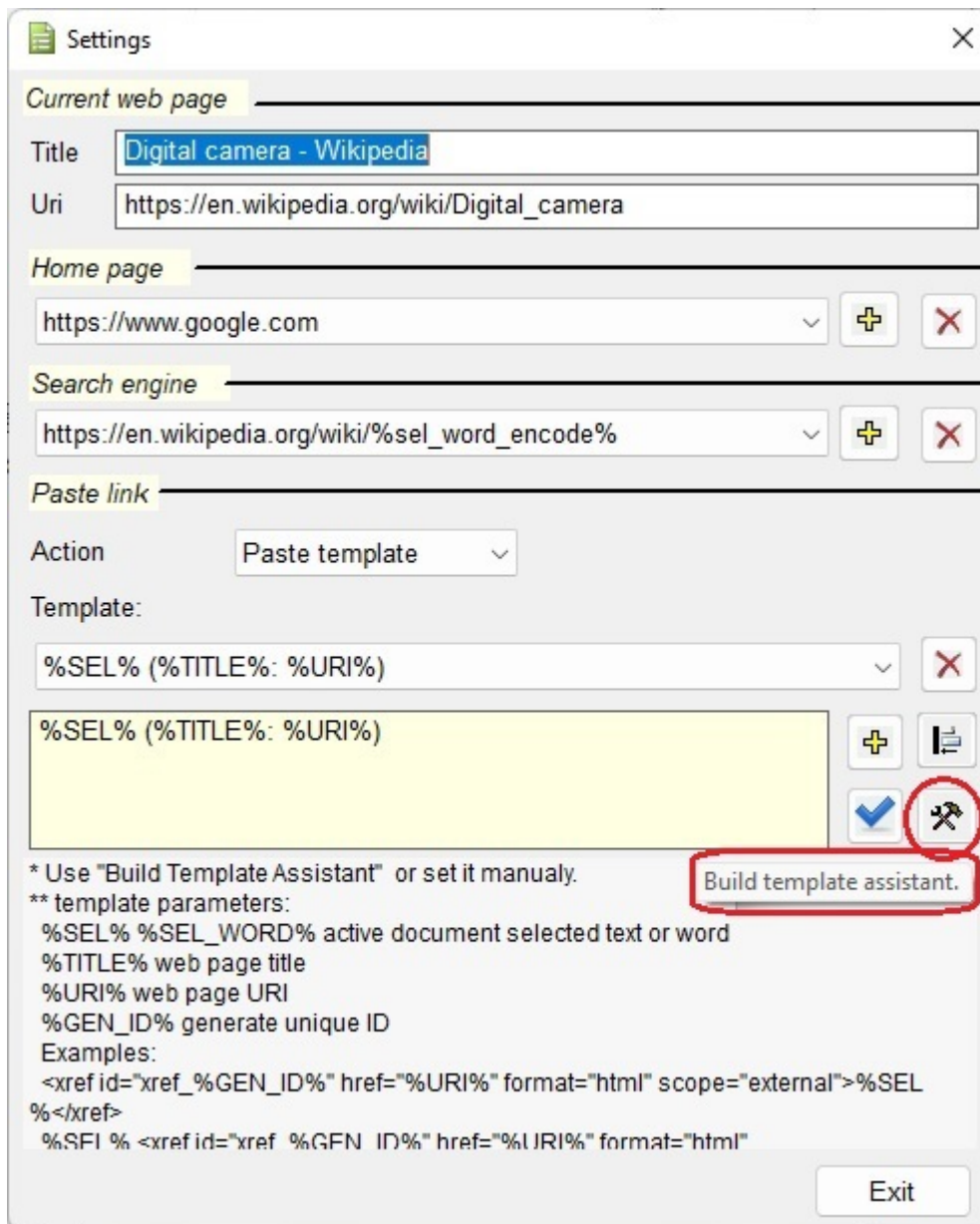
Note:

- All buttons show tool tips when the toolbar is activated.
- For maintaining the "Favorites" list , you can use:
 - "Del" key for deleting
 - "Shift+Up Arrow" and "Shift+Down Arrow" keys for changing order
- When clicking on the "Insert link to ActiveDocument" button based on utility settings, one or another action happens:
 - The current web page URI and title are sent as parameters for "xml template". The generated xml content is pasted in Active Document.
 - The XMetaL runs macro specified in utility settings. The macro script has access to all current web page data via the XMEdge ActiveX control API.

Settings in WEB Browser**Settings**

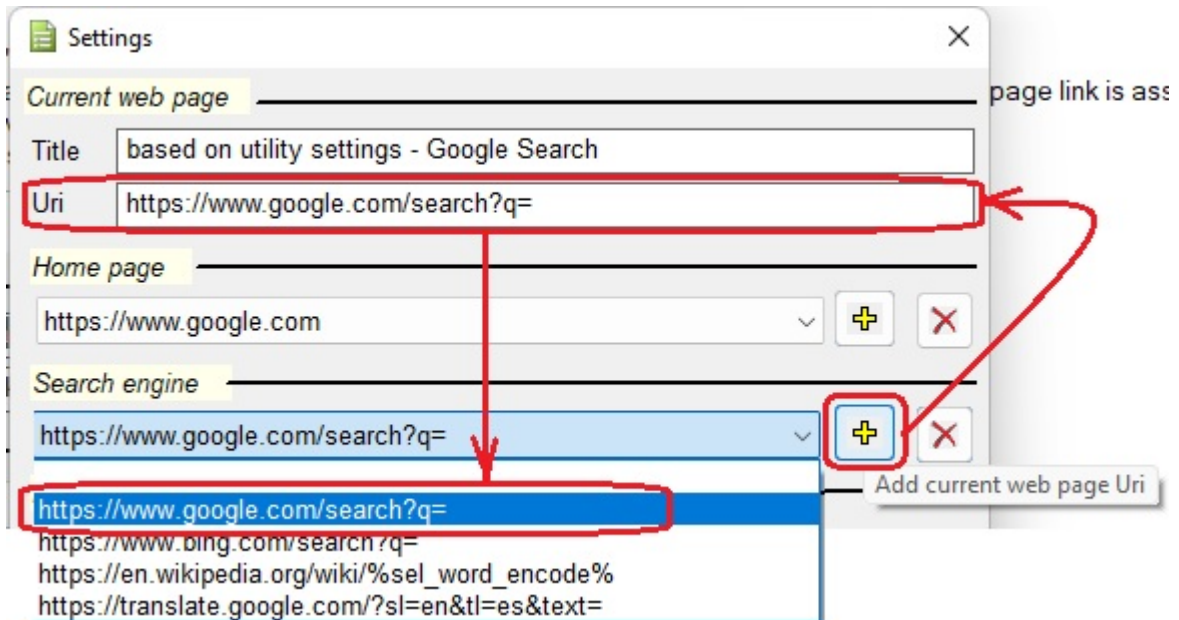
The Settings dialog allows you to:

- add/remove/select link for the "Home Page" button
- add/remove/select link to the WEB page that provides access to WEB search engine and online WEB service. Selected WEB page link is assigned to "Find text or open URI" and "Find Active Document selected text on WEB" buttons.
- assign action to "Insert link to Active Document" button. Available actions are "Paste template" and "Run Macro" .
- add/remove/select xml template for the "Paste template" action



Other features in Settings dialog include:

- The "Uri" edit box contains an editable web link to a current web page.
- By using "Add current web page Uri" buttons, you can add new entries to the lists of "Home Pages" and "Search engines" as follows:



- "Find text on WEB..." operations append Active Document selected text or "Navigation URI or Find text" edit box content to selected link.
- Optional parameter %sel_word_encode% forces text to be encoded before appending to web link. It is useful when document selected text should be sent to web services, for example for translation.
- You can use the "Paste Link" edit box for defining a template for the "Insert link to Active Document" button or click on "Build template assistant" button.

Available template parameters:

- %SEL% - Active Document selected text
- %SEL_WORD% - Active Document selected text words
- %TITLE% - web page title
- %URI% - web page URI
- %GEN_ID% - generate unique id
- %CLIPBOARD% - clipboard text content

Templates examples:

- Journalist ULink document selection as link text: <ULink URL="%URI%">%SEL_WORD%</ULink>
- Journalist ULink web page title or selection as link text: <ULink URL="%URI%">%TITLE%</ULink>
- Docbook URI document selection as link text: <uri xlink:href="%URI%">%SEL_WORD%</uri>
- Docbook URI web page title or selection as link text: <uri xlink:href="%URI%">%TITLE%</uri>
- (Selected text or HTML page title : URI) : (%TITLE%: %URI%)



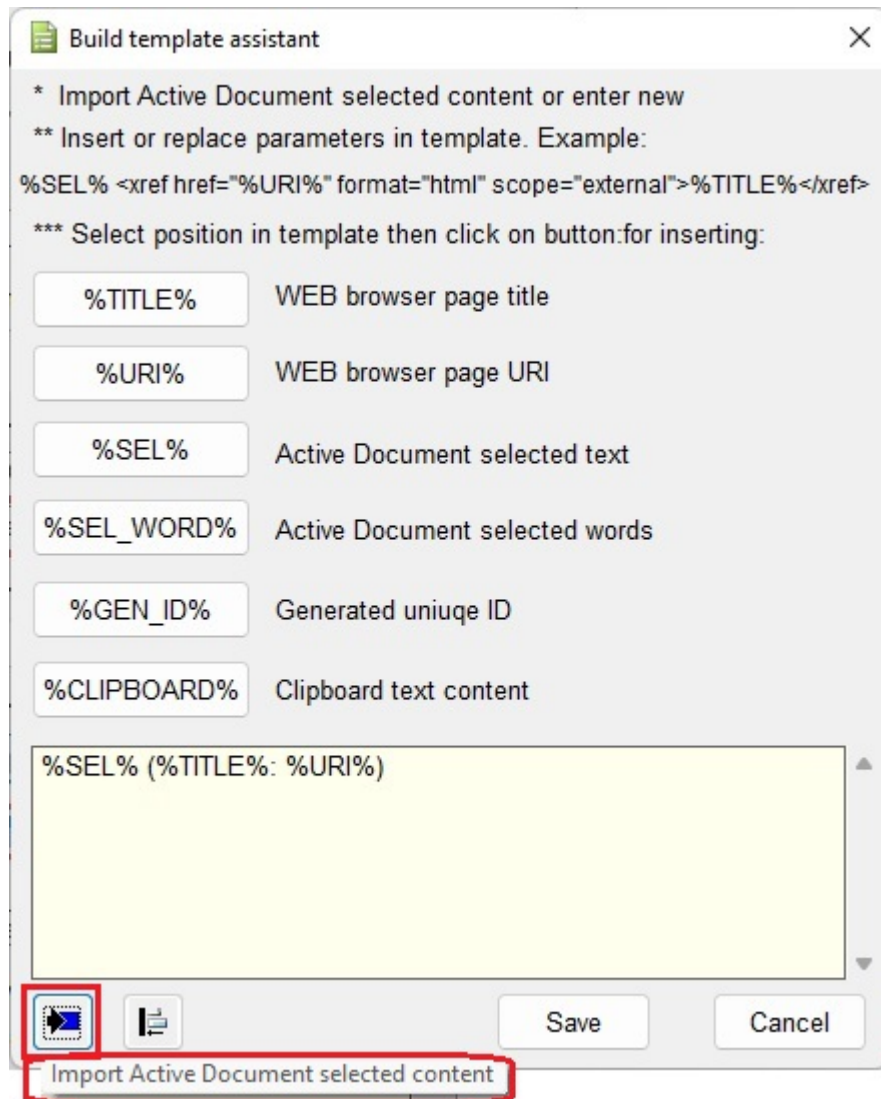
Note: Selected text from the active webpage can be formatted using the template and then copied into active documents.

Build template assistant

Clicking on the "Build template assistant" button in the Settings dialog opens the "Build template assistant" dialog.

This will allow you to build the template easily:

- You can use the "Import Active Document selected content" button to import the Active Document selected xml content as a starting point.
- You can insert/replace text in the template with template parameters by typing or clicking on parameter button.



Context Menu for Web Operations

The Web context menu offers convenient access to multiple options, facilitating the search for selected text in the active document on the web and the insertion of links into the active document.

Web Context Menu

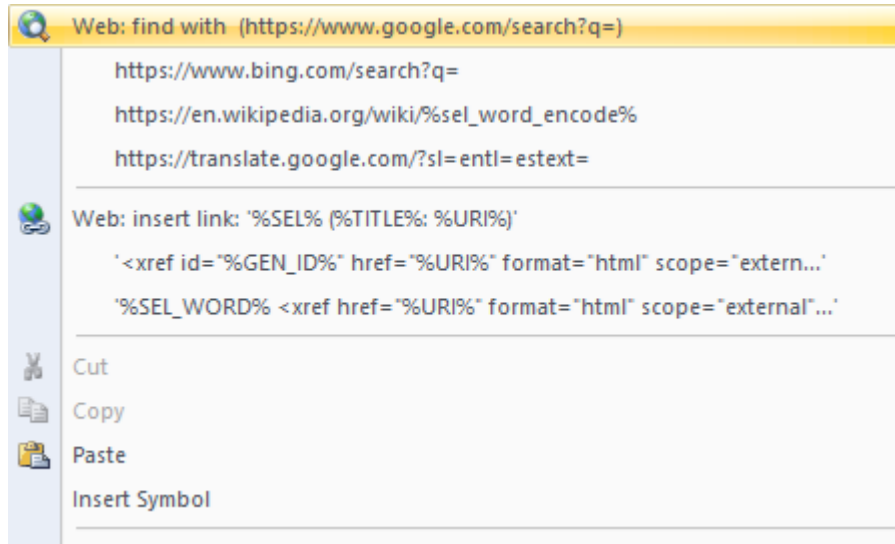
When WEB-Browser tab is open and active in Resource Manager:

Multiple web-related options can be accessed by following the steps.

The search engine option:

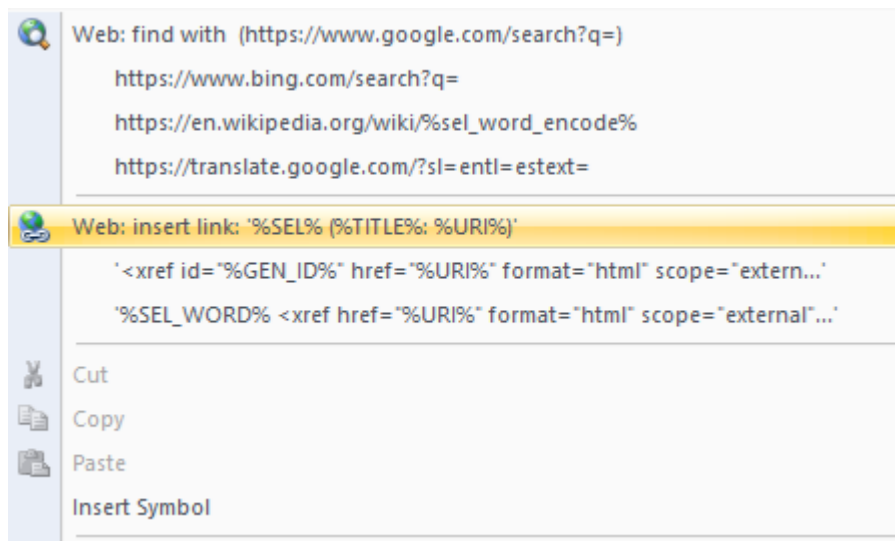
1. Select the text where you want to find the information on the web.

- Right-click to open the context menu for search engine and choose the desired option.



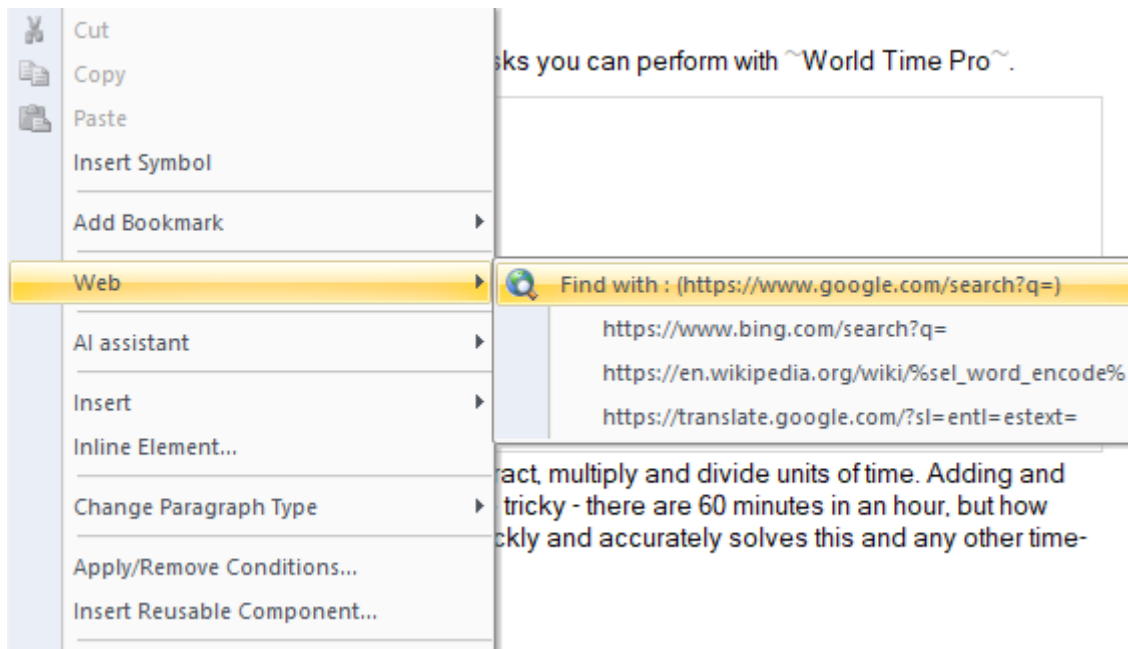
The option for inserting a link into the document:

- Locate the specific location within the active document where you intend to insert a link.
- Right-click to access the context menu for inserting a link into the active document and choose the desired option.



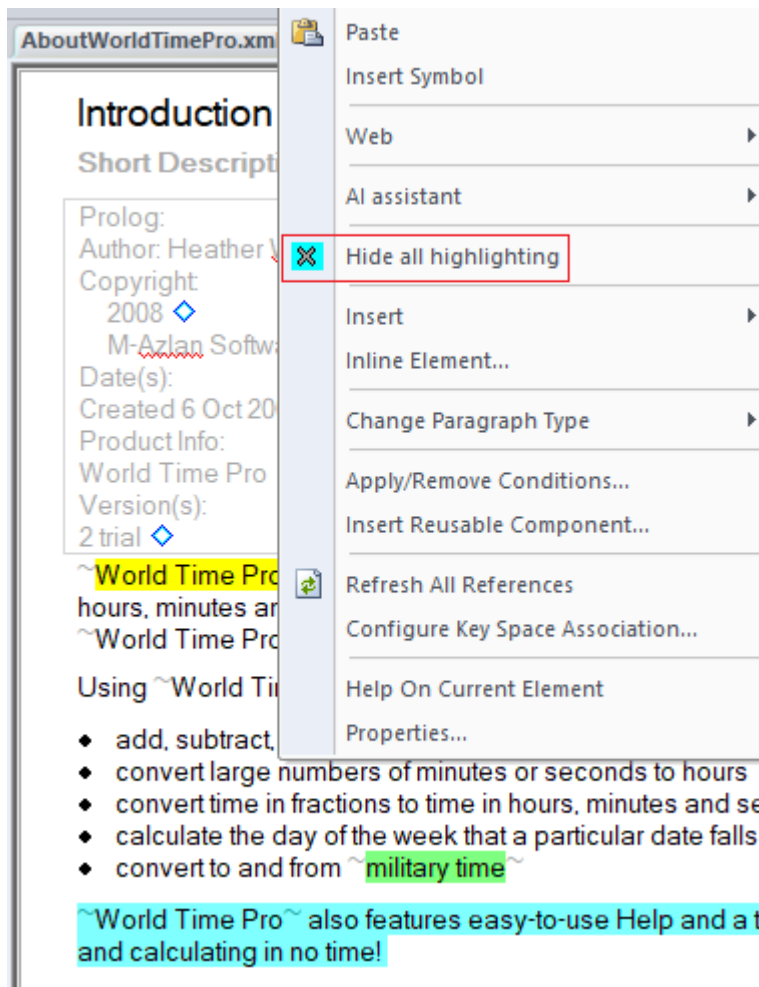
When WEB-Browser tab is not open or not active in Resource Manager:

The web-related context menu is accessible for locating the selected text in the document.



Hide all highlights:

To hide all highlights in the active document generated by Web operation, select any highlight and then use the specific context menu item provided for hiding all highlights.



- ➔ **Note:** Choosing this context menu item hides all highlights not only following a web search but also after operations involving XChatbot, XGrammarly, and Bookmark. To make hidden bookmarks visible, open the Bookmark manager and click the "Show all Active Document bookmarks" button.

Integration with ChatGPT, Bing AI, and Google Gemini

XMetaL 18.0 introduces a native access option that allows customers to directly access AI websites like ChatGPT, Bing AI, and Google Gemini within the XMetaL Resource Manager tab. This enables seamless integration of document editing with the ability to access these AI websites.

The following features enable users to access the AI website through XMetaL:

- Enhancing accessibility and efficiency by facilitating seamless switching and utilizing tools within XMetaL editor and AI input window.
- Establishing a mechanism for transferring document content and responses between XMetaL and AI.
- Converting XML markup in the editor to a compatible format that can be accepted as input by AI.
- Converting AI responses to a format that XMetaL can process as input.
- Providing customers with a dedicated tool to access AI responses, enabling them to extend, automate, and customize XMetaL according to their specific tasks.
- Introducing a mechanism for supporting and accessing AI request instruction templates, where template parameters can be selected from the active document, specific markup content, or the entire document.

Key requirements for using ChatGPT

- Internet connection.

ChatGPT is a cloud-based language model powered by AI. A stable internet connection to access the service is required.

You may need to add the <https://chat.openai.com> domain to the "Allow list" on your firewall or security settings.

- OpenAI Account.

To access the full capabilities of ChatGPT, you might need to sign up for an account on the OpenAI platform and obtain the necessary API key or credentials.

Key requirements for using Bing AI

- Internet connection.

Bing AI is a web service that enhances the Bing search engine with AI capabilities. A stable internet connection to access the service is required.

You may need to add the <https://www.bing.com> domain to the "Allow list" on the system firewall or security settings.

- Microsoft account.

Certain personalized features and benefits are available to users who sign in with their Microsoft credentials.

Key requirements for using Google Gemini

- Internet connection.

Google Gemini is a conversational generative artificial intelligence chatbot developed by Google, based initially on the LaMDA family of large language models (LLMs) and later the PaLM LLM.

A stable internet connection to access the service is required.

You may need to add the <https://gemini.google.com/> domain to the "Allow list" on the system firewall or security settings.

- Google account.

Users who log in using their Google credentials have access to specific personalized features and advantages.

Security and JSCI disclaimer of using ChatGPT, Bing AI, and Google Gemini in XMetaL Environment.

ChatGPT, Bing AI, and Google Gemini are powered by an artificial intelligence language model that generates text based on user input.

It may exhibit biases or inaccuracies due to training data limitations and limitations of the underlying technology.

Users are responsible for evaluating and verifying the information provided by ChatGPT, Bing AI, and Google Gemini web services.

JSCI does not assume liability for actions taken based on ChatGPT, Bing AI, and Google Gemini web services responses.

XMetaL Author XML editor environment provides access to the web services.

ChatGPT, Bing AI, and Google Gemini integrated in XMetaL environment don't have access to documents opened in the XMetaL editor.

JSCI takes precautions to maintain security and privacy but advises caution when sharing sensitive information with ChatGPT, Bing AI, and Google Gemini web services. JSCI is not responsible for unauthorized access, misuse, or data sharing with ChatGPT, Bing AI, and Google Gemini.

Known issues of integrations with ChatGPT, Bing AI, and Google Gemini web services.

Integration with web services relies on a stable internet connection. Due to the high volume of requests, web service responses can be delayed, user interface reactions slowed down or web service hangs. In this case, the recommendation are:

- Reload the web service.
- Close-reopen the web service integration tab in XMetaL.
- Log off from the service account then log in again.

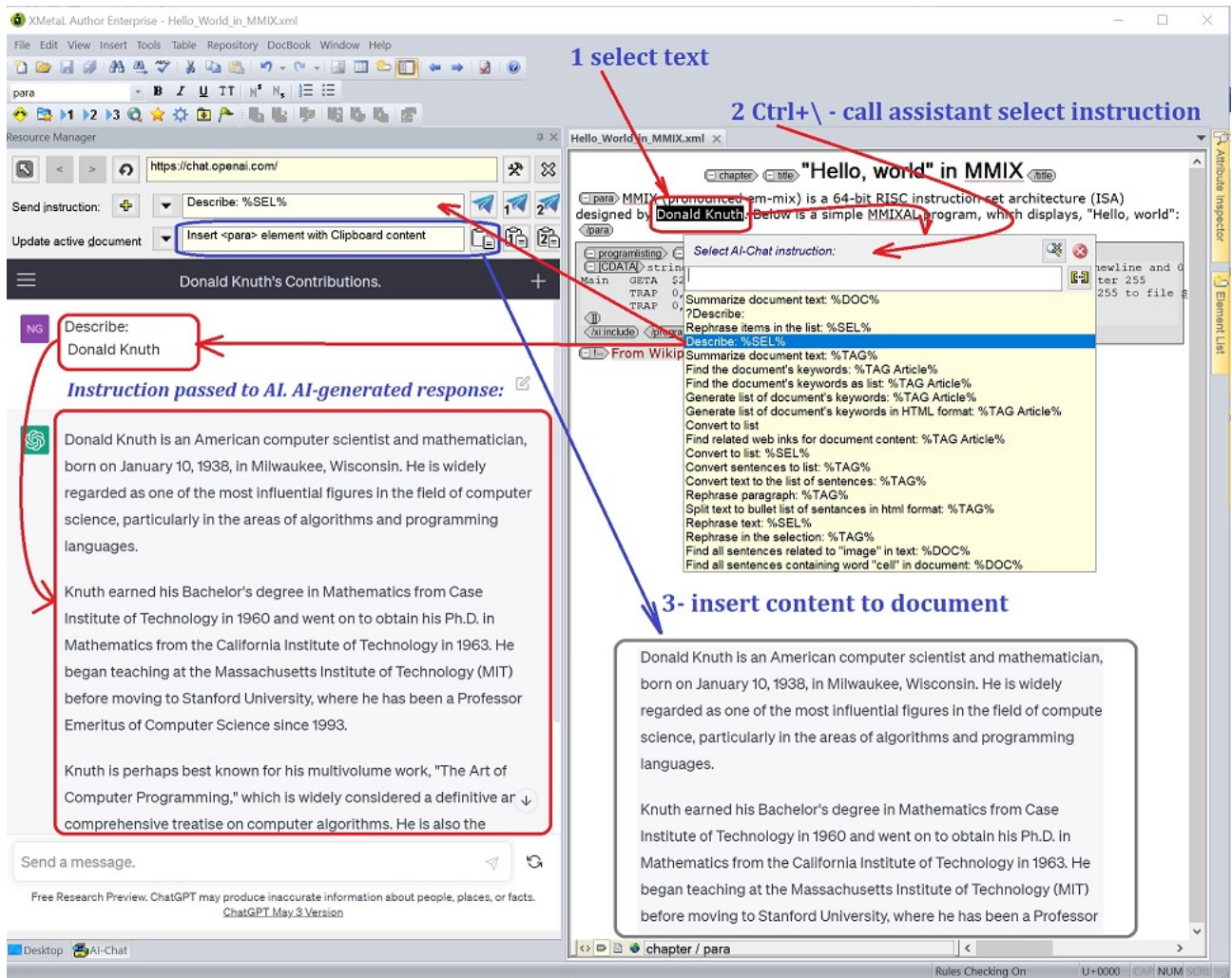
Opening ChatGPT, Bing AI, and Google Gemini in Resource Manager

To use this utility, you can utilize the XMetaL quick navigation tool for invoking the "XChatGPT: open", "XBingAI: open", or "XGoogleGemini: open" macro.

1. Ctrl+?
2. Start typing "XChat", "XBing", or "XGoogle" to show the list of commands
3. Select a macro and press "Enter"

Including a paragraph with a textual description within an active document editor window is possible using only a keyboard without switching windows or performing extensive mouse clicks.

Example:



How to do:

1. Select text in the Active Document.
2. Press "Ctrl+\ " to open "predefined instructions" list.
3. Select the instruction and press Enter key.
4. Locate a cursor in the Active Document to add the response or replace the content.
5. Press "Ctrl+]" to open "active document update command" list.
6. Select the update command.

Note:

Access to the Chatbot website may hang because of the user's invalid inputs or other limitations. The "Instructions" base web page can change URI if the response contains links and a user follows the link. Use the "Home" or "Reload" buttons in this case.

XMetaL tries to generate an instruction from the selected template, put it into the Chatbot input box, and then send it automatically. However, Chatbot's internal implementation may not always allow to do it. In this case, a user should click the "Send message" button at the right of the Chatbot input text box.

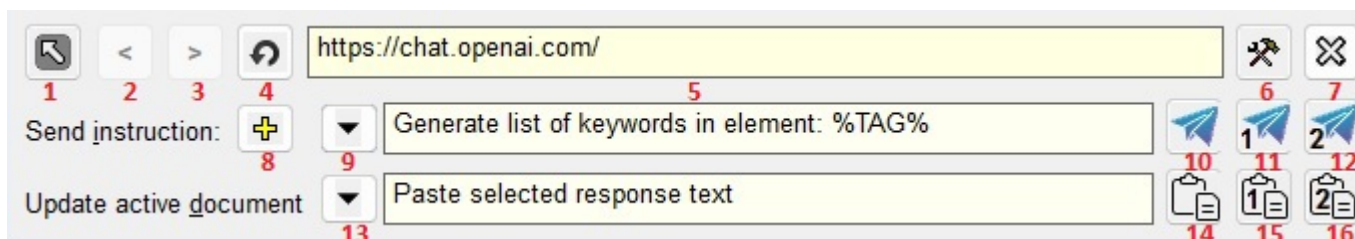
When Grammarly is active, Grammarly analyzes the Chatbot input text box and sometimes influences sending action. In this case, a user should click the "Send message" button at the right of the Chatbot input text box.

Toolbar

The integration's toolbar buttons are displayed on the XChatGPT, XBingAI, XGoogleGemini tab in the Resource Manager.

Integration's toolbar buttons

The toolbar buttons of this utility provide you with the ability to perform multiple actions.



# on image	Shortcut key	Description
1	Ctrl+H	Home Page
2		Previous
3		Next
4		Reload
5		AI Website URL
6		Settings
7		Close Tab
8	Ctrl+Insert	Add instruction to a predefined list
9	Ctrl+\	Select predefined instructions <ul style="list-style-type: none"> After choosing an instruction from the predefined instructions list, it will be executed automatically. If you hold down the Ctrl+Shift key while selecting an instruction, it will not be executed automatically. In order to run the instruction, you will need to click on the "Run instruction" button. When the Ctrl key is pressed during the selection of an instruction, template parameters are resolved and the instruction is subsequently copied to the Chatbot input window. After making modifications to the content, you can proceed by clicking on the "Send message" button in the Chatbot input window. This action enables you to send the modified instruction.
10		Run instruction
11		Favorite instruction 1
12		Favorite instruction 2
13	Ctrl+]]	Select the active document update command
14		Update document <ul style="list-style-type: none"> XMetaL attempts to find the appropriate position in the document for inserting the content. If the Ctrl key is pressed, XMetaL will try to replace the active document's content.

# on image	Shortcut key	Description
		<ul style="list-style-type: none"> If the template begins with a markup tag, it will attempt to replace the container element where the cursor is located. If it doesn't start with a markup tag, it will replace the container element's content.
15		Favorite update command 1
16		Favorite update command 2

- All buttons display tooltips when the toolbar is activated.

Available options for sending instructions to ChatGPT, Bing AI, and Google Gemini:

- Input text into the Chatbot input window by typing or copying and pasting.
- Select a predefined instruction from the list.
- Predefine an instruction or question with a placeholder for a parameter in the "Send instruction" edit box.
- Utilize the "Run instruction" button to send the same instruction with different selected content in the Active Document.
- Make the current instruction your favorite by pressing the Ctrl key and clicking the "1" or "2" button. If the selection is in the Chatbot, hovering over the button will display the favorite instruction text.

When the active document is in focus, pressing the **Ctrl+I** key will open the list of predefined instructions. Another method to access the list of predefined instructions is by selecting the "XChatGpt: select predefined instruction" macro using the **Ctrl+?** key and then pressing the Enter key. After using the arrow keys to select an instruction, pressing the Enter key will run the instruction automatically without needing to use the mouse.

Note:

- When selecting an instruction from the list, you can use the following shortcuts:
 - Find via Ctrl+F
 - Sort via Ctrl+R
 - Delete via Del
 - Delete all via Ctrl+Del
 - Reorder via Shift+Up/Down arrows
 - Copy template to "send instruction" text box without automatic sending via Shift+Enter
- The process of assigning an instruction to the "Run instruction" button and the "Favorite instruction 1/2" button is separate from the list of instructions. Modifying or deleting existing instructions from the list does not have any impact on the instruction assigned to these buttons.
- Executing the instruction using the "Favorite instruction 1/2" button does not alter the content of the "Send instruction" box.
- After selecting an instruction from the list and triggering its automatic sending, the majority of instructions will display their selected name in the "Send instruction" editable box. However, there are certain instructions where the selected name may not be displayed.

Available options for pasting responses from ChatGPT, Bing AI, and Google Gemini:

- Copy the selected text in the response to the clipboard and then paste it into the document.
- Select the update command from the list and press "Update document" button.
- Make the current update command your favorite by pressing the Ctrl key and clicking the "1" or "2" button. If the selection is in the Chatbot, hovering over the button will display the favorite update command text.

When the active document is in focus, pressing the **Ctrl+] key** will open the list of pasting templates. Another method to access the list of pasting templates is by selecting the "XChatGpt: select response..." macro using the **Ctrl+? key** and then pressing the Enter key. By selecting a template using the arrow keys, pressing the Enter key will automatically update the document without requiring the use of a mouse.

Note:

- When there is no selection in the response, pasting a template with %SEL% or %EL_SEL% will update the document with the content of the last response.
- The ability to assign templates to the "Update document" button and the "Favorite update command 1/2" button is separate from the list of available templates for pasting. The available templates can be modified or deleted as needed. However, once templates are assigned to these buttons, they remain permanent.
- When the response consists of multiple paragraphs separated by newlines, XMetaL applies the template to each paragraph.
- The quality of the Chatbot's answer depends on the wording of the instruction text. Modifying the "Send instruction:" template text can help improve the answers. You can press the "+" button to add a new instruction to the predefined instructions list.

Settings

Settings dialog

In the "Settings" dialog, you have several options available:

Predefined instructions:

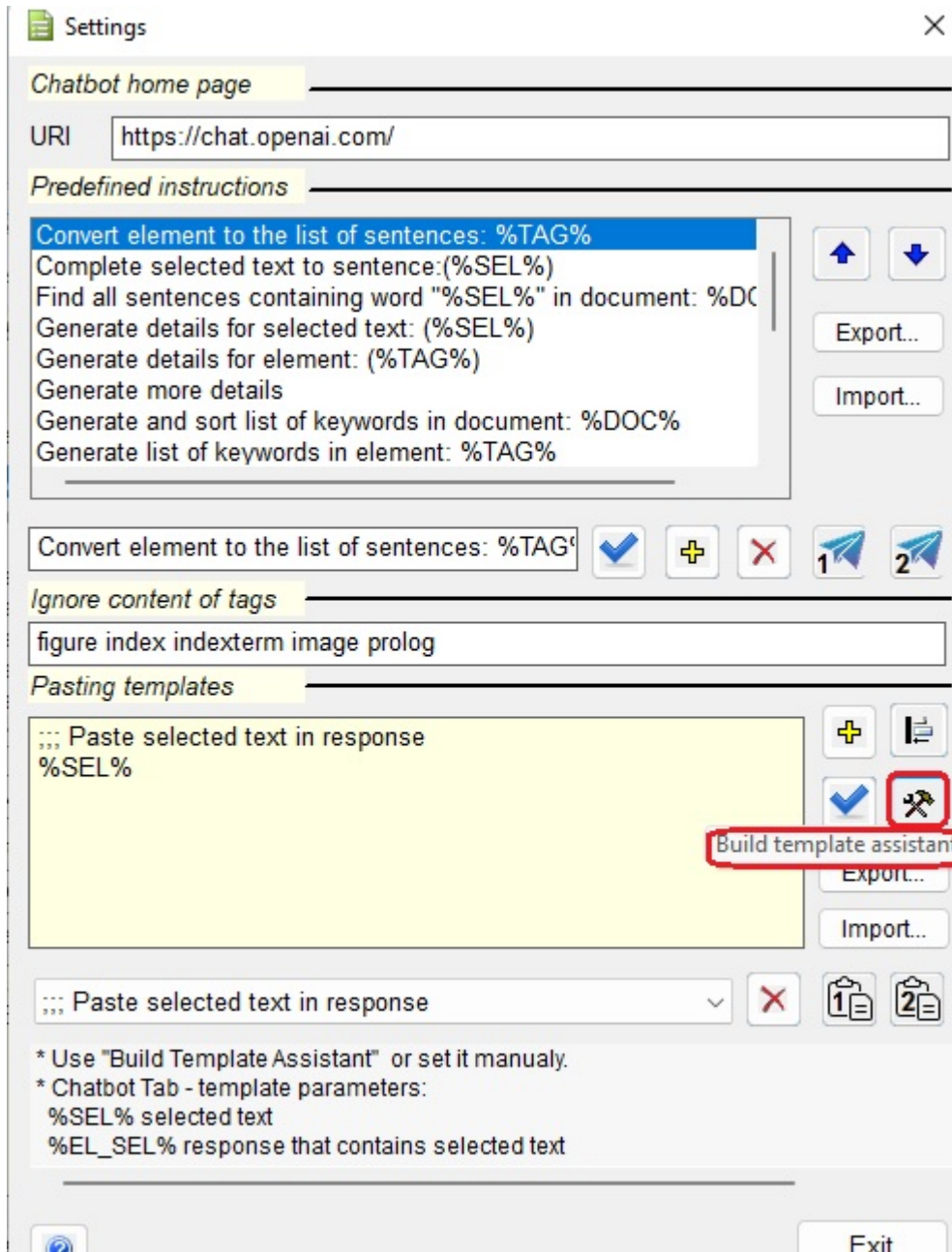
- Move the instruction up or down in the list of predefined instructions.
- Export instructions to or import instructions from the text file.
- Edit the predefined instruction using the edit box.
- Replace, add, or remove the selected instruction from the list of predefined instructions. These changes will be reflected in the "Send instruction:" drop-down list in the XChatGPT/XBingAI/XGoogleGemini tab of the Resource Manager.
- Set the favorite predefined instruction to the "Favorite instruction 1/2" button.

Ignore content of tags:

- List the ignored elements when sending an instruction to ChatGPT/Bing AI/Google Gemini.

Pasting templates:

- Edit the selected pasting template using the edit box.
- Align the template content in the edit box.
- Replace, add, or remove the selected pasting template from the drop-down list of pasting templates. These changes will be reflected in the "Update active document" drop-down list in the XChatGPT/XBingAI/XGoogleGemini tab of the Resource Manager.
- Export pasting templates to or import them from the text file.
- Set the favorite pasting template to the "Favorite update command 1/2" button.
- Open the "Build template assistant" dialog.



Other features in the Settings dialog include:

- The "Predefined instructions" edit box can be used to define an instruction or question with a placeholder for a parameter after ":". XMetaL automatically inserts a "new line" character after the first ":" in the predefined instruction templates.

Available instruction parameters:

- %SEL%: Active document selected text
- %TAG%:Text content of the document node where the cursor is
- %TAG [parent tag name] [parent tag name] ...%: Extending the selection to the first parent element with the specified tag names. For example, "%TAG section topic chapter%". The selection will be extended to the first parent element, "section", "topic", or "chapter".
- %DOC%: Whole document

- %TAGX%, %DOCX%: Sending Active Document content including XML tags. You can instruct Chatbot to preserve "XML tags names" in response. For example, it allows one to rephrase the part or whole document and then paste it back.
- %CLIPBOARD%: Clipboard text content
- The "Pasting templates" edit box can be used to define a pasting template, or you can use the "Build template assistant" button. Pasting templates are markup content with parameters.

Available pasting template parameters:

- %EL_SEL%: Whole response that includes the selected portion
- %EL_LAST%: The last response
- %SEL%: Selected text in the response
- <%TAG%>...</%TAG%>: Selection container node. XMetaL replaces it with a tag name of the Active Document element that contains the selection.
- %GEN_ID%: Generate unique ID
- %CLIPBOARD%: Clipboard text content
- <%>...</%>: Template block Start/Stop boundary

Templates examples:

- <%TAG%>%EL_SEL%</%TAG%>
- <ItemizedList><%><ListItem Id="li_%GEN_ID%"><Para>%SEL%</Para></ListItem></%></ItemizedList>

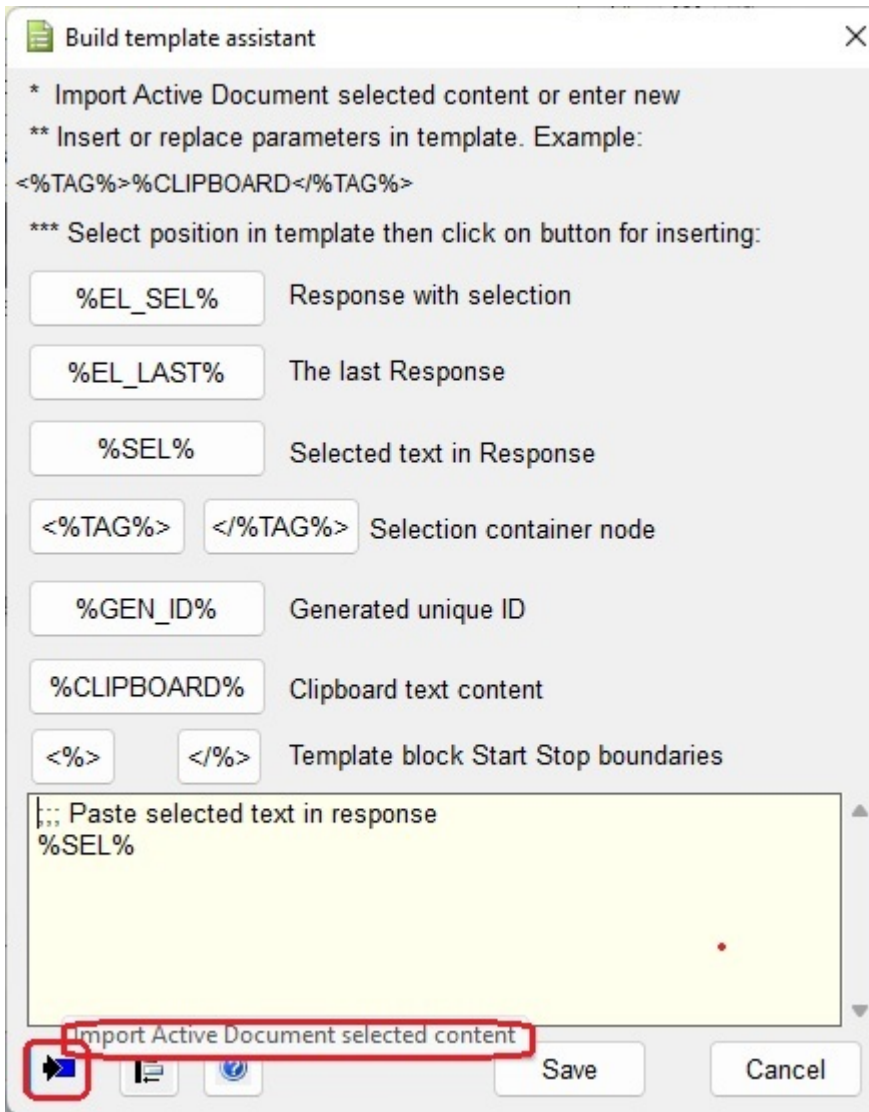
Note:

- If the selected text is in the Chatbot response window, sending an instruction with %SEL% will prioritize this text over the selection in the active document or browser window.
- Modifying the instruction or update command assigned to the "favorite instruction 1/2" button or the "favorite update command 1/2" button in the Settings dialog will result in a corresponding change in the instruction or command displayed on the main XChatGPT page. However, the button's tooltip on the main XChatGPT page will not update unless you restart XChatGPT.

Build template assistant

The "Build template assistant" button in the Settings dialog opens the "Build template assistant" dialog. This allows you to build templates quickly:

- You can import the selected XML content from the Active Document as a starting point by utilizing the "Import Active Document selected content" button.
- You can insert or replace text in the template using template parameters. This can be done by either typing or clicking on the parameter button.



Context Menu for AI Assistant

The AI assistant context menu provides the quick access to the various options of finding the instruction and updating active document.

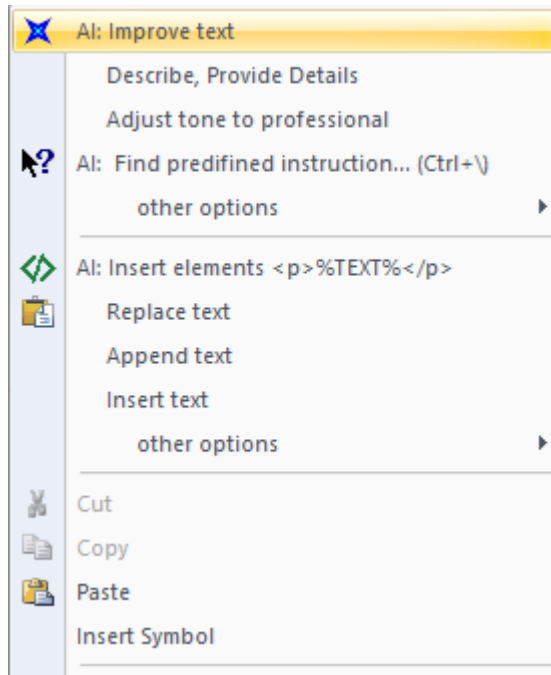
AI Context Menu

When Chatbot tab is open and active in Resource Manager:

You have multiple options for AI-related instructions.

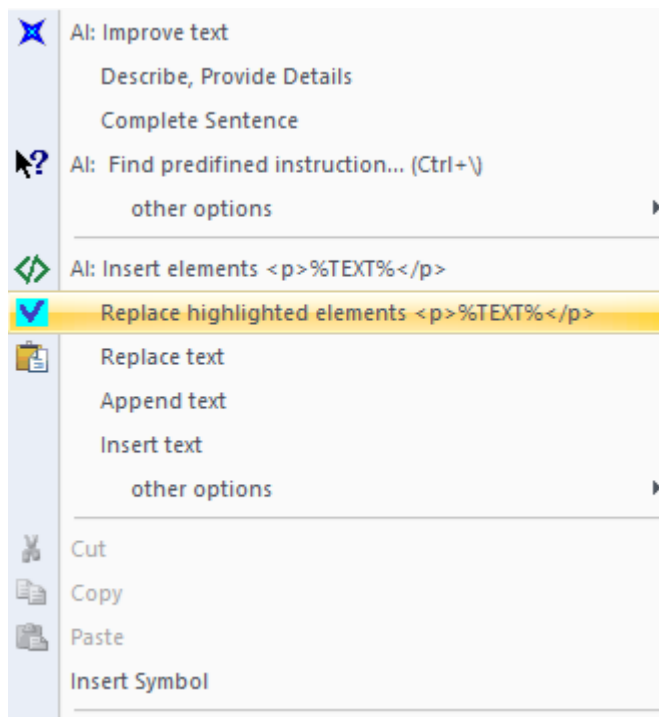
The instruction to send to XChatbot:

1. Identify the section where you aim to refine or enhance.
2. Right-click to reveal the context menu for sending instructions to the XChatbot and choose the desired instruction. .



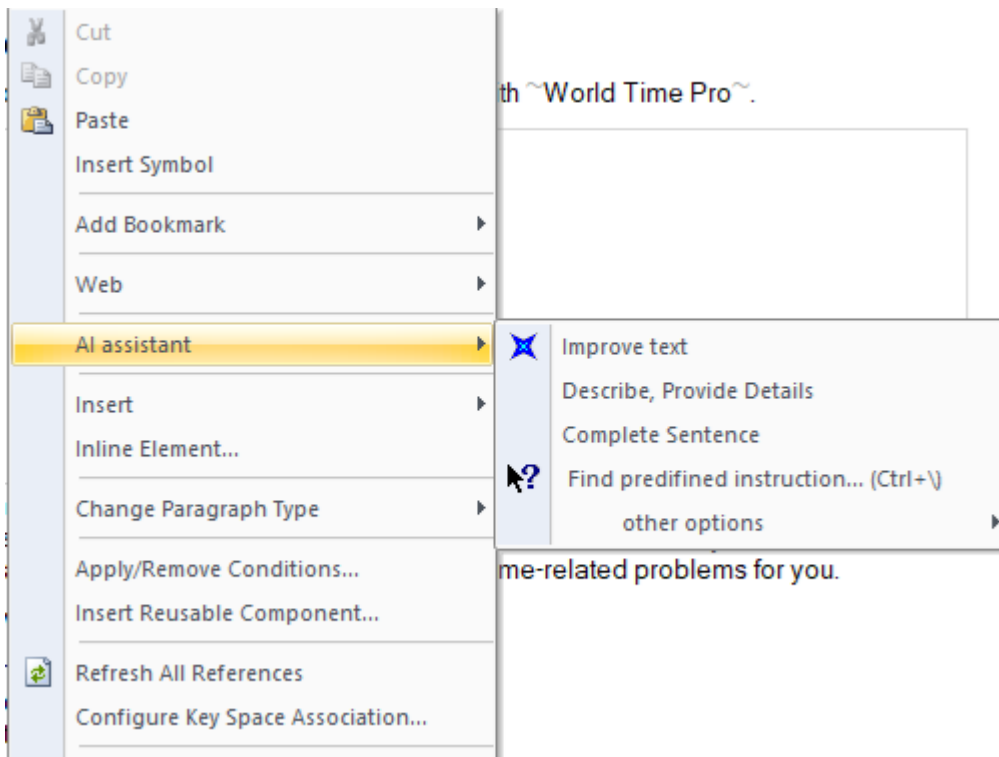
The instruction to update the document:

1. Locate the specific location within the active document where you intend to perform the update.
2. Right-click to access the context menu for updating the document from the XChatbot response and choose the desired instruction.



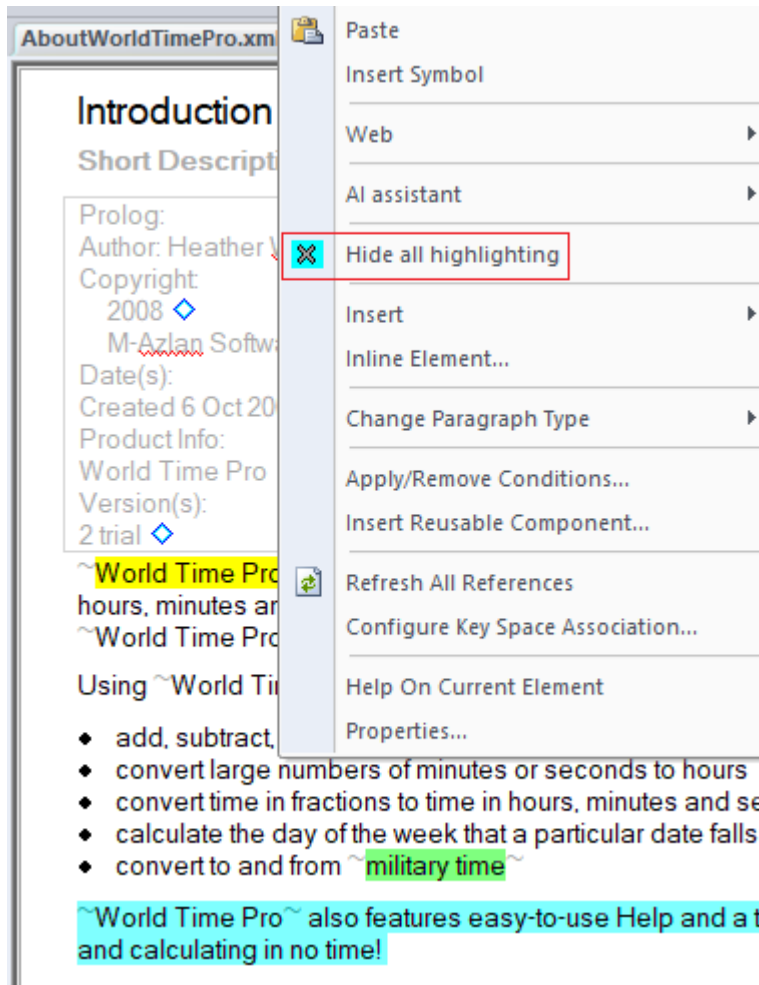
When Chatbot tab is open but not active in Resource Manager:


The "AI assistant" context menu is available for sending to the Chatbot.



Hide all highlights:

To hide all highlights in the active document generated by XChatbot, select any highlight and then use the specific context menu item provided for hiding all highlights.



-  **Note:** When this context menu item is selected, it hides not only AI-related highlights but also any other highlights from XGrammarly, Web, and Bookmark. To make hidden bookmarks visible, open the Bookmark manager and click the "Show all Active Document bookmarks" button.

Integration with Grammarly

XMetaL 18.0 brings a new feature that allows customers to access Grammarly directly from the XMetaL Resource Manager tab. This seamless integration provides the convenience of editing documents while utilizing Grammarly's features.

The Grammarly platform is an advanced web-based writing assistant designed to proofread and edit documents. It conducts thorough checks for spelling, grammar, and punctuation errors while offering rephrasing suggestions and enhancing vocabulary usage. The latest extension, GrammarlyGO, is a generative AI tool that facilitates rapid composition, rewriting, and generation of new ideas, along with offering personalized and relevant suggestions.

The Grammarly web assistant is integrated into XMetaL Resource Manager, offering swift access to both the XMetaL editor and Grammarly tools. This integration facilitates smooth data exchange between the two platforms and encompasses the following features:

- The integrated features between Grammarly and XMetaL Resource Manager offer a convenient side-by-side layout for editing documents.
- Users can easily switch between Grammarly and Active Document views.
- The supported text processing scopes in Grammarly include:
 - processing the active document.
 - processing a selected fragment from the active document.
 - writing new text content.
- Through XMetaL's quick navigation commands manager (Ctrl+?), users can pass Grammarly commands and save processed text from the active document environment.
- The document and document fragment post-processing commands allow users to:
 - replace the original content of the active document.
 - replace the corresponding XML element in the active document with the selected element in the spell-checker view.
- Various new text or new text fragment processing commands are available such as:
 - inserting text into a new element.
 - appending text to the selected element.
 - replacing selected element content with new text.
 - pasting text at a designated location.
- Additional tools allow:
 - showing or hiding XML markup tags.
 - synchronizing selections in the active document and spell-checker view.

Key requirements for using Grammarly

- Internet Connection

Grammarly operates as an online platform, so a stable internet connection is essential for accessing its features and functionalities.

You may need to add Grammarly *.grammarly.com domain to the "Allow list" on your firewall or security settings.

- Grammarly Desktop Edition for Windows must be installed on your system

This will allow you to access Grammarly writing suggestions directly in a wide array of native applications including XMetaL and websites.

Download link: <https://www.grammarly.com/desktop/windows>

Follow installation instructions and "Grammarly for Windows and Grammarly for Mac user guide" from website.

- Grammarly Account

To utilize Grammarly's advanced features and personalized settings, users must create a Grammarly account. This account will also allow you to sync your writing across different devices.

Security and JSCI disclaimer of using Grammarly in XMetaL Environment.

Users are responsible for evaluating and verifying the information the Grammarly web service provides.

JSCI does not assume liability for actions taken based on Grammarly web service responses.

XMetaL Author XML editor environment provides access to the web services.

Grammarly, integrated into the XMetaL environment, doesn't have access to documents opened in the XMetaL editor.

Only data the user explicitly puts into Resources Manager Spell-checker window are available for Grammarly.

JSCI takes precautions to maintain security and privacy but advises caution when sharing sensitive information with Grammarly. JSCI is not responsible for unauthorized access, misuse, or data sharing with Grammarly.

Known issues

Integration with web services relies on a stable internet connection. Due to the high volume of requests, web service responses can be delayed, user interface reactions slowed down or web service hangs. In this case, the recommendation are:

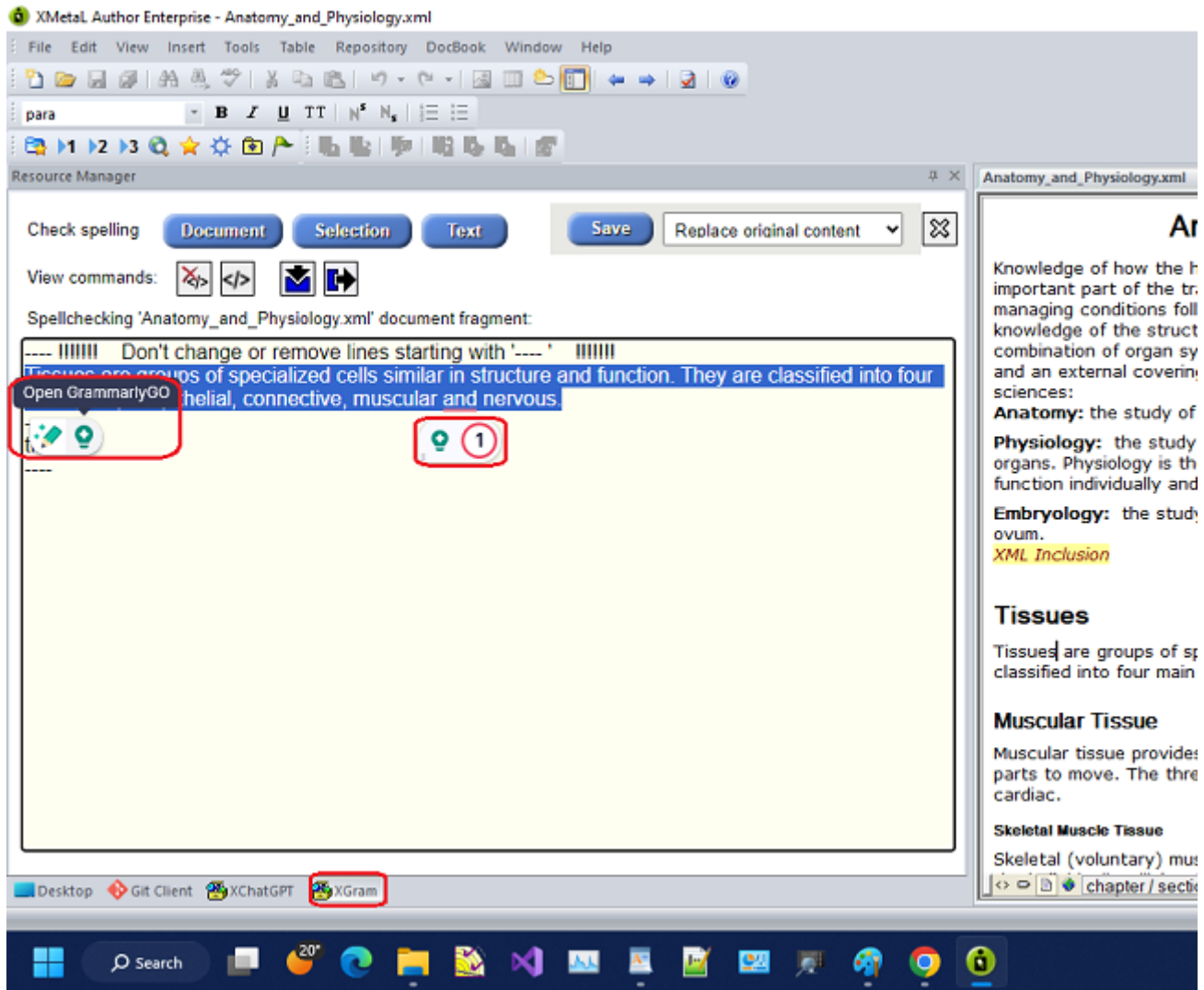
- Close-reopen the Grammarly integration tab in XMetaL.
- Log off from the Grammarly account then log in again.
- In some cases, the Grammarly Desktop application should be shut down and then restarted again. Some of symptoms that require this action are
 - Grammarly doesn't replace spell checker content in Resource Manager with suggestions text.
 - Grammarly suggestions window doesn't appear when the mouse hovers over Grammarly highlighted word.

Opening XGrammarly in Resource Manager

To utilize this utility, use the XMetaL quick navigation tool to invoke the "XGrammarly: open" macro.

1. Ctrl+?
2. Start typing "XGram" to show the list of commands
3. Select a macro and press "Enter"

The easiest way to activate XGrammarly is through the "XGrammarly" context menu.



Note:

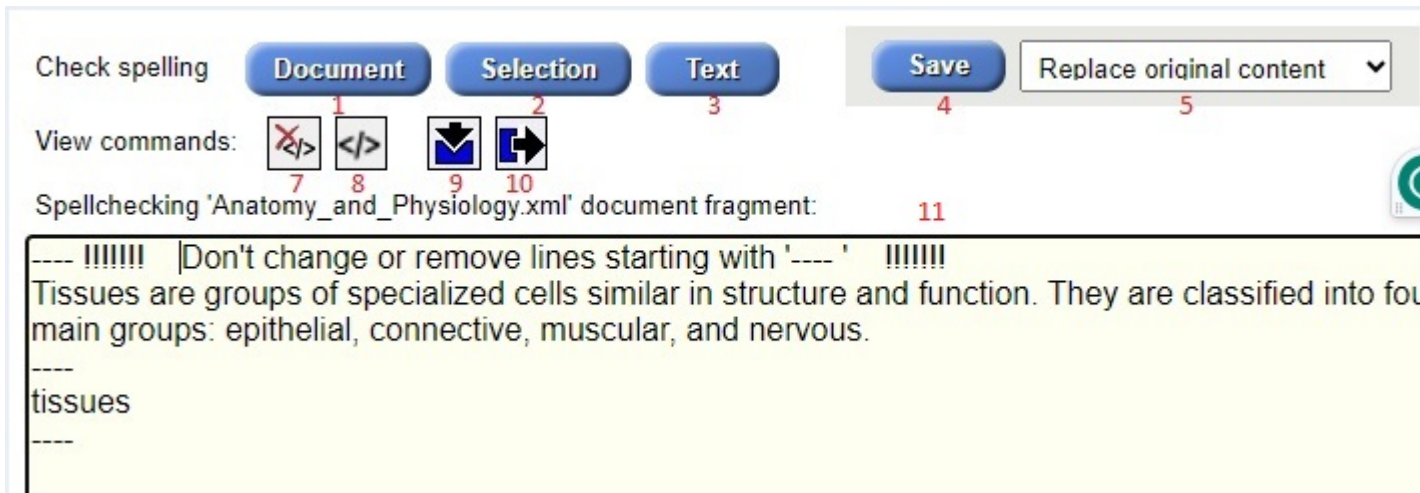
- Once the "Check spelling" button is clicked, Grammarly becomes visible. Additionally, when text is selected in the spell-checker, GrammarlyGO also appears.
- The content produced by GrammarlyGO can be inserted or replaced at the selection point in the spell-checker by using the "Insert" button in the GrammarlyGO response window. However, in some cases, it may get inserted or replaced at the selection point in the active document with every second insertion. To address this, you can use the Copy button in the GrammarlyGO response window and paste the content into the spell-checker window as a workaround.

Toolbar

The toolbar buttons of the utility are displayed on the XGram tab within the Resource Manager.

Grammarly Integration's toolbar buttons

With the toolbar buttons in this utility, you have the versatility to execute numerous actions.



# on image	Description
1	Check spelling, grammar, and clarity of active document content
2	Check spelling, grammar, and clarity of active document selected content
3	Enter new text
4	Copy spell-checked content to the active document
5	Option for Save changes
6	Close Tab
7	Hide XML tags in the spell-checker window
8	Show XML tags in the spell-checker window
9	Show active document selected text in the spell-checker window
10	Show spell-checker selected text in the active document
11	Spell-checker window

Note:

- The "Option for Save changes" (#5) offers the ability to update either the entire content initially provided for spell-checking or only the element content corresponding to the changed text in the spell-checker window.
- The functionality of "Show in the spell-checker window" (#9) and "Show in the active document" (#10) is operational when the content in both views is identical. In cases where the contents become unsynchronized due to document changes or changes in the spell checker view, the commands attempt to locate the closest matching words, if available.
- Text entry mode (#3) retains a history of previously input information.

Context Menu for XGrammarly

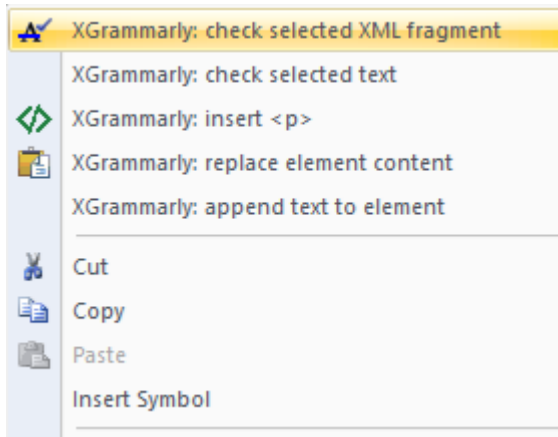
The XGrammarly context menu provides quick access to various options for spell checking, grammar checking, clarification, and updating the active document.

XGrammarly Context Menu**When XGram tab is open and active in Resource Manager:**

Multiple XGrammarly-related options are available:

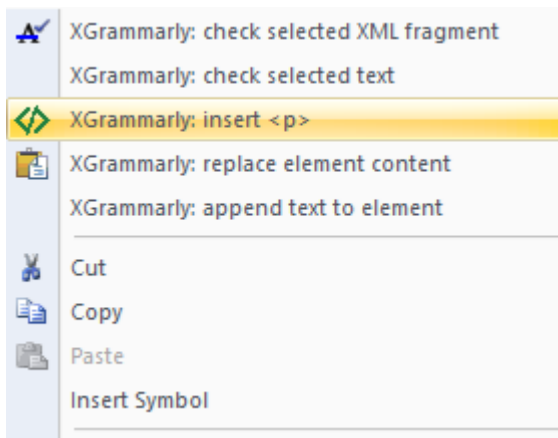
The checking option:

1. Identify the section where you aim to perform spell and grammar checking or clarifying.
2. Right-click to reveal the context menu for checking options and choose the desired option.



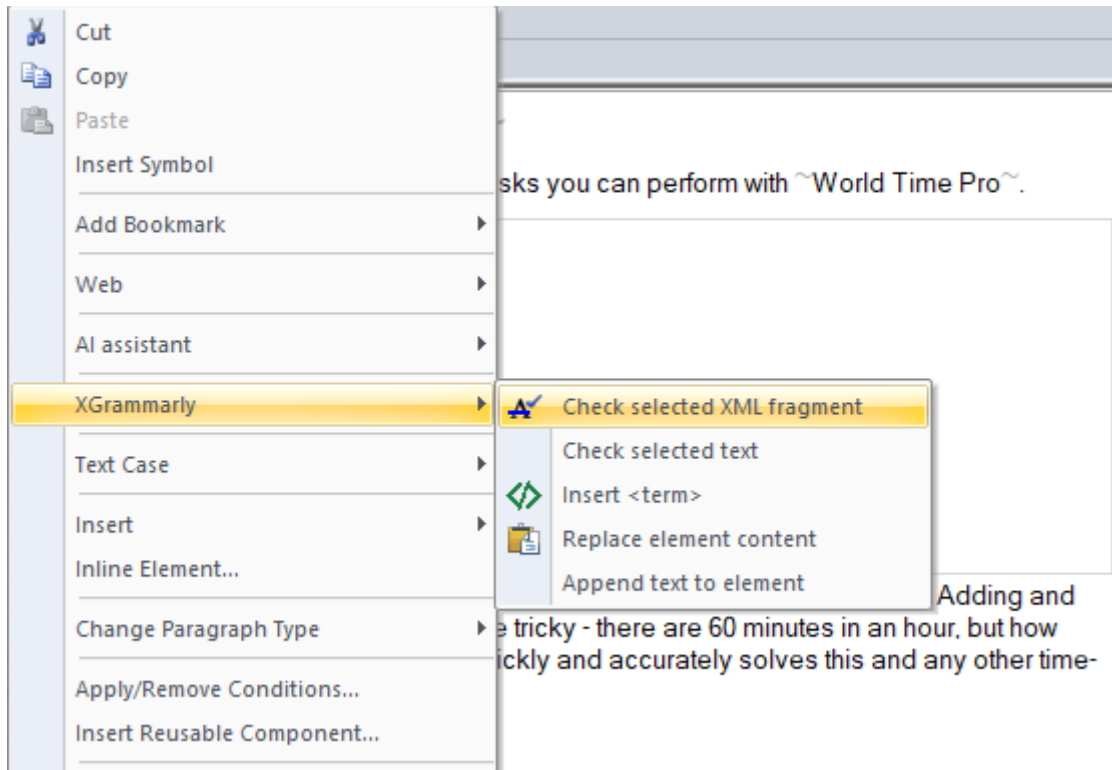
The instruction to update the document:

1. Locate the specific location within the active document where you intend to perform the update.
2. Right-click to access the context menu for updating the document from the XGrammarly and choose the desired option.

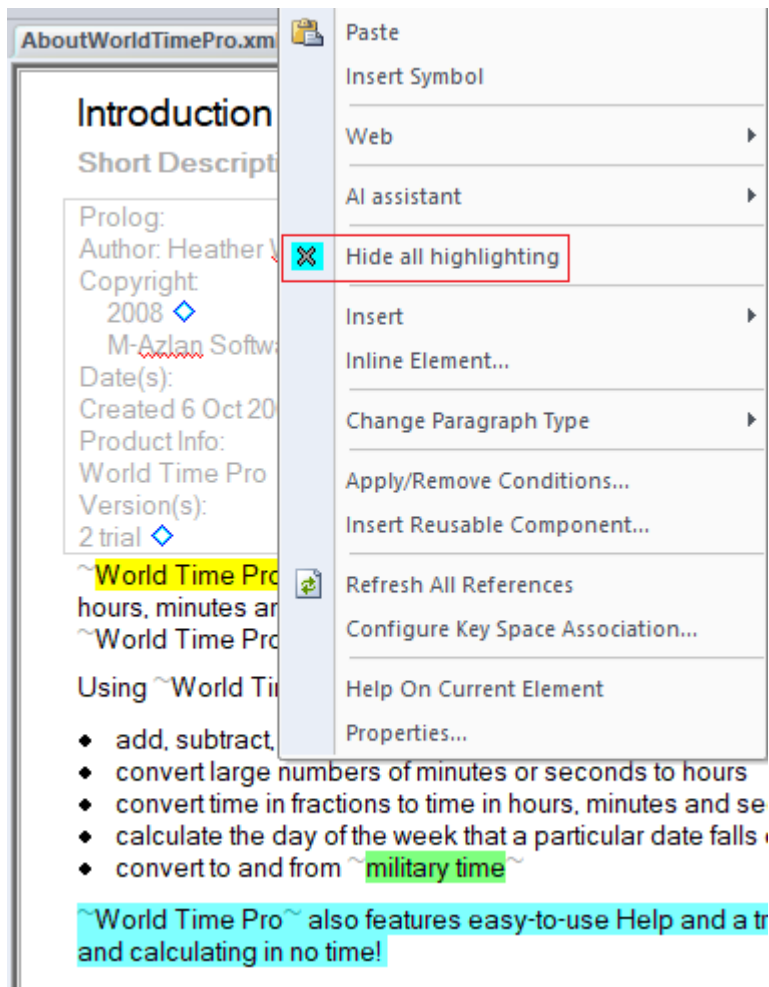



When XGram tab is open but not active in Resource Manager:

The XGrammarly related context menu is available for spell and grammar checking, clarifying sections in the active document, and updating the document.

**Hide all highlights:**

To hide all highlights in the active document generated by XGrammarly, select any highlight and then use the specific context menu item provided for hiding all highlights.



-  **Note:** Selecting this context menu item hides highlights not only from XGrammarly but also from XChatbot, the Web, and Bookmark. To make hidden bookmarks visible, open the Bookmark manager and click the "Show all Active Document bookmarks" button.

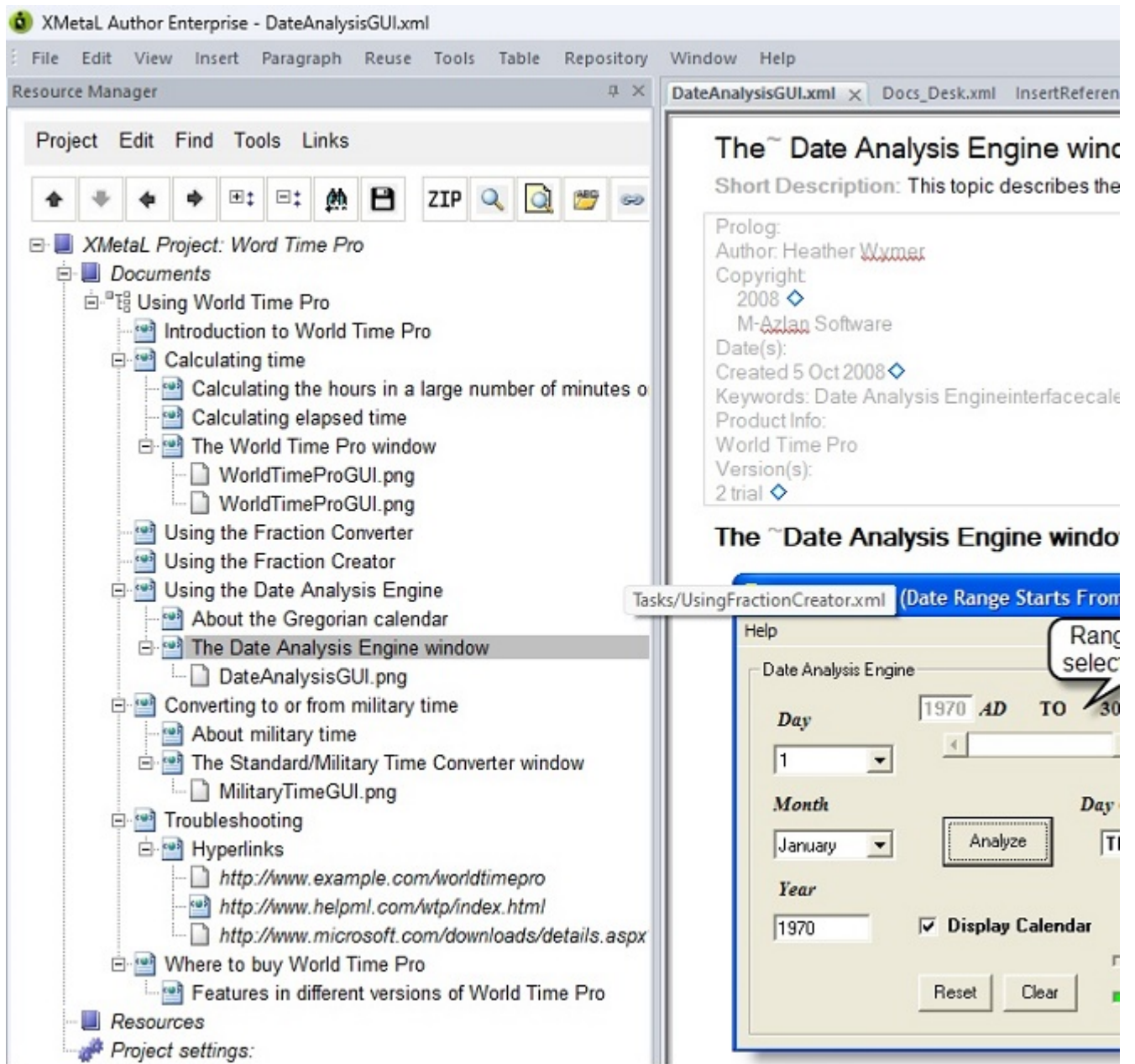
XMetaL Project

In modern technical documentation projects, which may include thousands of documents and images, swift access to content is critical for technical writers. Effective cross-referencing between topics is essential for producing high-quality documentation, though it can be complex and time-consuming. Facilitating this process is a key requirement.

The XMetaL Project is a framework within XMetaL Author designed to structure and manage content in extensive documentation projects. It establishes the structure and relationships among various documents and resources, facilitating rapid access and enabling bulk processing. This tool enhances content management efficiency and accuracy in documentation projects.

Features:

- **Hierarchical Organization:** Defines the hierarchical structure of content, including parent-child relationships between documents, resources, and virtual folders.
- **Navigation:** Facilitates content navigation by specifying the order and relationships of documents.
- **Quick Access to Documents and Resources:** Enables users to locate elements by title, file name, keywords, or content, and open them directly within the XMetaL environment or a specified application.
- **Cross-File Operations:** Supports tasks such as text or markup replacement, archiving, spell checking, inserting cross-references, validating links, and creating documentation templates. These operations can be performed on selected XMetaL Project items, open documents, or file system folders.
- **Import of Existing Documentation:** Enables bulk import of documents from open XMetaL documents, maps, folder contents, and results from XMetaL cross-file searches, including referenced documents and resources.
- **Adding New Content:** Allows for the rapid bulk addition of new documents using XMetaL document templates.
- **Reorganizing Content:** Facilitates copying and moving project elements across the file system while preserving references throughout the project scope.



XMetaL Project main menus

The XMetaL Project offers various features accessible through the following main menus:

Table 53: Project Menu

To do this	Follow these steps
Create a new project	Click the Project menu and then select New...
Open the project in the Resource Manager	Click the Project menu and then select Open...
Save or Save As the project	Click the Project menu and then select Save or Save_As...
Configure the XMetaL Project parameters	Click the Project menu and then select Settings...
Display the project's location in Explorer	Click the Project menu and then select Show in explorer

To do this	Follow these steps
Exit the project	Click the Project menu and then select Exit

Table 54: Edit Menu

To do this	Follow these steps
Select the item in the project that synchronizes with the Active Document	Click the Edit menu and then select Synchronize selection...
Insert a folder into the project	Click the Edit menu and then select Insert folder...
Insert an Active Document into the project	Click the Edit menu and then select Insert reference to Active Document...
Insert a reference to: <ul style="list-style-type: none"> • Open documents and maps • Folder content • Existing files • Results tab content • New XML documents 	Click the Edit menu and then select Insert reference to...
Update project titles	Click the Edit menu and then select Update titles...
Rename the selected item in the project	Click the Edit menu and then select Rename
Delete the selected item	Click the Edit menu and then select Delete
Delete all items in the project	Click the Edit menu and then select Delete All
Transform the selected node in the project to a new XMetaL project	Click the Edit menu and then select Transform selected node to new project...
Choose the appropriate application to open the selected item	Click the Edit menu and then select Open with...
Open windows explorer to locate the selected item in the project	Click the Edit menu and then select Show in explorer
Change the hierarchy in the project by selecting: <ul style="list-style-type: none"> • Move item Up/Down • Promote item • Promote item and siblings • Demote item • Demote item and siblings • Collapse • Expand 	Click the Edit menu and then select Hierarchy

Table 55: Find Menu

To do this	Follow these steps
Find and open the documents in the project that contain the specified keywords	Click the Find menu and then select Document...
Find the words	Click the Find menu and then select Content...

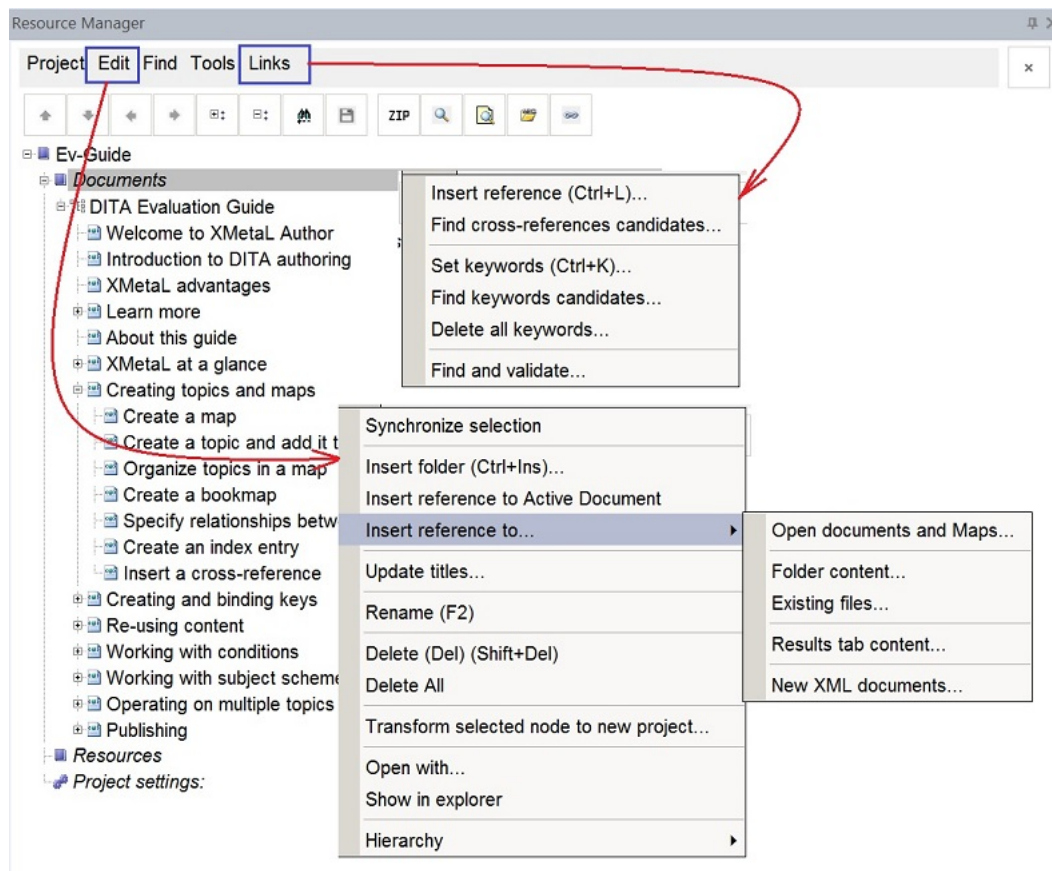
Table 56: Tools Menu

To do this	Follow these steps
Archive the project or documents	Click the Tools menu and then select Archive...
Perform a spell check on all documents in the project	Click the Tools menu and then select Spell check documents
Generate a resources map of the project, with tree nodes representing the hierarchical folder structure of the documents within the Windows file system	Click the Tools menu and then select Generate resources map...
Relocate the resource by copying or moving it within the resources map	Open the resources map, click the Tools menu and then select Relocate resources...
Transfer the selected resource in the resources map to the 'New Document' template by copying or moving it under the XMetaL templates folder	Open the resources map, click the Tools menu and then select Transfer to 'New Document' template...

Table 57: Links Menu

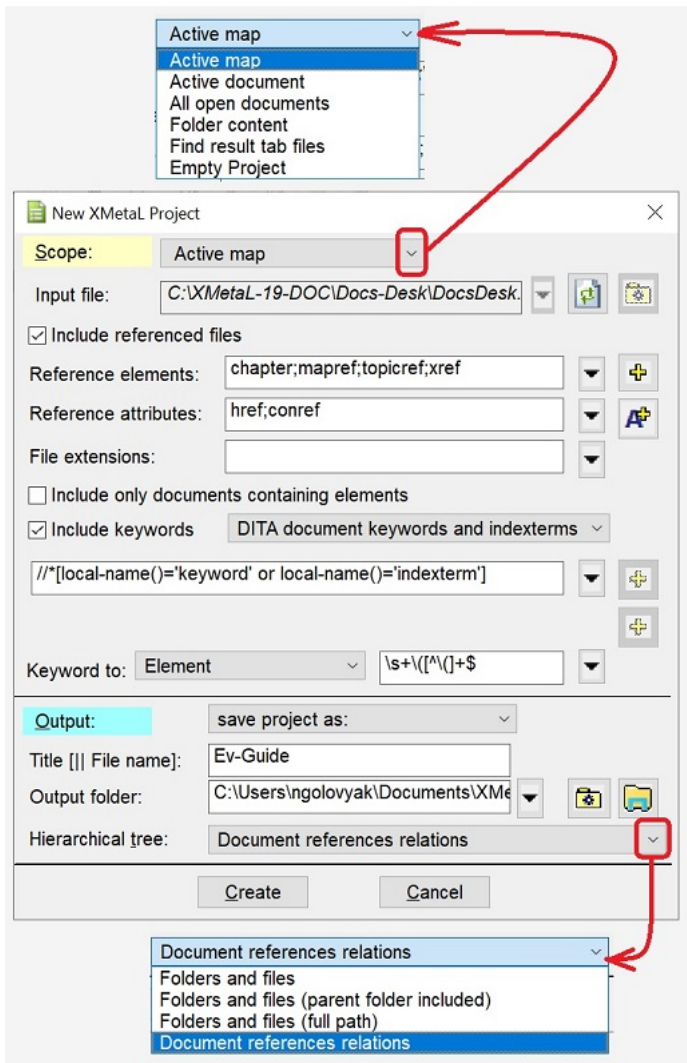
To do this	Follow these steps
Insert links into the document within the project	Click the Links menu and then select Insert reference...
Find keywords for cross-reference candidates and display them in the Results window	Click the Links menu and then select Find cross-references candidates...
Set keywords in the documents within the project	Click the Links menu and then select Set keywords...
Find keywords candidates in the project and display them in the Results window	Click the Links menu and then select Find keywords candidates...
Delete all keywords from the project	Click the Links menu and then select Delete all keywords...
Find references in the project that meet the following conditions: <ul style="list-style-type: none"> • Broken references • Linked documents • Documents containing references • References to xml • References to non-xml • References to WEB content • References to content within documents only • Reference attribute contains value • Reference element text contains values 	Click the Links menu and then select Find and validate...

The Edit and Links menus provide an extensive selection of valuable features:



Creating new XMetaL Project

A new XMetaL Project is created using the "New XMetaL Project" wizard, accessible via the Project > New menu item:



Note: When the "Include referenced files" checkbox is enabled, both the @href and @conref attributes are consistently added during the creation of a new project.

Docs Desk

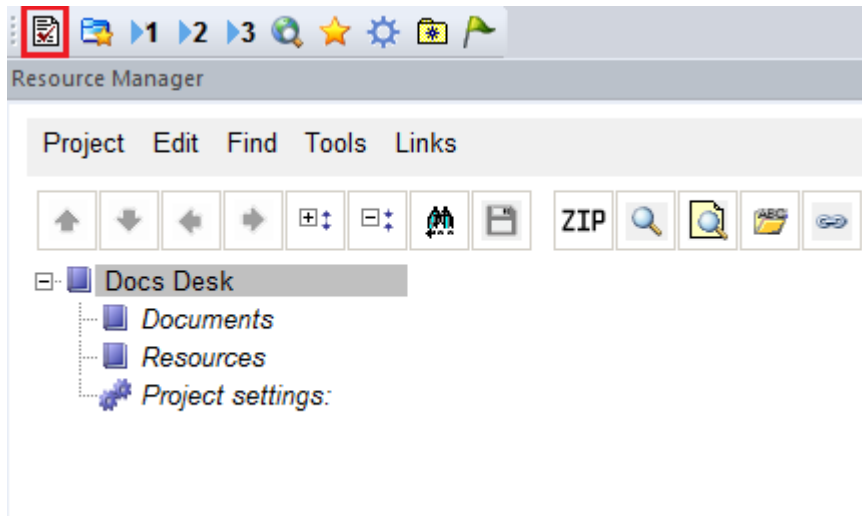
Docs Desk is an *XMetaL Project* on page 183 that provides permanent, always-accessible support for technical writers through macro calls or shortcuts.

The XMetaL project offers efficient and convenient tools for cross-file content searching, spell checking, archiving, and reference insertion. These operations apply not only to project items but also to documents and maps opened in XMetaL, file system folders, and search result tabs. Additionally, straightforward import functions allow for the seamless addition or removal of documents from existing documentation projects.

Docs Desk serves as a versatile tool for technical writers, enabling daily document and file system resource processing without altering the original document projects.

Opening Docs Desk

Clicking the "Open Docs Desk" button in the Whiteboard toolbar will open the XMProject.xwb project document within the Resource Manager.



Edit

Set/Update Titles

The core of the XMetaL Project features a tree control structure, where tree nodes represent virtual folder names and leaves refer to documents or resources. The labels for these leaves can be file names, custom text, or text extracted from XML files using element names or XPath expressions. For example, labels can be derived from tag names containing the document title. The Set/Update Titles dialog is a user-friendly tool that allows technical writers to update or modify labels according to their documentation needs and define rules for extracting title elements.

To open the **Set/Update Titles** dialog box, navigate to **Edit** menu and select **Update Titles**.

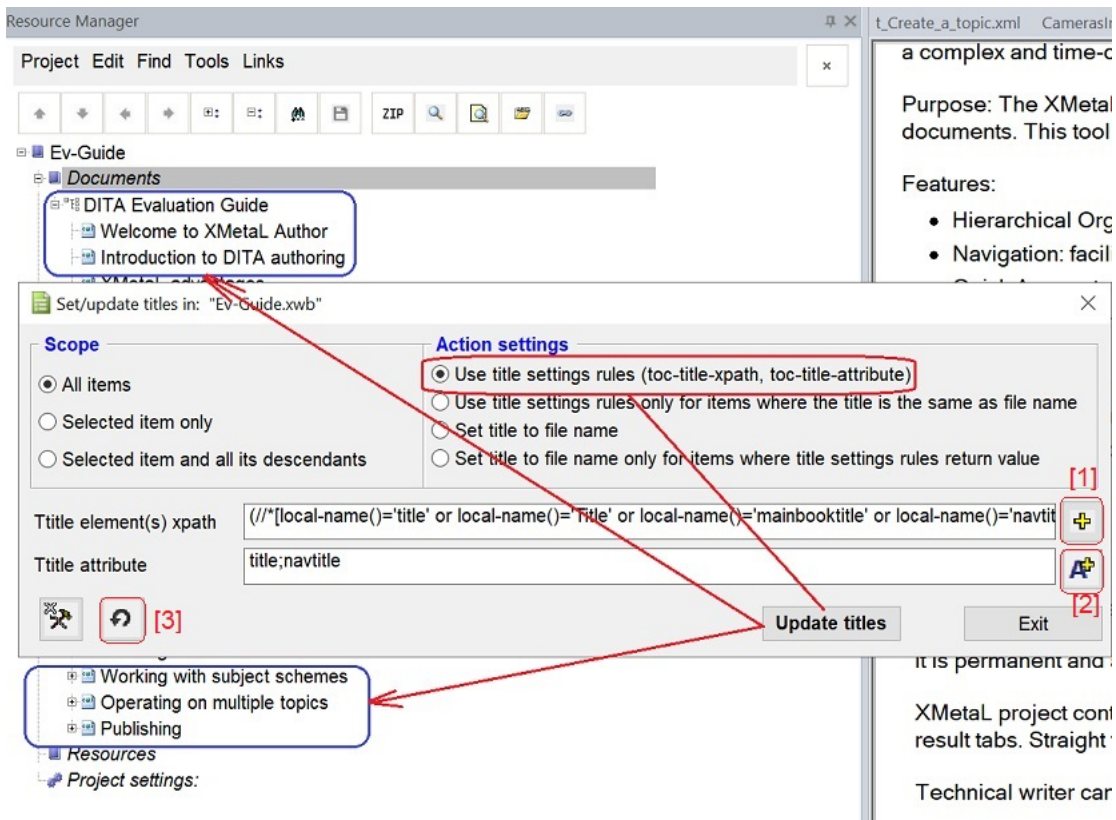


Figure 1: Set/Update titles: User Interface

[1] A "one-click" operation enables users to automatically copy the selected title element of the Active Document into the "Title element(s) xpath" edit box.

[2] A "one-click" operation allows users to automatically copy the selected title element attribute of the Active Document into the "Title attribute" edit box.

[3] Default settings can be restored.

Find

Find Document

The "Find Document" feature is a modeless dialog box that presents a structured view of all project files in a single, flat list. This list includes various identifiers such as document titles, keywords, and file names, facilitating the efficient location of specific documents. The dialog's context-sensitive filtering capabilities enable users to search for, manage, and organize documents with ease, allowing for quick actions such as finding, opening or closing files. Additionally, it supports synchronization between the project structure and currently opened documents, ensuring that selections within the project are consistently reflected across all open files.

Furthermore, it allows technical writers to view, filter, and verify keywords linked to specific documents. This functionality ensures that the correct keywords are applied, promoting accurate content categorization and facilitating easier retrieval of documents during the writing and review process.

A customized version of the "Find Document" dialog is available as an optional tool within the "Insert Cross References" feature. This tool is specifically designed to assist users in setting the reference target attribute by enabling them to efficiently locate and select the appropriate document or section to reference.

To open the **Find document** dialog box, navigate to **Find** menu and select **Document**.

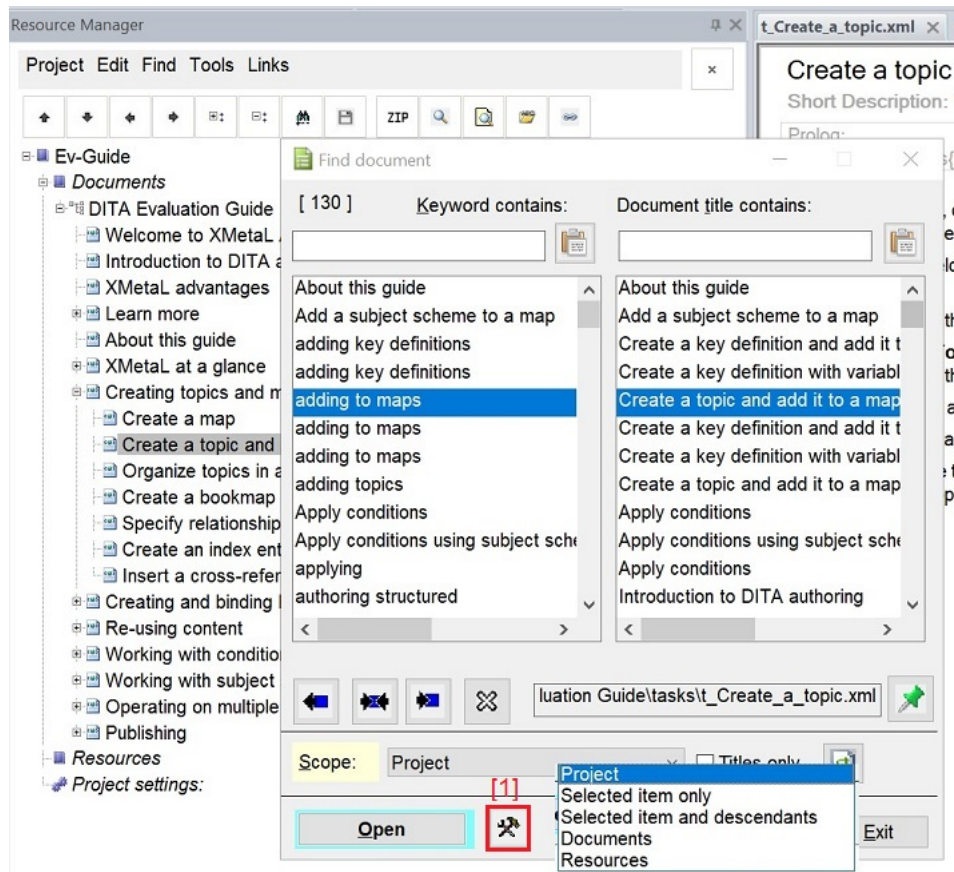
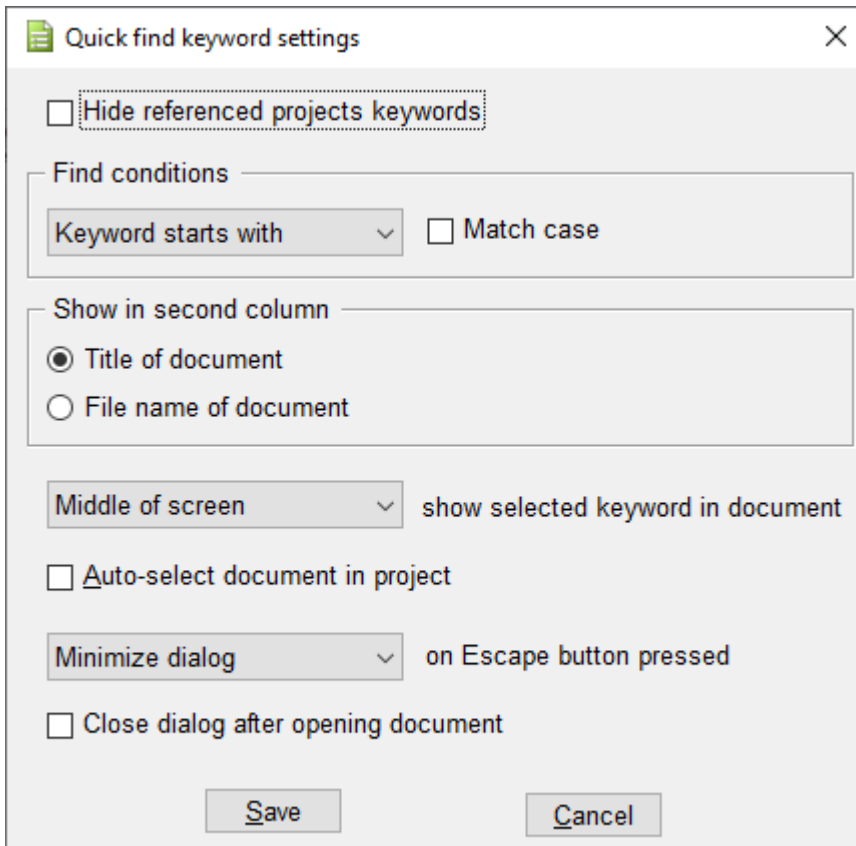


Figure 2: Find Document: User Interface

To set "Quick find keyword parameters", click the **Set quick find keyword parameters** button [1] in **Find document** dialog box:



Find Content

The "Find Content" feature is a modeless dialog that streamlines cross-file operations for efficient text and markup search and replacement. This tool offers a user-friendly interface for managing content across multiple files, simplifying tasks such as text searches and replacements.

The dialog's WYSIWYG interface is designed to facilitate the extraction of various components from active documents, including plain text, XML markup elements, attributes, and attribute values. This functionality enables users to set and apply a wide range of search conditions efficiently.

To open the **Find words** dialog box, navigate to **Edit** menu and select **Content** or click **Find content** toolbar button.

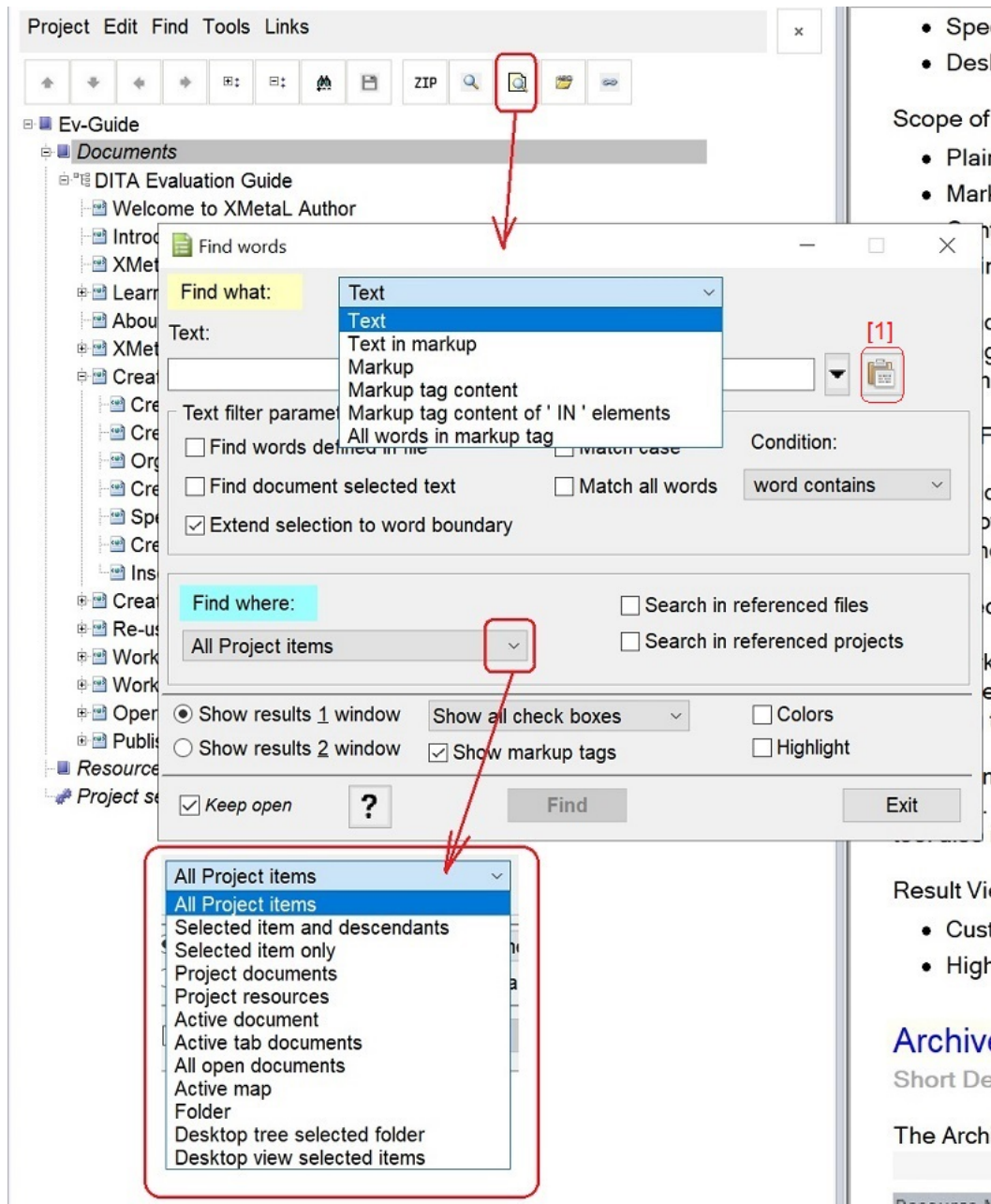



Figure 3: Find Content UI : Main

Scope of the Find Operation:

- Entire XMetaL project or a selected subtree
- Active documents or maps
- All open documents
- Specific file system folders
- Desktop tree content within XMetaL Resources Manager

There are two available check boxes: one for including referenced files and another for including referenced projects in the search operation.

 **Tip:** When multiple tab groups are created by right-clicking on the file name tab, the "Active tab documents" setting restricts searches to the active tab group only.

Scope of "Find What":

- Plain text or text within markup
- Markup tags
- Content within markup tags
- All instances of words within a specific markup tag

The "Find What:" feature is designed to optimize the search process by aligning found text to whole word boundaries by default. It offers a "one-click" functionality that allows users to quickly copy selected text from the active document into the search box [1], automatically extending the selection to the nearest word boundary. This feature also supports a search history, enabling users to organize or remove past queries. For advanced users, the tool provides the ability to utilize regular expressions for more complex search conditions.

Result View Settings:

- Customization options for the result set include the ability to show or hide markup tags and control check boxes.
- Highlighting and coloring of found words are available to improve visibility.

Markup Filtering and Advanced Functionality

The "Find What" extension includes a simple yet powerful tool for filtering markup. Various settings allow users to apply conditional filtering to text based on specific criteria. Additionally, this extension offers advanced functionality by permitting the use of text files as input instead of the standard search box. These text files can specify the target text and may include an optional "Replace with..." parameter, listing potential replacements for the identified text.

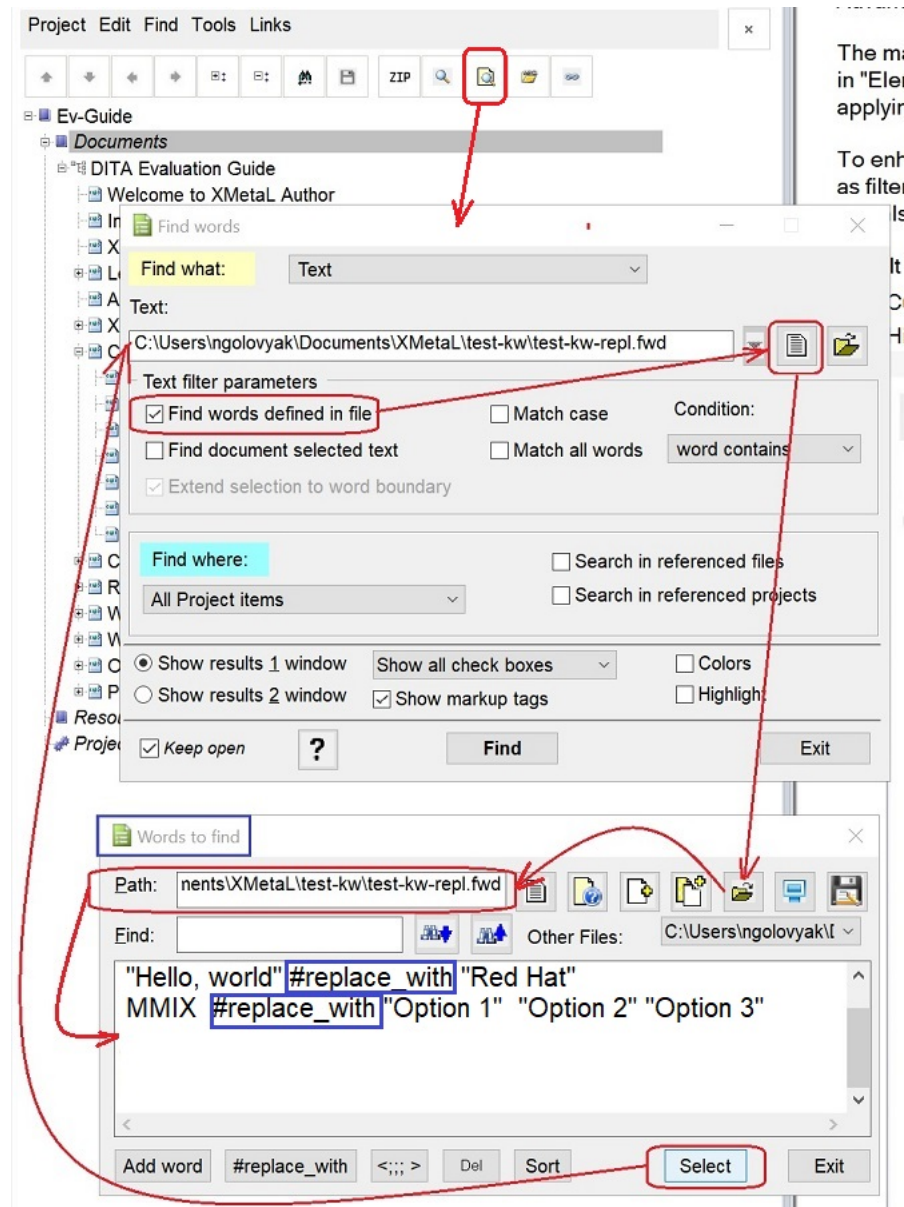


Figure 4: Find Content UI: Keywords in file

Results Find tab:

This replacement list is displayed as a series of buttons in the result set, where button labels show replacement's option.

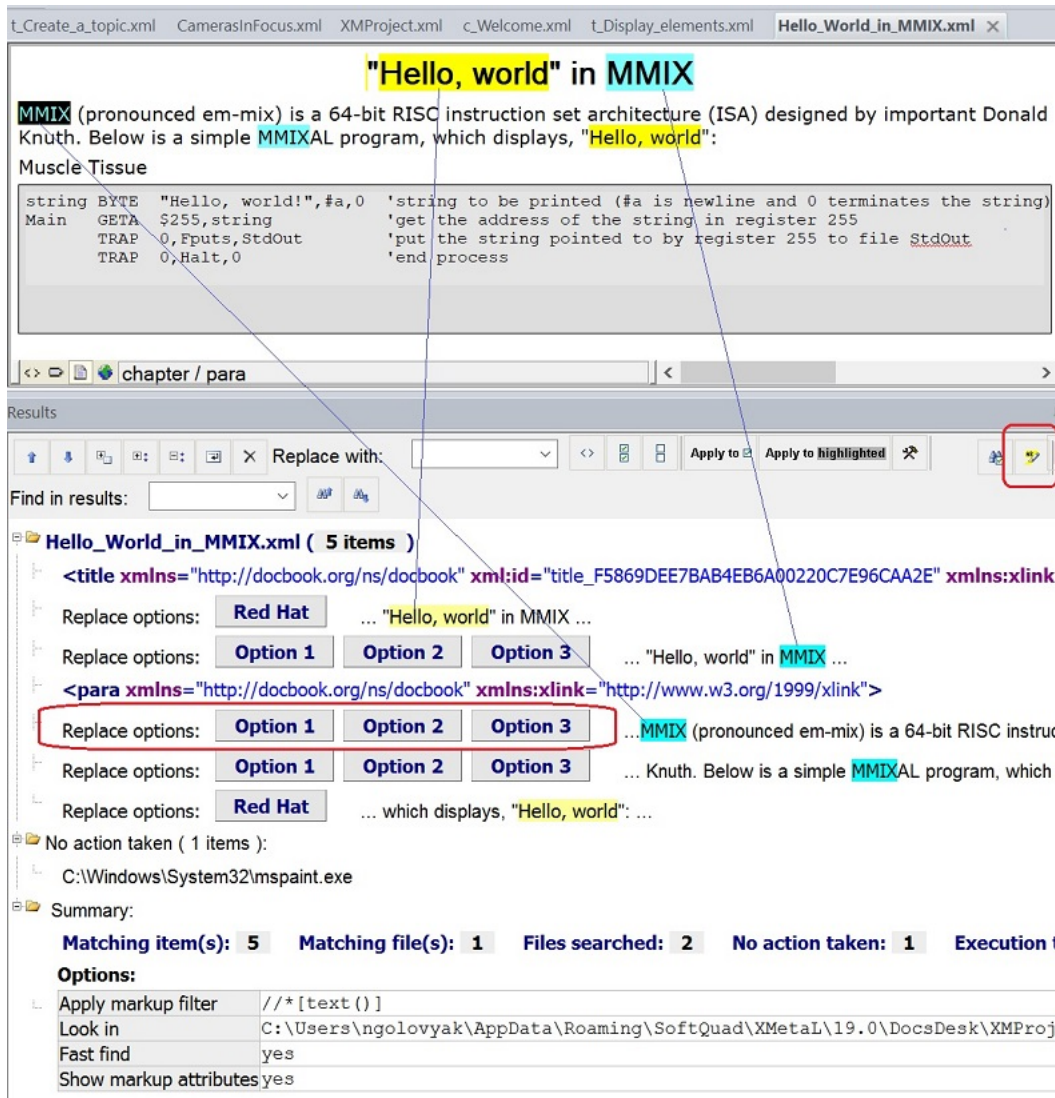


Figure 5: Find Content UI: Keywords in file - Results window with replace options

Advanced Markup Filtering

The markup filtering feature enables users to create advanced search conditions by specifying lists of markup tags in two edit boxes under the "Markup filter (elements)" section. Tags in the first edit box represent the first condition, identifying the ancestors of the searchable text, while tags in the second edit box represent the second condition. These conditions can be combined using logical operators such as "IN" and "AND IN" or "IN" and "NOT IN." The system first validates the condition in the first edit box before applying the condition in the second edit box.

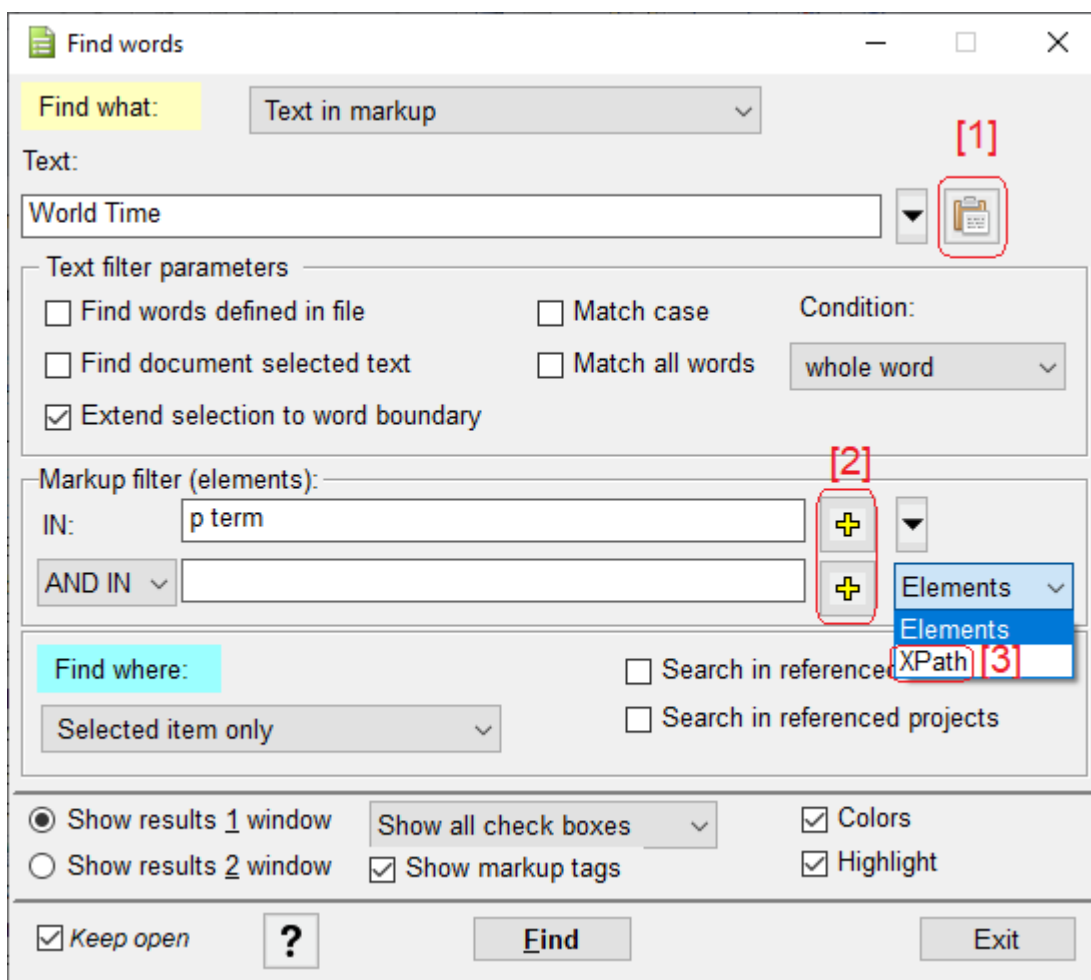


Figure 6: Find Content UI: Advanced markup filtering

To enhance usability, a "one-click" operation allows users to automatically copy the container element of the current selection into the search condition box for either the first or second edit box [2]. For more advanced search requirements, users can utilize XPath expressions as filters [3]. The feature includes an integrated XPath expression builder, which assists in constructing these expressions and provides quick access to predefined XPath expressions. Additionally, the builder offers "one-click" access to the container element of the current selection and includes comprehensive options for filtering based on tag names, attributes, and attribute values, making it a valuable resource for precise markup filtering.

Tools

Archive Project

The Archive XMetaL Project feature provides an efficient solution for archiving projects and their associated content.

To open the **Archive linked documents** dialog box, navigate to **Tools** menu and select **Archive**, or click **Archive** toolbar button.

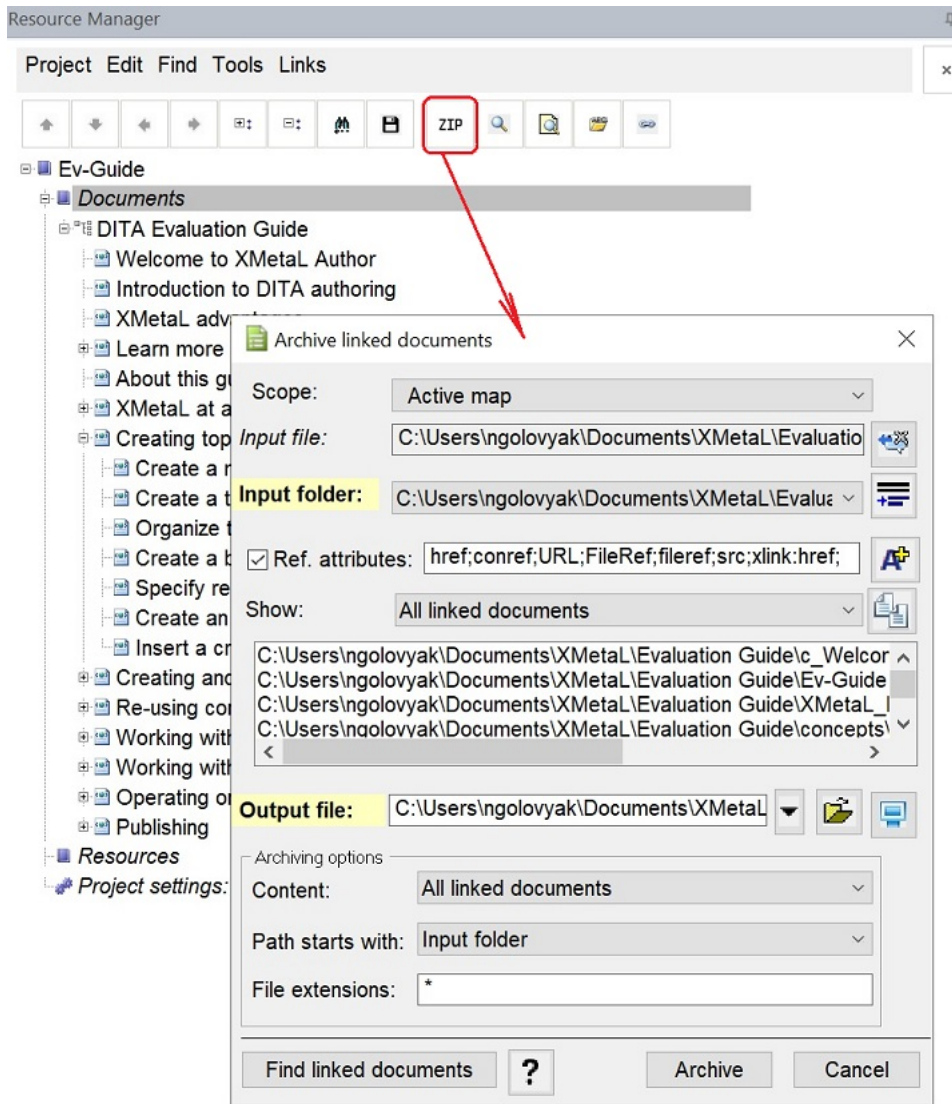


Figure 7: Archive UI

Spell Check Project

The Spell Check XMetaL Project feature provides an efficient method for verifying the spelling of projects and their referenced content. This functionality supports the accuracy and professionalism of written materials.

To perform spell checking within a project, navigate to **Tools** menu and select **Spell check documents**, or click **Spell Check** toolbar button.

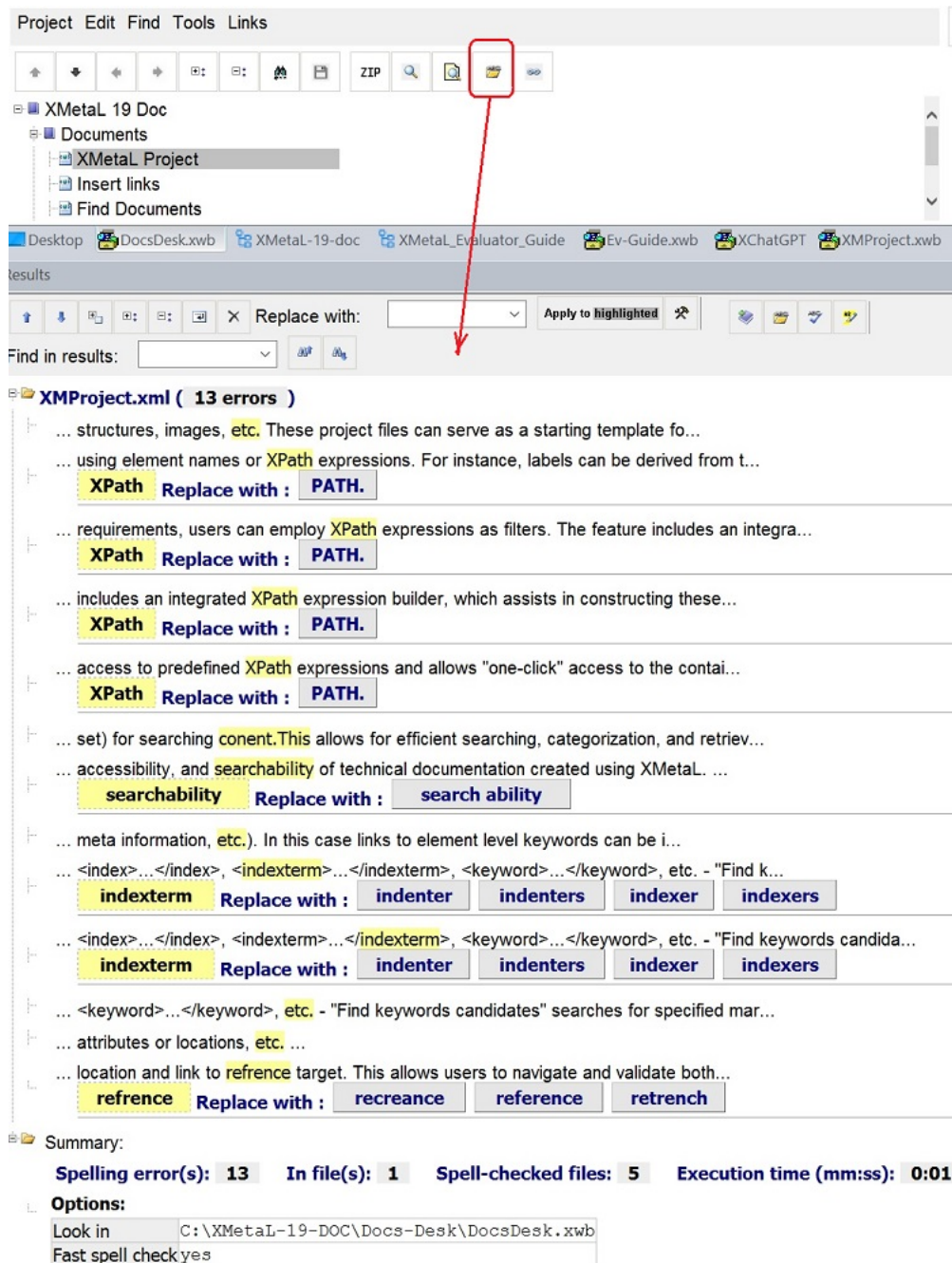


Figure 8: Spell check results tab

Resources Map

An XMetal project, whether a generic documentation project or an XML document, defines a logical data structure in which elements directly reference one another. For example, a documentation index file may reference various topics, and a document topic may link to other topics, images, or external documents.

The Resources Map is a specialized type of XMetal project, generated to mirror the hierarchical folder structure of elements (documents) within the Windows file system. In this structure, tree nodes represent folders, while tree leaves represent file names.

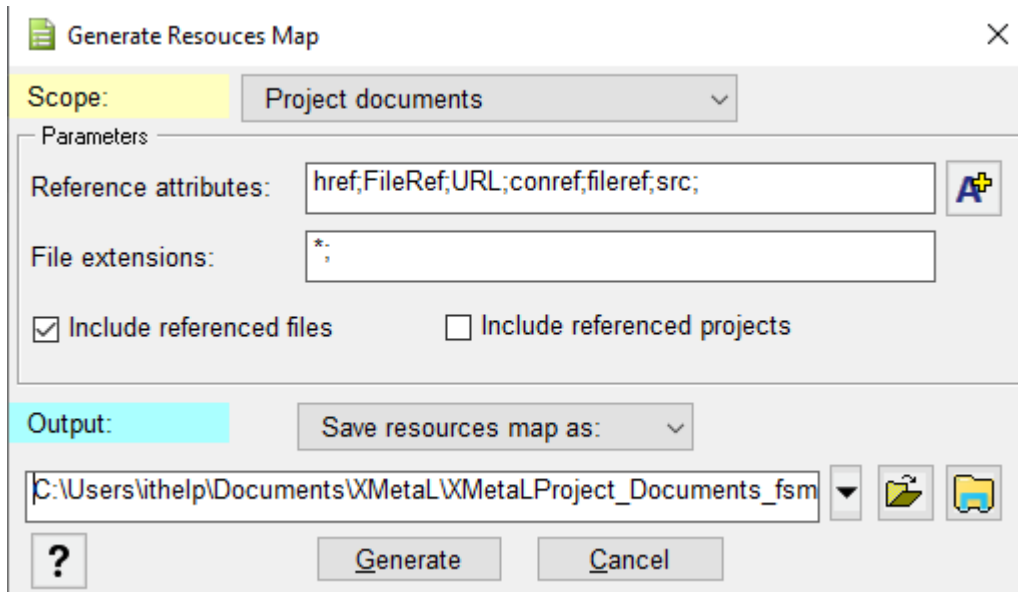
Generate Resources Map

Input parameters for generating a Resources Map include open XMetaL documents, projects, or maps.

The algorithm used to generate a Resources Map traverses the input elements and their referenced content, creating a tree structure that captures all resources. This structure provides technical writers with a comprehensive view of the physical locations of all documentation files.

XMetaL Project's editing functionality allows users to rename or relocate elements, including logical folder names, within the Resources Map tree.

To open the **Generate Resources Map** dialog box, navigate to **Tools** menu and select **Generate resources map**,



Scope for generating resources map:

- All Project items
- Selected item and descendants
- Selected item only
- Active document
- All open documents
- Project documents
- Project resources

Two options are available for including referenced files or referenced projects.

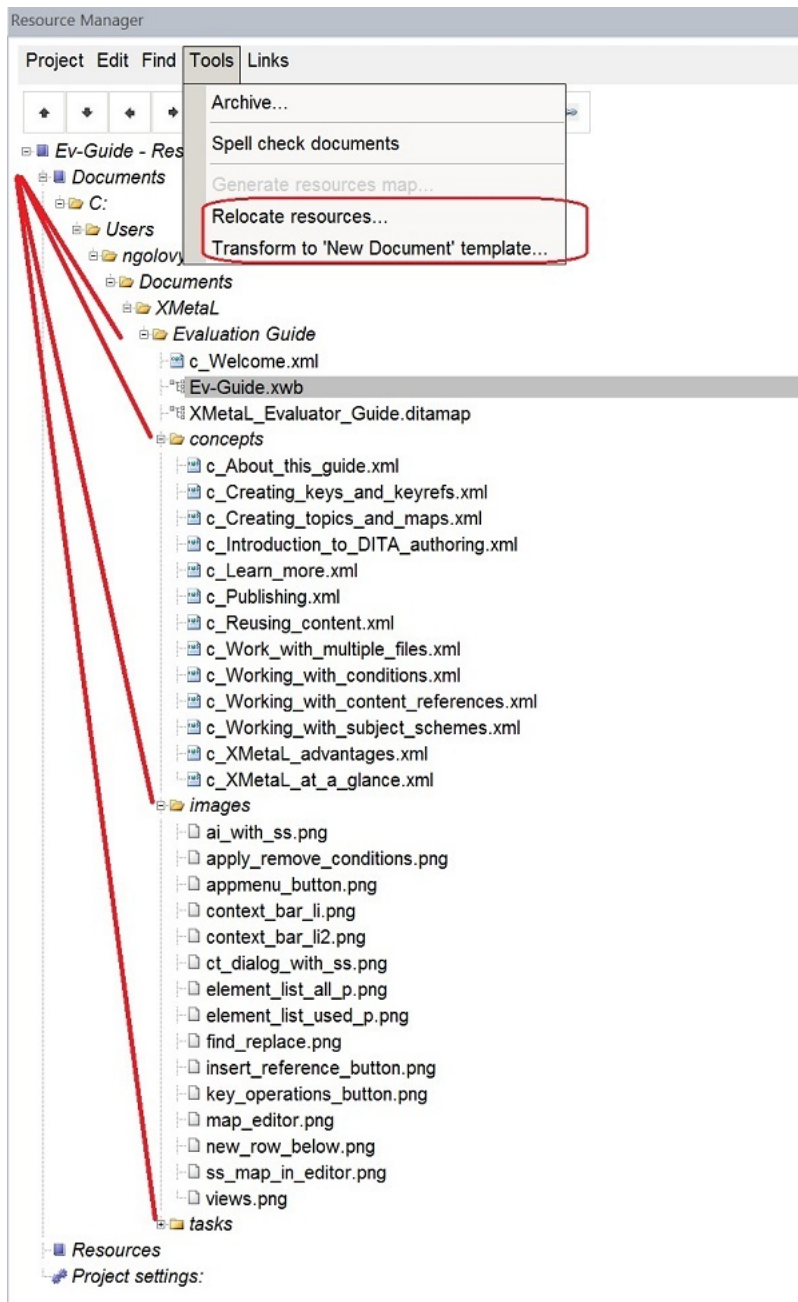


Figure 9: Resources Map

Relocate Resources

The "Relocate Resources" command, available under XMetaL Project Tools menu, is exclusively for the Resources Map. This command enables users to create, copy, or update the file system by replicating the folder and file structure as defined in the Resources Map tree. It also updates referenced content according to the new folder structure.

The procedure for relocating resources is outlined as follows:

1. Modify the Resource Map: Insert, delete, or rename folders or references as required.
2. Access the Tools Menu: Navigate to the Tools menu and select the Relocate Resources option.

3. Relocate Resources: Choose either Copy or Move to transfer the resources to the new location, ensuring the file system is updated accordingly.

Transform to New Document Template

The "Transform to New Document Template" command, available under XMetaL Project Tools menu, is specific to the Resources Map. This command allows users to convert the Resources Map into an XMetaL document template. The transformed content is then accessible in the list of XMetaL's templates under the "New Document" command. When this template is applied, a copy of the transformed Resources Map files is created in a user-specified folder. For example, a new documentation project might include mandatory elements such as an index, preface, chapters, topics, glossaries, and images, with some topics featuring predefined internal structures and images. These project files can serve as a fundamental template for other similar projects.

The procedure of transforming to new document template are followings:

1. Generate the Resources Map: Create a resources map that aligns with the desired new document template.
2. Access the Tools Menu: Navigate to the Tools menu and select the Transform to New Document Template option.
3. Configure Template Settings: Select the XMetaL template group and specify the template name.
4. Relocate Resources: Select either Copy or Move to transfer resources to the new XMetaL document template location, ensuring the template is updated as required.

Links

Insert References

High-quality documentation enables efficient navigation between related topics, chapters, or chunks of relevant information, with topics potentially referencing external web resources. However, the requirements for valid XML reference formats add complexity to a technical writer's work. While automated systems can generate numerous cross-references, they may sometimes be irrelevant, redundant, or non-compliant with technical writing standards. Additionally, as document content evolves, links may break or become obsolete. In such cases, technical writers require tools to manually or semi-manually maintain existing references and create new ones.

The XMetaL "Insert References" feature is designed to streamline the technical writer's work by providing tools to locate content within a documentation project or on the web while managing the technical details of setting valid XML reference elements. This allows the technical writer to focus on the document's semantics and maintain clean content.

The "Insert References" tool is implemented as a modeless dialog. This dialog provides controls for selecting an XML reference template based on document type requirements, the format of the reference target, and the technical writer's preferences.

To open the **Insert references** dialog box, navigate to **Links** menu and select **Insert reference**, or click **Linking assistant** toolbar button.

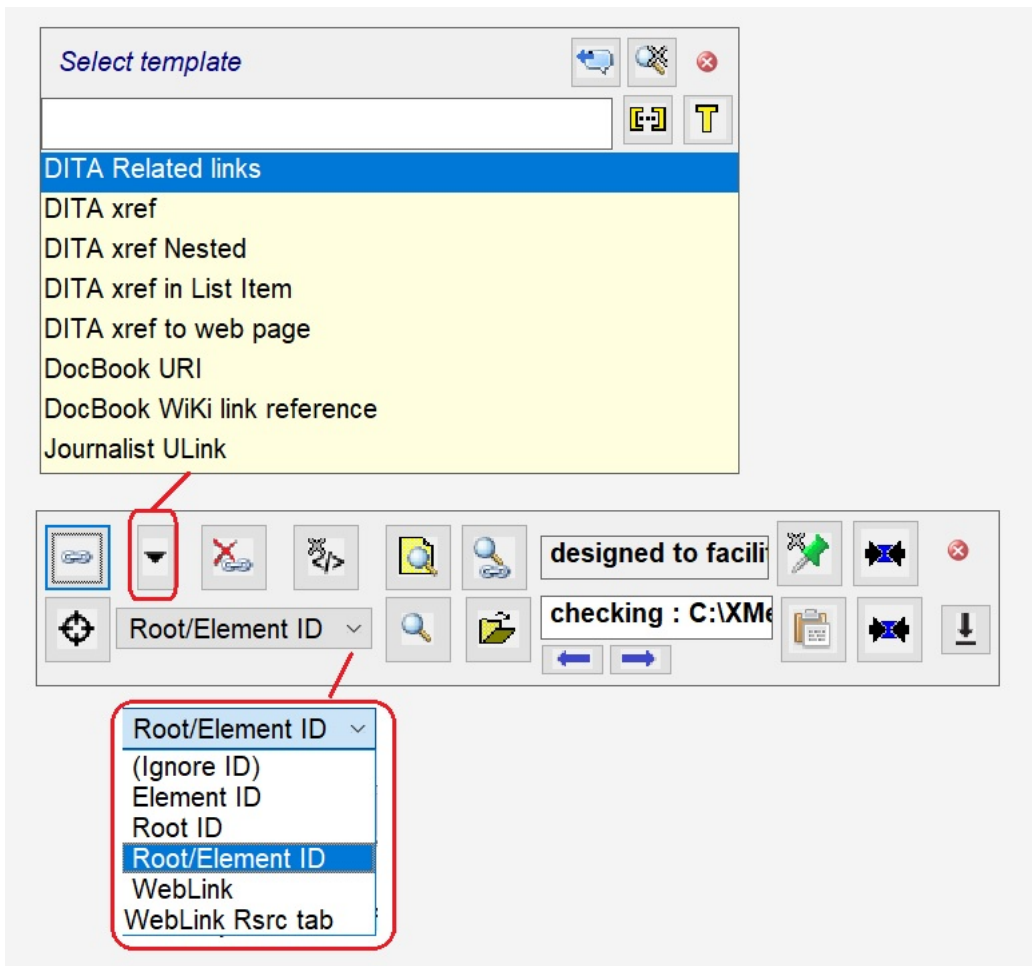
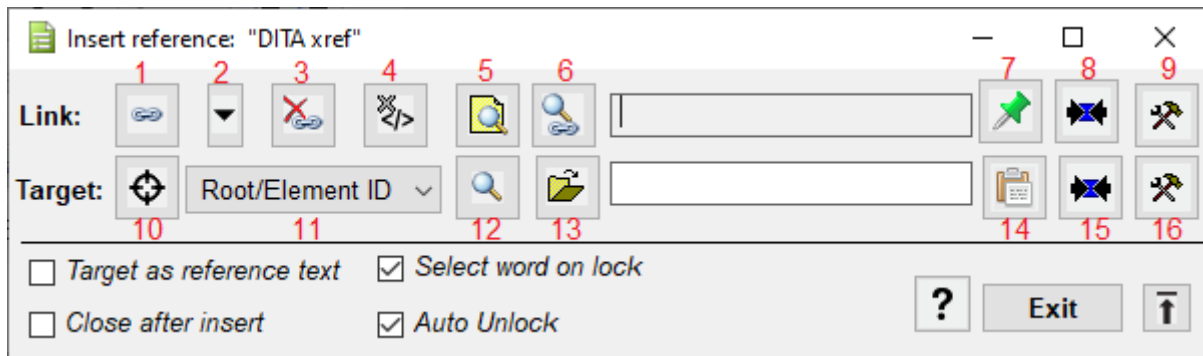
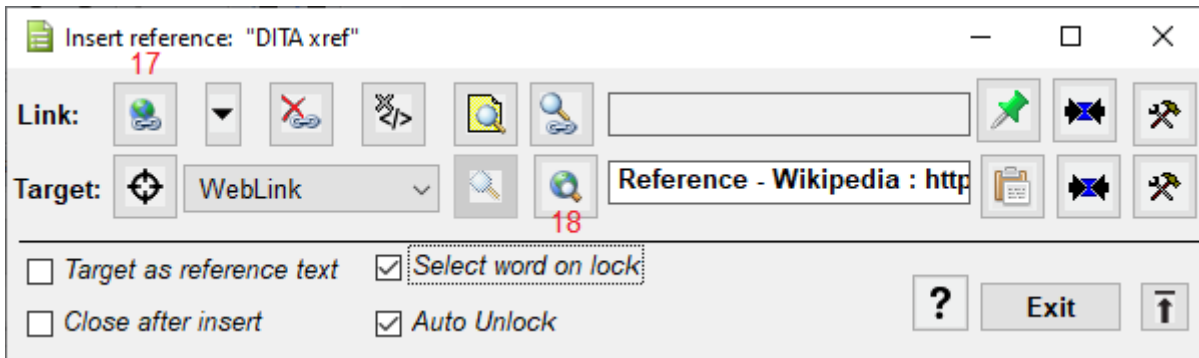


Figure 10: Insert reference: default UI





# on image	Description
1	Insert reference
2	Select reference template
3	Remove reference tag
4	Remove surrounding tag
5	Find content
6	Find cross-references candidates
7	Lock link location to Active Document selection
8	Select reference location
9	Settings for "Insert reference" action
10	Set target to Active Document selection
11	Target type and ID format
12	Find target document by keyword
13	Browse for target
14	Paste target markup
15	Select target location
16	Settings for "Set target" action
17	Insert web reference into Active Document
18	Find Active Document content on the WEB

Example of a typical scenario of inserting reference in manual mode:

1. The author begins by reviewing the document, identifying any text that may require referenced content. The selected text is marked as a potential link candidate by clicking the "Pin Reference" button .
2. The author searches for relevant content either within the project documentation using XMetaL tools such as "Find content" button [5], or on the web using "Find Active Document content on the WEB" button [18].
3. Once the appropriate content is located, the author selects the "Set as Target" button [10], followed by the "Insert Reference" button [1]. For the "WebLink Rsrc tab" as the target type, the author just clicks the "Insert Reference" button [1].

Example of a typical scenario of inserting reference in semi-manual mode:

1. The author assigns keywords to topics through the "Links" menu by selecting either "Find Keyword Candidates" or "Set Keywords".
2. To locate documents containing those keywords within the project, the author uses the "Find cross-reference candidates" button [6].

3. This generates a list of potential reference documents, enabling the technical writer to navigate between the reference location and the target document.
4. The author can then adjust the reference location or target as necessary and finalize the process by clicking the "Insert Reference" button in the Results Find pane.
5. Once inserted, the reference is marked in the list of candidates in the Results Find pane.

Insert reference context menu:

Activating the "Insert References" UI dialog enables XMetaL context menu commands related to this task.

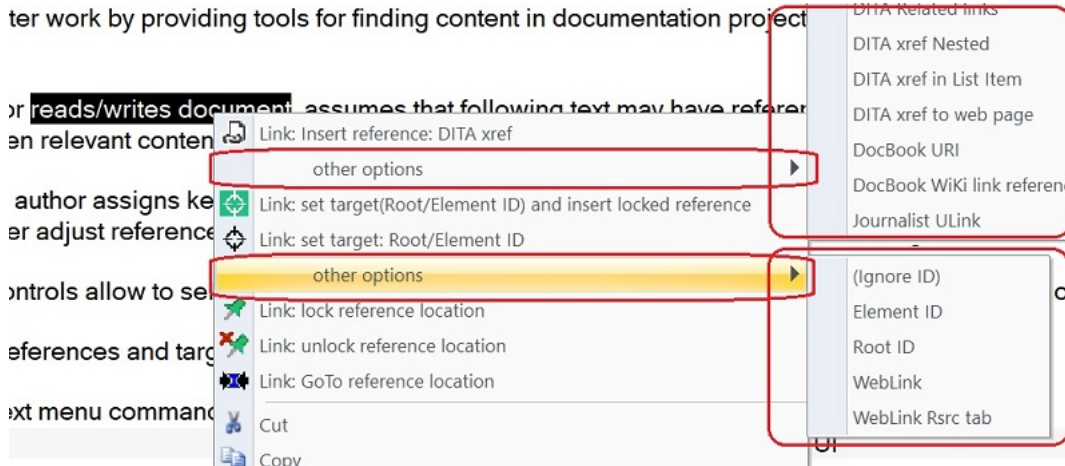


Figure 11: Insert reference: context menu

Settings for "Insert reference" action:

Additional tool with a WYSIWYG user interface, activated by button [9], allows for the addition, deletion, and modification of references.

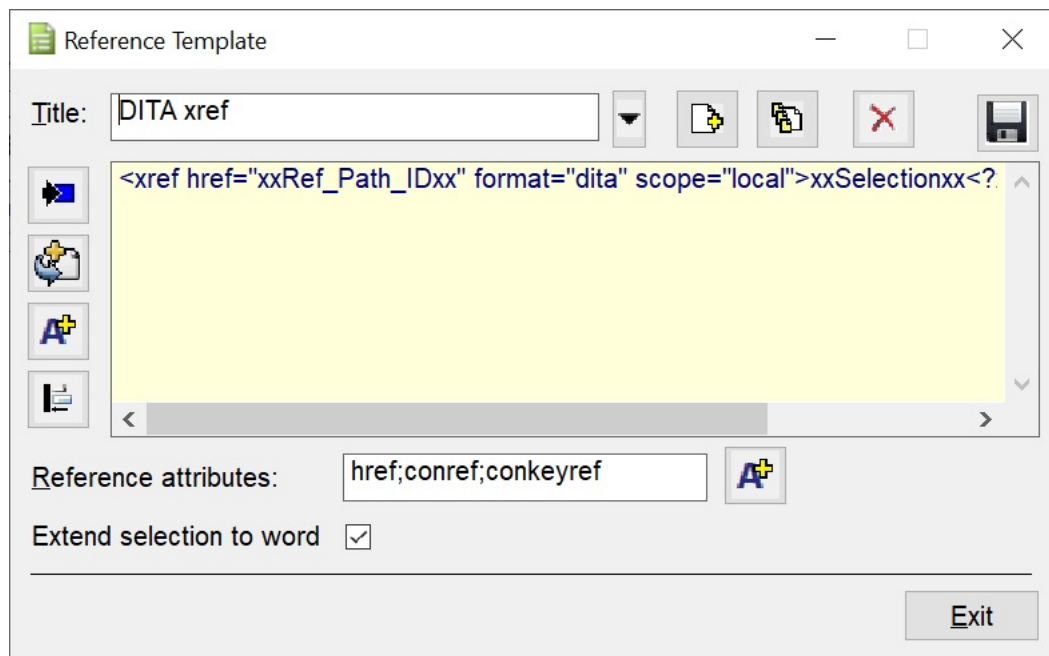



Figure 12: Insert reference: reference template

 **Note:** The "Extend selection to word" checkbox is effective when the user partially selects a word and then applies the "Insert reference" button.

Settings for "Set target" action:

Additional tool with a WYSIWYG user interface, activated by button [16], allows for the target templates and settings.

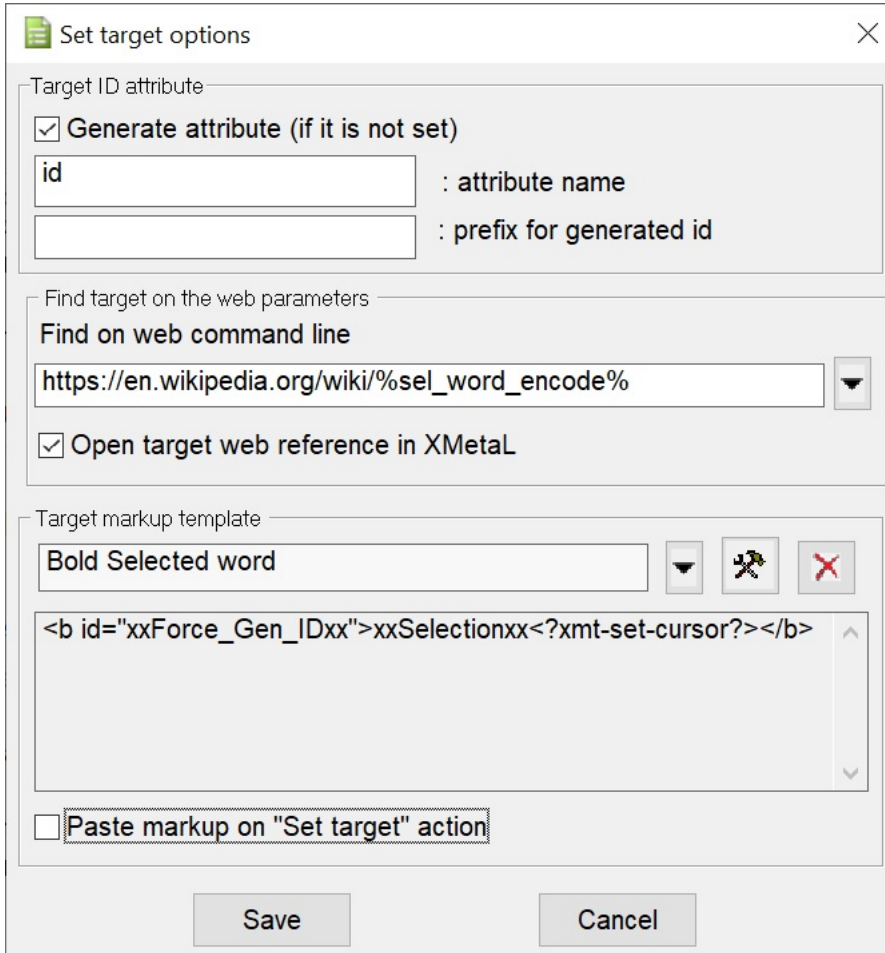


Figure 13: Insert reference: target settings

Find Cross-References Candidates

Modern documentation may consist of hundreds of documents, with content frequently referencing or relating to information in other documents. High-quality documentation includes links that facilitate user navigation between related pieces of information. Identifying valid connections across numerous documents and creating accurate markup links is a challenging task for technical writers. Fully automated processes for finding connections can produce many irrelevant or redundant links, diminishing documentation quality. The XMetaL "Find Cross-References Candidates" feature is a semi-automated tool that assists in identifying and inserting valid markup links. Technical writers conduct the final semantic review and determine the appropriate connections.

The "Find Cross-References Candidates" feature is a specialized extension of the "Find Content" function, designed to streamline the creation of cross-references within documents based on keywords defined in the XMetaL Project.

The user interface is designed to efficiently support the visualization and configuration of search conditions, options, and criteria.

To access the **Find cross-references candidates** dialog box, navigate to **Links** menu and select **Find cross-references candidates**, or click the **Find cross-references candidates** button in the **Insert reference** dialog box.

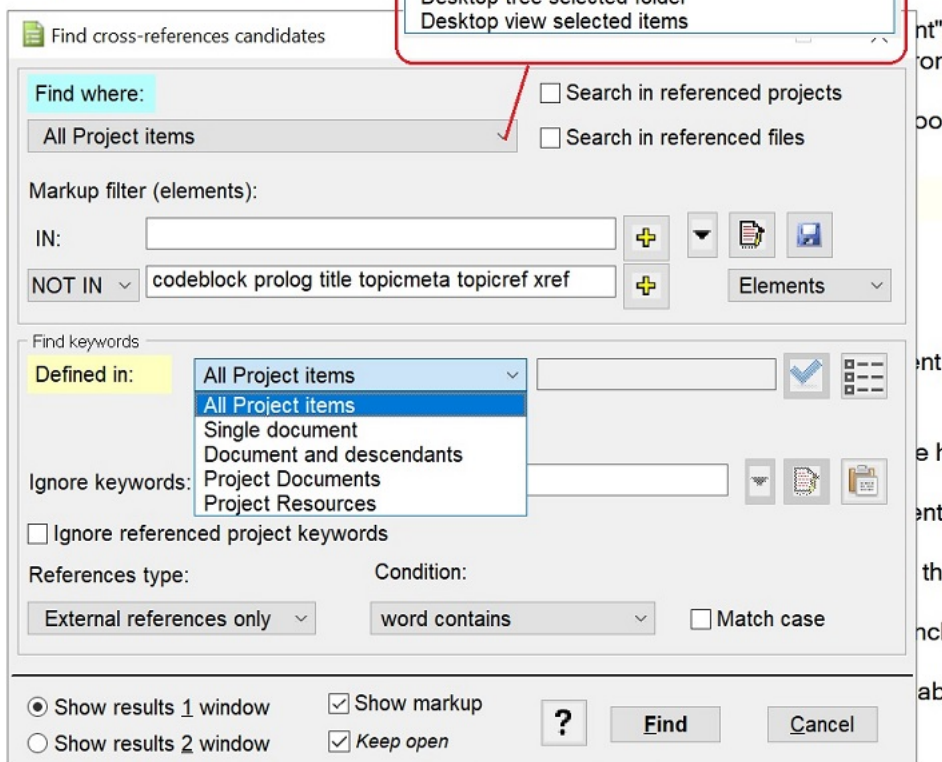
- Import of Existing Documentation: Supports the bulk import of documents from
- Adding New Content: Allows for the rapid bulk addition of new documents using
- Reorganizing Content: Allows

Docs - Desk

Short Description: *Short Descript*

Docs-Desk is XMetaL project.

It is permanent and always accessi



The "Transform to New Document Template" command, also available under XMe the list of templates under the "New Document" command in XMetaL. Applying this

Figure 14: Find cross-references candidates: Find UI

Scope of the Find Cross-Reference Candidates Operation:

Cross-references can be created within the following document scopes:

- The entire XMetaL project or a selected subtree
- Active documents or maps

- All open documents
- Specific file system folders
- Desktop tree content within XMetaL Resources Manager

Additional options allow for searches by:

- Extending to referenced files or projects
- Limiting the scope of reference elements candidate within a document to specific markup elements and their descendants, such as paragraphs and descriptions
- Using logical operators such as "IN" and "AND IN", or "IN" and "NOT IN."
- Disabling specific markup elements

Range of Documents for Identifying Keyword Candidates:

The scope of reference candidates is determined by keywords assigned to XMetaL Project documents and can be limited to the following:

- Entire XMetaL project
- Selected project subtree
- Single document

The list of keywords can be filtered according to user requirements by configuring the following options:

- Ignore keywords
- Ignore referenced project keywords
- Select reference type
- Set filtering conditions

Results Find tab:

The search for cross-reference candidates yields a list of documents containing sub-lists of potential reference element locations. Each entry in these sub-lists includes the candidate text, the surrounding document fragment, a link to the target candidate, a link to the reference element candidate, and a button for inserting the reference. This setup enables users to navigate and validate both link and target locations.

Result UI controls enable users to highlight, select, and adjust link candidates, to set the link element format and template, to run insert cross-references action as bulk operation.



Note: Ensure that the link element format is correctly configured by selecting the "Set Replace Options" button in the Results Find tab.

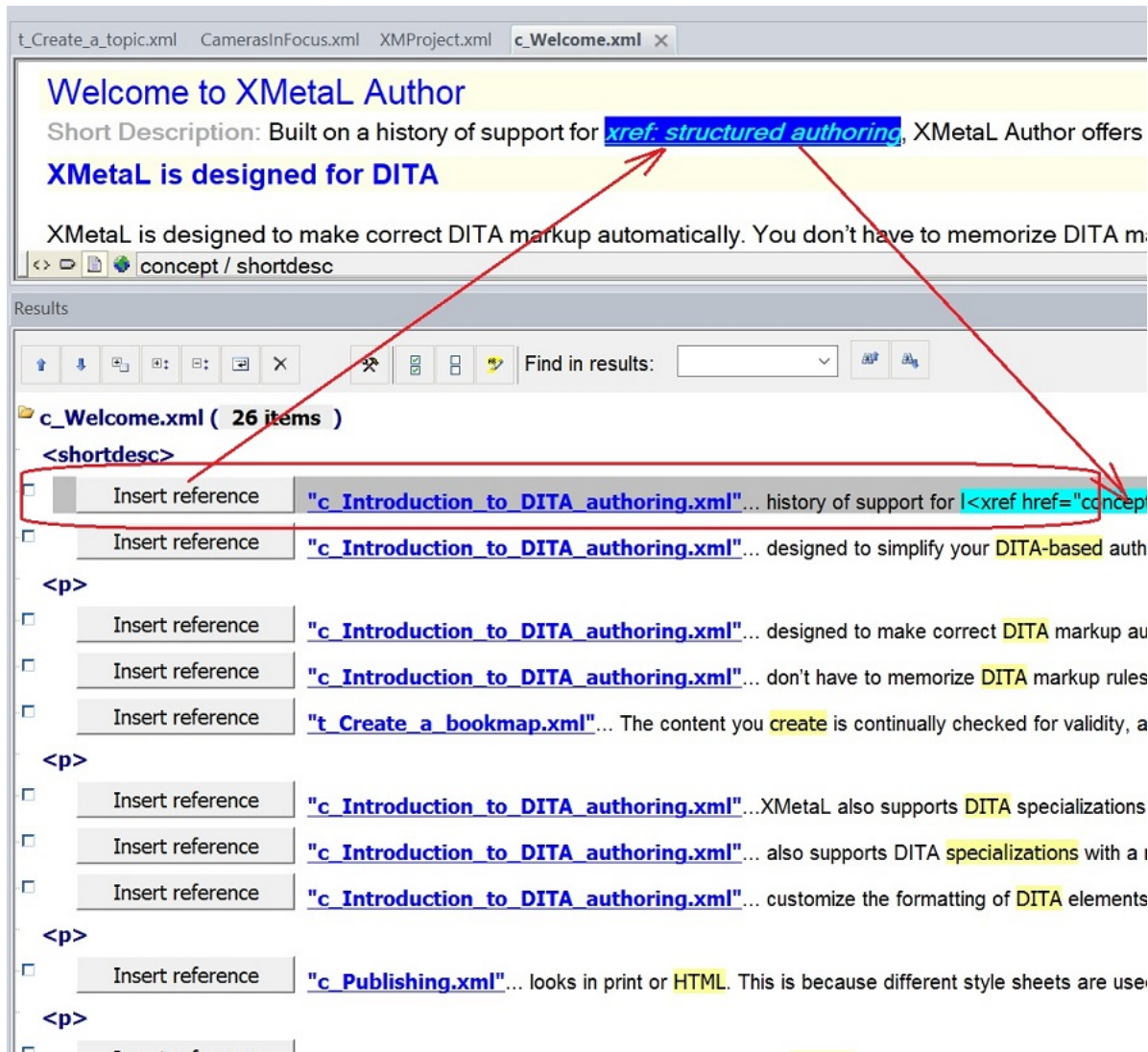


Figure 15: Find cross-references candidates: Set reference UI

Set Keywords

An XMetaL Project "keyword" is a text label assigned to a specific markup element or an entire document within a project.

The primary functions of an XMetaL Project "keyword" are to help technical writers quickly locate documents or document elements within large documentation projects (which may contain hundreds of files) via the "Find Document" dialog, serve as a potential reference target for locating cross-document references, and facilitate explicit document linking. XMetaL uses the document path and, if available, the keyword element's attribute ID to search content. This enables efficient searching, categorization, and retrieval of information.

XMetaL Project supports two primary types of keywords:

- Element-level keywords: These are assigned to specific elements within a document, such as paragraphs, titles, or topics. Each element must have a unique ID attribute that corresponds to its position in the source XML content and the generated documentation. The keyword's reference target attribute identifies the element's ID.

- Document-level keywords: These are applied to the entire document, offering a general overview or categorization of its content. Unlike element-level keywords, the reference target attribute for document-level keywords is optional.

The XMetaL Project's "Set Keywords" feature provides a user-friendly WYSIWYG editing environment, allowing technical writers to easily add, view, and manage both element-level and document-level keywords for files opened in XMetaL. This functionality greatly improves the organization, accessibility, and searchability of technical documentation within the platform.

To open the **Set Keywords** dialog box, go to the **Links** menu and select **Set Keywords**. Alternatively, activating the "Set Keywords" dialog also enables relevant XMetaL context menu commands for this task.

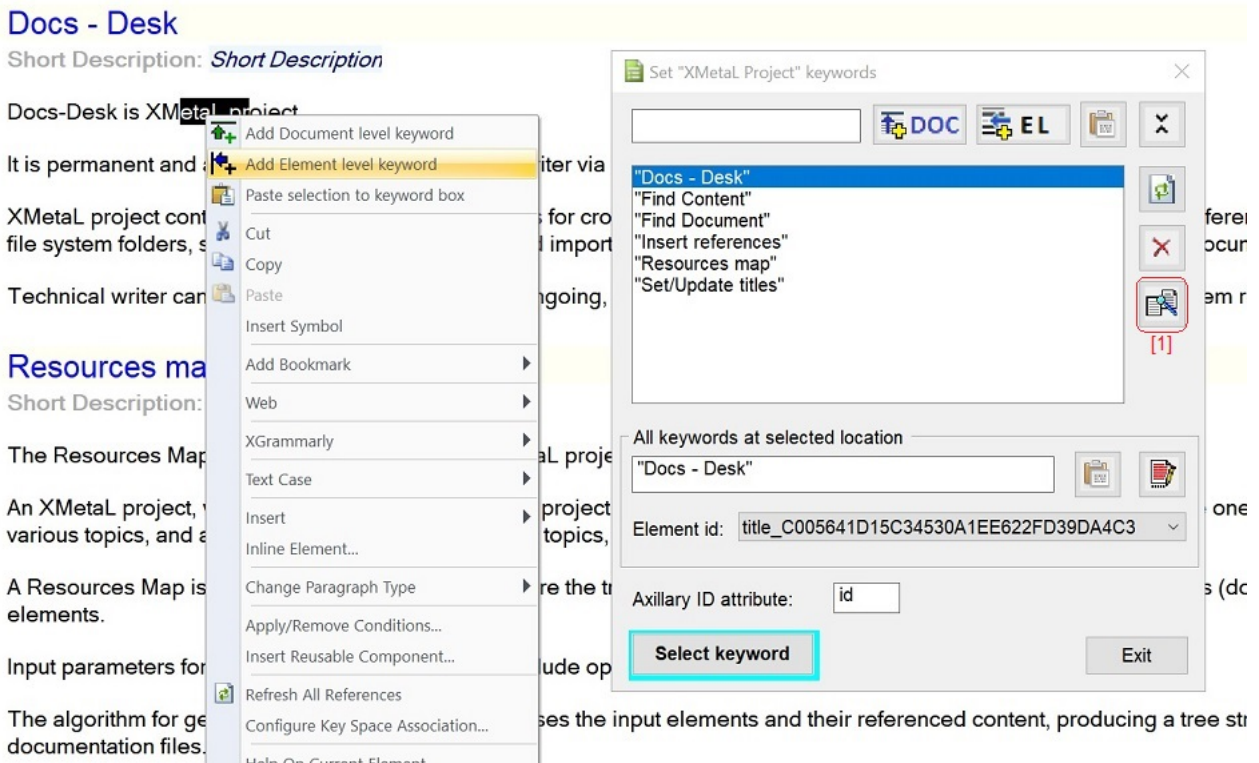


Figure 16: Set keywords full user interface and context menu example

Description of Set keywords user interface:

The keywords for documents are stored within the XMetaL Project rather than directly in the document. When using the "Set Keywords" UI dialog, the selection within the XMetaL Project should correspond to the active document.

When assigning a keyword and the keyword entry field is empty, place the cursor on a specific word or select a portion of text within the document. Then, click the "Add Element Level Keyword" or "Add Document Level Keyword" button. The keyword can be a partial word, and XMetaL will automatically expand the selection to include the entire word boundaries. It uses the provided keywords as a search filter to complete the action.

If the desired keyword is not found in the document text or if adjustments are needed, enter the keyword into the keyword edit box and then click either the "Add Element Level Keyword" or "Add Document Level Keyword" button. Note that the list of keywords may include words or phrases that are not currently present in the document or element.

Another method for setting keywords is to use the "Find Keyword Candidates" button [1] in the "Set Keywords" dialog. If the document already contains content with designated XML elements for keywords, such as <indexterm>, <keyword>, etc., the "Find Keyword Candidates" action can extract and assign keywords to the XMetaL project in bulk. The keywords identified in the Results Find window can be set as either "Element Keywords" or "Document Keywords" by pressing the respective buttons. The keywords will then be displayed in the "Set Keywords" dialog within the complete user interface for convenient access and management.

When assigning an "Element-level keyword" to an element that lacks an attribute ID, XMetaL will automatically generate a new ID for the element. The Full UI dialog will then display a list of newly created keywords along with their corresponding element IDs. You can modify the keyword text later within this Full UI dialog.

Notes:

- The titles of XMetaL Project documents are designed to be explicit document-level keywords. Therefore, there is no need to include additional keywords.
- Keywords within a document must be unique to ensure clarity and avoid redundancy.
- When determining whether to assign "Element-level keywords" or "Document-level keywords," consider the following: if you assign element-level keywords to an element that lacks an attribute ID, XMetaL will generate a new ID and update the document accordingly. Additionally, certain elements—such as prologs, meta information, or other components not present or addressable in the "Final Generated Documentation"—may cause links to element-level keywords to become invalid.
- XMetaL provides both bulk and manual tools for inserting references, utilizing "reference element templates" within the "Insert Reference" dialog. One of the parameters in these templates is the Keyword ID. XMetaL allows users the flexibility to either include or omit the element ID when applying the insert reference template.

Find Keywords Candidates

Find keywords candidates is a specialized feature of "Find Content" designed to assist in adding documents keywords into the XMetaL Project.

When document rules, such as DTD or Schema, specify elements for document keywords (e.g., <index>...</index>, <indexterm>...</indexterm>, <keyword>...</keyword>), "Find Keywords Candidates" searches for these specified markup tags across the input scope documents.

To open the **Find keywords candidates** dialog box, navigate to **Links** menu and select **Find keywords candidates**,

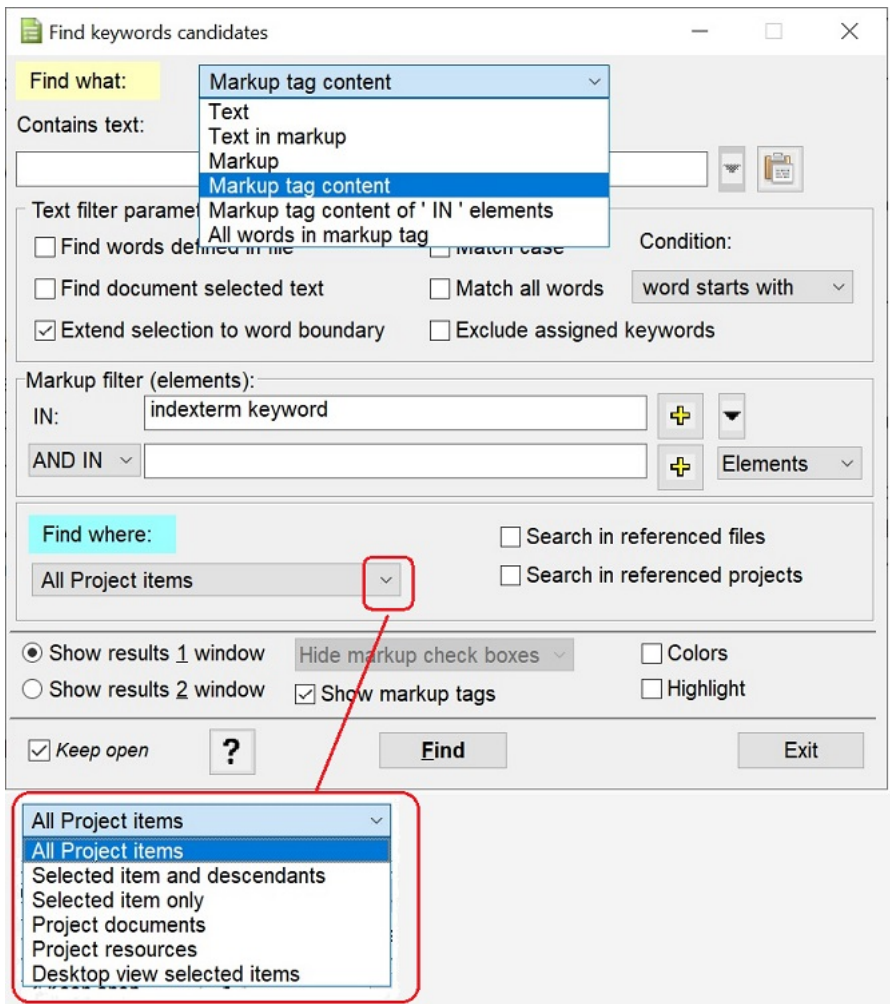


Figure 17: Find keywords candidates: UI

Scope of the Find Operation:

- Entire XMetaL project or a selected subtree.
- Desktop tree content within XMetaL Resources Manager.

Results Find tab:

The results display the found text and markup contents. Each result entry includes buttons to set the found text as a "Document Level Keyword" (pointing to the root element ID) or as an "Element Level Keyword" (pointing to the text container element if it has an ID attribute). This action modifies only the XMetaL Project, leaving the documents themselves unchanged. Selecting the "Element Level Keyword" will automatically generate an ID attribute for any element that is missing one. The user interface also supports setting keywords in bulk mode.

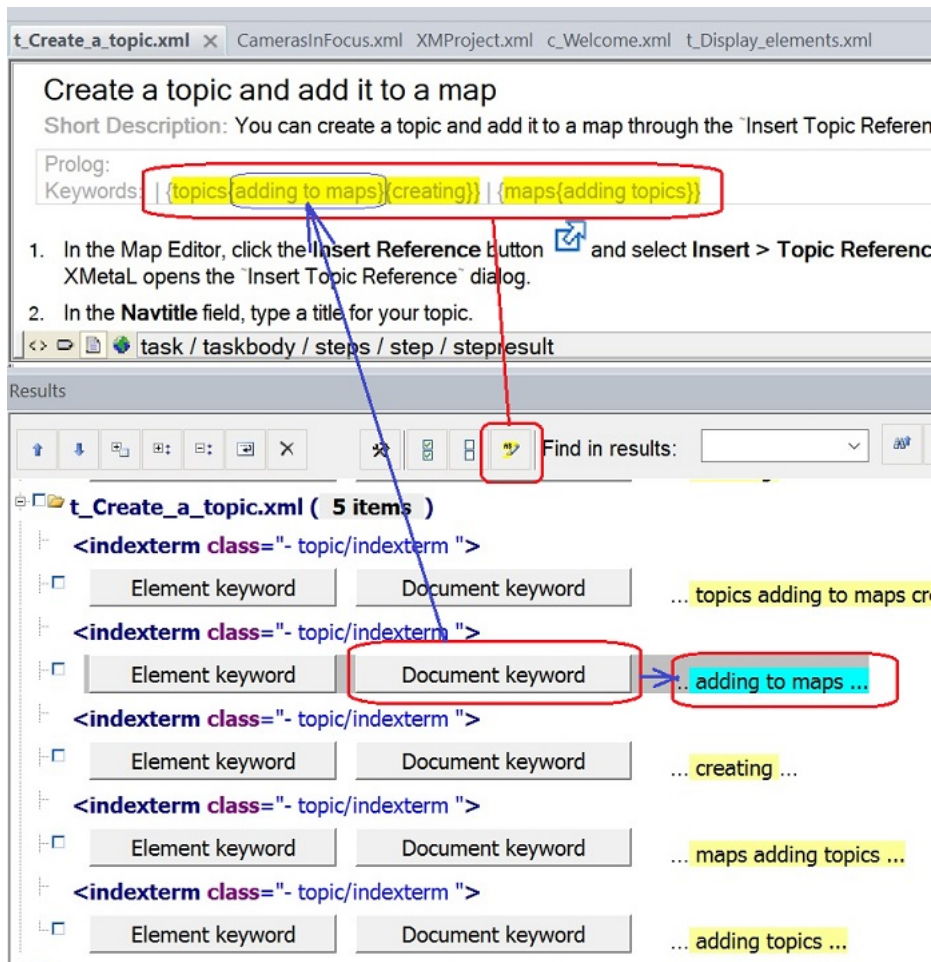


Figure 18: Find keywords candidates: Set keyword from results tab

Find and Validate Links

The "Find and Validate Links" tool is a specialized feature designed to assist technical writers in analyzing and validating cross-references between documents. It allows users to search for referenced content based on specific criteria, such as images, web links, or links with specific text, attributes, or locations, ensuring accuracy and consistency across documentation.

To open the **Find linked documents** dialog box, navigate to **Links** menu and select **Find and validate**.

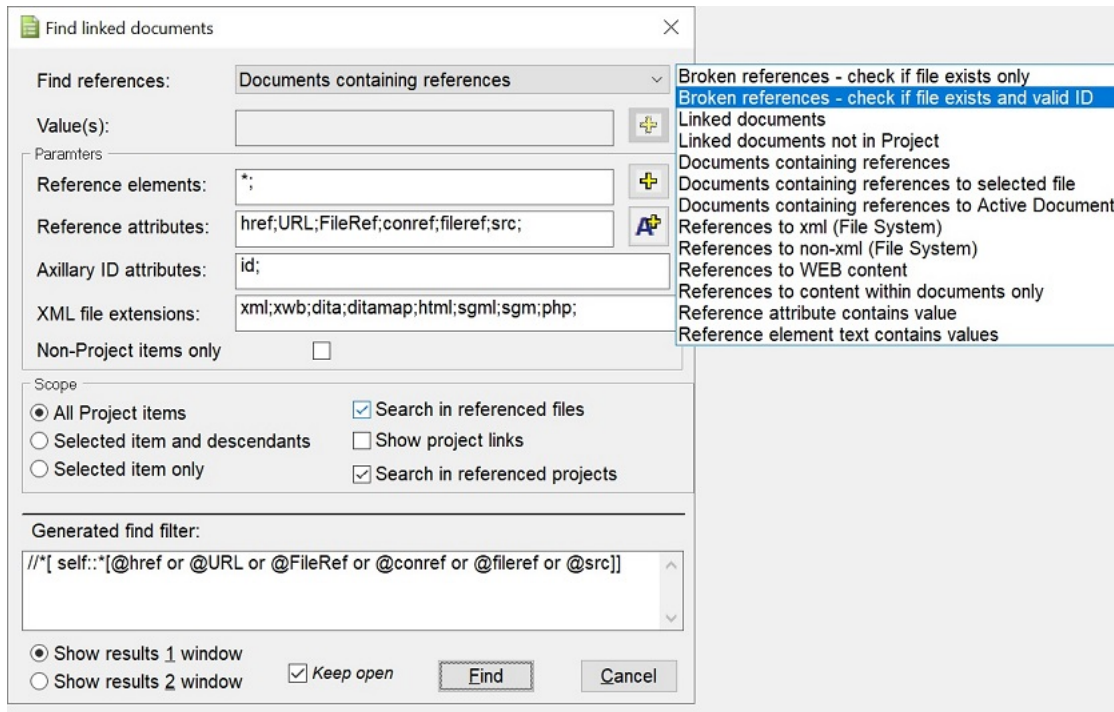


Figure 19: Find and validate links: user interface

Results Find tab:

The "Find and Validate Links" tool generates a list of documents, each containing sub-lists of references that meet the specified search criteria. Each entry in these sub-lists includes the reference's markup content, reference text, a link to the reference location, and a link to the reference target. This enables users to efficiently navigate and validate both the links and their corresponding targets.

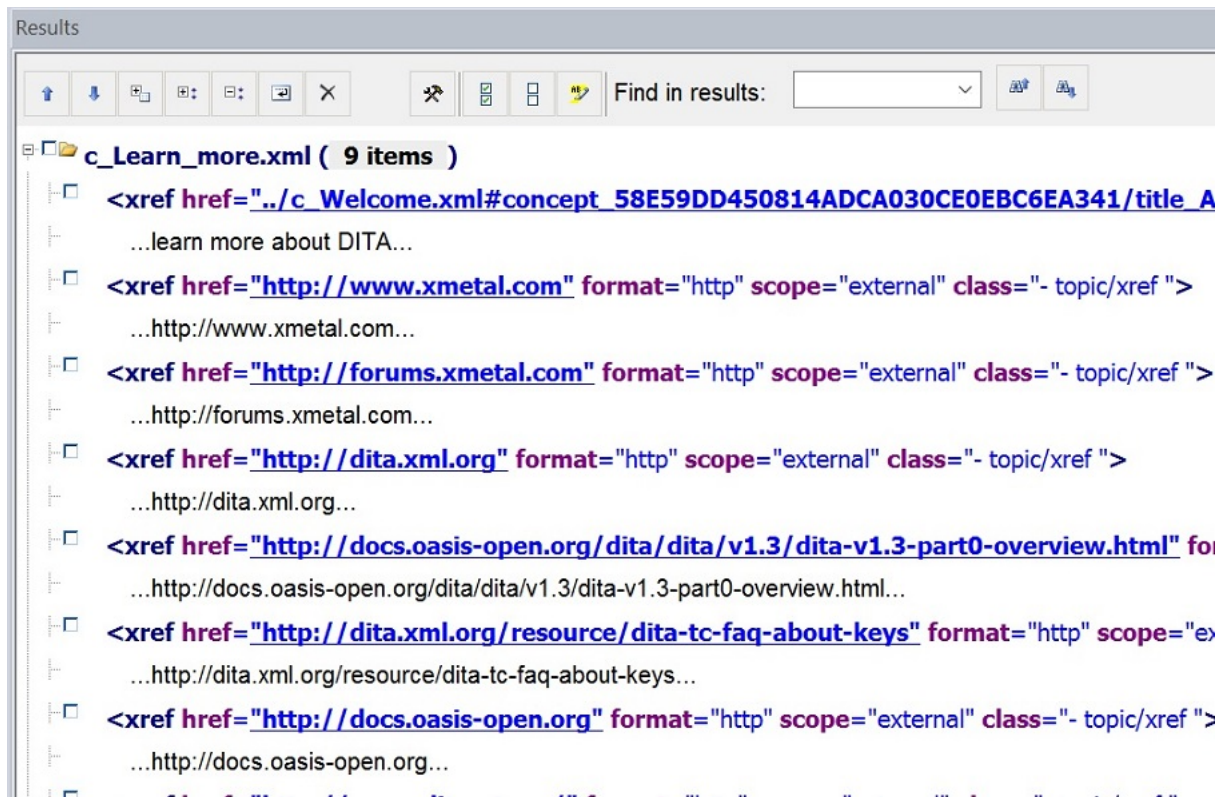


Figure 20: Find and validate links: results tab

3rd party viewers

This option configures XMetaL to display media whose format requires third-party control for viewing. Element types set up with Treat-As-Image designation will be so configured.

For more information, contact [XMetaL Support](#)

Appendix A: XML basics

XML (Extensible Markup Language) is a recommendation of the World Wide Web Consortium (W3C). It is a language for describing the structure and content of a document. Authors use XML to “mark up” their documents for a consuming application such as a Web browser or print formatting engine. XML is an application of SGML (Standard Generalized Markup Language). XML is more flexible than other markup languages such as HTML because it allows you to create your own markup. This makes it better suited to describing and processing complex information.

Separation of content and format

XML elements describe the role the information plays in a document, not how it is to be formatted. Consuming applications such as Web browsers receive instructions from a style sheet on how to render the markup. XML elements can also be transformed via XSLT (Extensible Stylesheet Language Transformations) into elements that are recognized by a consuming application. For example, an XML `<title>` element can be transformed into the HTML `<h1>` element for rendering in a specific size and typeface.

XML declaration

All XML documents start with a processing instruction (the *XML declaration*) that indicates that the file is an XML file and which version of XML is used. Some XML declarations also specify a character encoding. The recommended encoding for XML documents is UTF-8. Here is an example:

```
<?xml version="1.0"
encoding="UTF-8"?>
```

References

You are encouraged to consult the many available printed and online references. These include the following:

- *The Extensible Markup Language (XML) 1.0 (Fourth Edition)* (a W3C Recommendation), available at www.w3.org/TR/REC-xml
- *The XML Handbook* by Charles Goldfarb and Paul Prescod, at www.xmlhandbook.com
- *The Annotated XML Specification* by Tim Bray, at www.xml.com/axml/testaxml.htm
- XML-related publications, events, and software, from the World Wide Web Consortium web site at www.w3.org/XML
- XML.com
- The SGML/XML Web Page (maintained by Robin Cover) at www.oasis-open.org/cover/sgml-xml.html provides a reference database
- *The XML Companion* by Neil Bradley is recommended for beginners (see also www.bradley.co.uk)
- *XML Specification Guide* by Ian Graham and Liam Quin is a comprehensive reference book (see also www.wiley.com/compbooks/graham-quin)
- *XML: The Annotated Specification* by Bob DuCharme is recommended for advanced users
- The Project Cool Developer Zone at <http://www.devx.com/projectcool/developer/> provides references on various technologies, including XML
- *XML by Example* by Benoit Marchal is recommended for intermediate-level Web developers
- *XML Black Book* by Natanya Pitts-Moultis and Cheryl Kirk is recommended for intermediate to advanced webmasters and Web developers
- *XML Pocket Reference* by Robert Eckstein, a reference for XML, XSL, and XLL

Valid vs. well-formed documents

An XML document is *well-formed* if it is structurally correct according to the XML standard. It is *valid* if it conforms to a DTD or Schema. XML documents can be well-formed without being valid; however, all valid XML documents are well-formed by definition. SGML documents must be valid *and* well-formed.

There are several aspects to well-formedness:

- The document must have only one top-level element that contains all other elements.
- All elements (with the exception of the top-level element) must be nested, that is, if an element's start tag occurs inside an element, then its end tag must occur inside the same element.
- An attribute name cannot occur twice in the same tag.
- All characters must be in the character set defined by the XML standard (that is, Unicode).
- Entities must not be defined recursively.

DTDs and Schemas

DTDs and Schemas define the information that can be contained in a document and facilitate the exchange of similarly defined information between systems. Although XML files can exist as well-formed, stand-alone documents, most are associated with either a document type definition (DTD) or an XML Schema. SGML files must be associated with a DTD.

Document type definitions

Document type definitions contain declarations that describe document structure using a formal notation. They define the names of elements and attributes and the document hierarchy.

DTDs specify which elements can or must be contained in a document and their allowable sequence and combinations. They are *often* separate files with the extension '.dtd', but declarations can also be included wholly within the XML or SGML document itself as part of the document type declaration.

A DTD can consist of one or many files. Some DTDs use parameter entities to "call in" blocks of declarations that exist in other files.

XML Schemas

XML Schemas are similar to DTDs in that they describe a document structure, but they are written in XML. They also provide flexibility in defining complex data types. Schemas are supported in XML only.

A Schema is *always* a separate file with the extension '.xsd'.

Document type declarations

Document type declarations associate XML documents with a DTD. They consist of an external identifier, an internal subset, or combination of the two.

Here is an example of a document type declaration:

```
<!DOCTYPE BOOK
PUBLIC "-//XYZ Corporation//Book v1.0//EN" "book.dtd">
```

The *document type name* follows the DOCTYPE keyword (in this case, 'BOOK'). By default, this is the top-level element in the DTD.

A document that refers to a DTD or Schema is referred to as a *document instance*.

External identifiers

The document type declaration can include an *external identifier* that specifies an external DTD file.

External identifiers consist of either of the following:

- The SYSTEM keyword followed by a system identifier
- The PUBLIC keyword followed by a public identifier followed by a system identifier

The system identifier can be a filename or URL and is generally the filename of the DTD (for example, 'book.dtd'). The public identifier is an arbitrary identifier that is agreed upon by the various organizations that use the DTD (for example, '-//XYZ Corporation//Book v1.0//EN'). If the external identifier starts with SYSTEM, there cannot be a public identifier.

Here are two document type declarations that refer to the same DTD:

```
<!DOCTYPE BOOK SYSTEM "book.dtd">
```

```
<!DOCTYPE BOOK PUBLIC "-//XYZ Corporation//Book v1.0//EN"
"book.dtd">
```

Another form of external identifier is available *for SGML documents only*, in which the PUBLIC keyword is followed by a public identifier, but no system identifier. Here is an example:

```
<!DOCTYPE BOOK PUBLIC "-//XYZ Corporation//Book
v1.0//EN">
```

Public identifiers can be mapped to system identifiers using a catalog file.

Internal subset

An *internal subset* is an optional part of the document type declaration that contains additional declarations.

The internal subset follows the external identifier (if there is one) and is enclosed in square brackets. Here is an example of an internal subset:

```
<!DOCTYPE Article SYSTEM
"journalist.dtd" [ <!ENTITY Title "The History of the XYZ Corporation">
... ]>
```

Declarations in the subset are read *before* declarations in the external DTD file; therefore, they override any external declarations of the same name. Attribute list declarations specifying different attributes of the same element are combined, but if the same attribute is specified in both places, the specification in the internal subset takes precedence.

A document type declaration can omit the external identifier. In this case, the document's DTD is internal (contained completely in the internal subset). Here is an example:

```
<?xml
version="1.0" standalone="yes"?> <!DOCTYPE Article [ <!Element Article
(Title, Sect1+)> <!Element Title (#pcdata)> <!Element Sect1
(Title,Para+)> <!Element Para (#pcdata)> <!Attlist Article Id ID
#IMPLIED> ]> <Article> ... </Article>
```

Elements

An element is a markup construct that consists of tags and content. Tags are written using angle brackets ('<' and '>') and contain element names. Elements are named according to their function in the document. For example, the <section> element describes a section. Elements can include attributes, text, or other elements. The elements available in your document and the sequence in which they must appear is defined in a DTD or Schema.

Since documents are formatted differently by each rendering agent (for example, a browser), you may prefer to think of elements as standing for parts of the document's structure (for example, heading, paragraph, list item) without thinking explicitly about how they are formatted.

In DTDs, an elements are defined using the ELEMENT keyword. The following sample defines `topic`, `title`, and `para` elements:

```
<!ENTITY % typemods "b|i|u|pre|tt"> <!ELEMENT
topic (title, para+) > <!ELEMENT title (#PCDATA) > <!ELEMENT para
(#PCDATA|*typemods;)* >
```

Here is a corresponding document instance:

```
<!DOCTYPE topic SYSTEM "topic.dtd"> <topic>
<title>My sample topic</title> <para>The first
paragraph.</para> <para>The second paragraph.</para>
</topic>
```

In XML, element names are case-sensitive. The following samples represent different elements:

```
<Topic>...</Topic>
<topic>...</topic>
```

The following markup is illegal:

```
<Topic>...</topic>
```

Empty elements

Elements can also be defined as empty. These elements cannot have any text content. Here is a sample definition of an empty element in a DTD:

```
<!ELEMENT newpage EMPTY >
```

Empty elements appear differently in XML and SGML.

```
<!-- an empty
element in XML --> <newpage/>
```

```
<!-- an empty
element in SGML --> <newpage>
```

Attributes

Attributes consist of name/value pairs that are used to provide more information about an element. Attribute values are not part of an element's content. The DTD or Schema specifies attribute names and allowed values.

In DTDs, attributes are defined within attribute lists, which are declared using the `ATTLIST` keyword. In the following example, an attribute list defines an audience attribute for the `topic` element:

```
<!ENTITY % typemods "b|i|u|pre|tt"> <!ELEMENT topic (title,
para+) > <!ATTLIST topic audience CDATA #IMPLIED > <!ELEMENT title
(PCDATA) > <!ELEMENT para (PCDATA|%typemods;)* >
```

Attribute names are separated from the element name by a space, and values are enclosed in quotation marks. Here is a corresponding document instance:

```
<!DOCTYPE topic SYSTEM "topic.dtd"> <topic
audience="administrators"> <title>My sample topic</title>
<para>The first paragraph.</para> <para>The second
paragraph.</para> </topic>
```

In XML, attributes and their values are case-sensitive. The following samples represent different attributes and values:

```
version="beginner" Version="beginner"
version="Beginner" Version="Beginner"
```

Data types and default values

Here are some commonly used attribute data types:

- `CDATA` describes a sequence of characters from the document character set and may include character entities.
- `ID/IDREF` are identifiers. The value of an `ID` attribute is used to identify an element and must be unique. The value of an `IDREF` attribute must be the value of an `ID` attribute somewhere in the document.
- `NUMBER` tokens must contain at least one digit (0-9).

Attributes can also be defined as a name token group that restricts the possible values to a list.

Default values for attributes are defined by the default value parameter. Here are some commonly used parameters:

- `REQUIRED` means that a value must be specified.
- `IMPLIED` means that specifying a value is optional.
- `FIXED` describes a fixed value for an attribute. The value cannot be modified.

Entities

An *entity* is a named body of data that you can refer to from within your document. An *entity declaration* names the body of data and its replacement text or file reference. Entities are declared within the DTD or your document's internal subset. You can refer to the declaration from within your document using an *entity reference*. When the document is displayed in a rendering agent, the entity reference is replaced by the text or file that the entity represents. Entities are an important mechanism for supporting content reuse and data management. In XML, entity names are case-sensitive.

Text entities

Text entities specify replacement text within the entity declaration itself. This type of entity is useful for "boilerplate" text or for terms that may change, such as product names or version numbers. For example, in the following user manual, the name of the product is declared as 'Z2000' in the `prodname` entity. For

subsequent model numbers, you need only change the replacement text to have the change reflected throughout the document.

```
<!DOCTYPE manual
SYSTEM "manual.dtd" [ <!ENTITY prodname "Z2000"> ]> <manual>
<chapter> <title>Installing the &prodname;</title>
<p>The &prodname; is easy to install.</p> </chapter>
</manual>
```

External entities

External entities refer to text and markup that exists within an external file. In SGML, external entities include a system identifier or a public identifier or both. XML requires a system identifier, and a public identifier is optional. Here are some examples:

```
<!ENTITY copyright SYSTEM "copyright.txt" --
a copyright notice containing a block of text -->
```

```
<!ENTITY section SYSTEM "section.xml" -- a
section containing text and markup -->
```

Graphic entities

Graphic entities are used to refer to image, video, sound, or other multimedia files. These entities are not parsed and they must specify a notation. Notations specify how the file is encoded. Here is an example of an unparsed entity declaration and corresponding reference:

```
<!DOCTYPE chapter [ <!NOTATION JPEG
SYSTEM "Joint Photographic Experts Group"> <!ENTITY dogpic SYSTEM
"lassie.jpg" NDATA JPEG> ]> <chapter>
<title>Dogs</title> 
</chapter>
```

Character entities

Character entities are used to represent certain typographical characters, such as symbols and accented letters, that are not normally found on US keyboards. For example, the character reference `…` represents an ellipsis (...). Numeric character entities do not have to be declared in XML documents because they are included in the XML specification.



Note: Named character entities, for example, `…`, must be declared in the DTD.

Parameter entities

Parameter entities are used to insert declarations. The internal subset can refer to an external DTD using a parameter entity reference. In the following example, `%journalist;` causes the declarations in `journalist.dtd` to be parsed just as if they were included in the file.

```
<?xml version="1.0"?>
<!DOCTYPE Article [ <!ENTITY % journalist SYSTEM "journalist.dtd">
%journalist; ]> <Article> ... </Article>
```

Many DTDs also use this mechanism to “call in” blocks of declarations. In the following DTD, `%topic-type;` causes the declarations in `topic.mod` to be parsed just as if they were included in the file.

```
<!ENTITY % topic-type PUBLIC "-//XYZ
Corp//ELEMENTS Topic//EN" "topic.mod"> %topic-type;
```

Related Links

[Internal subset](#) on page 219

An *internal subset* is an optional part of the document type declaration that contains additional declarations.

CDATA sections

A CDATA (character data) section is a type of marked section that is used to prevent content from being interpreted as markup. A *marked section* is a markup construct that designates content for special processing.

For example, the following document includes an sample code that contains markup characters ('<' and '>'). In this case, you do not want these characters to be interpreted as markup, so you enclose them in a CDATA section.

```
<?xml version="1.0" encoding="UTF-8"?> <technote>
<title>Audience attribute</title> <para>The audience
attribute describes the intended audience. It is defined for the TOPIC element.
Here is an example: <![CDATA[<topic audience="administrators" />]]>
</para> </technote>
```



Note: SGML files can have several types of marked sections, but XML files can have only CDATA sections.

Comments

Comments contain additional information about the text or markup. They are ignored during processing. Comments can contain text only.

The following sample XML document includes a sample comment.

```
<?xml version="1.0" encoding="UTF-8"?> <!--
here is a comment in an XML document --> <topic> <title>My
sample topic</title> <para>The first paragraph.</para>
<para>The second paragraph.</para> </topic>
```

Comments in DTDs have a special syntax.

```
<!ELEMENT para
(#PCDATA|&typemods;)* -- here is a comment in a DTD -->
```

Processing instructions

Processing instructions contain instructions for applications.

The following processing instruction identifies the document as an XML 1.0 document that uses Unicode encoding.

```
<?xml version="1.0"
encoding="UTF-8"?>
```

Appendix B: W3C XML Inclusion (XInclude) Support

XInclude allows you to create larger XML documents from smaller documents without needing to manually duplicate content.

With XInclude, you can assemble multiple XML instances into a larger XML document through inclusion. This allows for easier editing using smaller files, improved distributed authoring, and reuse of content.

In XMetaL, XInclude support is turned off by default. For information on enabling XInclude, see the XMetaL Developer Customization Guide.

About W3C XInclude Support 1.0 (Second Edition)

W3C XInclude Support 1.0 (Second Edition) introduces a generic mechanism for merging XML documents for use by applications that need such a facility. The syntax leverages existing XML constructs - elements, attributes, and URI references. For more information on W3C XInclude Version 1.0 (Second Edition), go to <http://www.w3.org/TR/xinclude/>

XInclude Customization Features

Depending on your customization of XMetaL Author, you may be able to update, show, hide and/or open XIncluded target content.

- Updating XIncludes will import that target content and process it in accordance to the W3C XML Inclusion specification. Any processing errors are listed within the XML Inclusion log pane. The target content's physical location can be either on the local file system or within your CMS (provided you have an XMetaL Connector).
- Showing XIncludes allows you to view the target content inline with the rest of your document. When includes are shown inline, they are in read-only but you are permitted to make selections and copy the content.



Note: Showing includes does not automatically update the includes if you have made changes to the target content.

- Hiding XIncludes allows you to edit the include element's attributes or fallback element.
- Opening XIncludes opens the files that contain the target of an xinclude's link.

XML inclusion log

The XML inclusion log is a list of XML inclusion link errors. The XML inclusion log is displayed in the Link Errors pane of the XMetaL Author user interface. Clicking on a link error displays the error in the main pane.

Limitations and Variations

The XML Inclusion support has the following limitations:

- For parse="xml", included target markup must be defined by the top-level source document's schema or DTD. Furthermore, appearance in Tags On/Normal view is determined by the top-level source document's customization (i.e., CSS and CTM settings).
- XPointer has the following limitations:
 - The xptr-xpointer scheme is built on the XMetaL xpath capability and supports whatever XMetaL supports for xpath.
 - The xptr-xpointer scheme does not support additional functionality described in 4.2 Additions to XPath Terms and Concepts of <http://www.w3.org/TR/xptr-xpointer/>.

- Limited support for range-to:
 - Supports node-to-node (inclusive) range only (subsequent steps can remove start/end node).
 - If the start point returns a node set, the last node in the node set is used as start point.
 - If the end point returns a node set, the first node in the node set is used as end point.
 - Start point and end point must be siblings.
 - The system handles form: `/.../range-to(Expr)/...`
 - The system does NOT handle form: `/.../range-to(Expr)Predicate*/...` However, there is a partial workaround: `/.../range-to(Expr)/self::node()[Predicate]/...`,



Note: The above workaround cannot handle cases related to positions, e.g., 2nd node within the range.

- `parse="text"` is wrapped with a CDATA section for inline display within your editor. The CDATA tags are removed when you exporting the content.

Appendix C: XMetaL Licensing Server

The XMetaL Licensing Server includes an user interface to allow for administration of your license server and licenses.

Installing XMetaL Licensing Server

1. Launch the installer, and click through the setup wizard, taking into account the following.
2. On the End-User License Agreement screen, select the check box to agree to the end-user license.
3. On the Destination Folder screen, select the destination folder manually or by browsing for it.

XMetaL License Server is now installed on your computer.

Using XMetaL Licensing Server Admin

The user interface consists of two tabbed views, for administration of the licensing server as well as for the contents of the user licenses+.

License Server

The license server tab includes the following items:

Floating Licenses List - displays all active and inactive, floating licenses. For each licenses the following information is displayed:

- **Product** - the XMetaL product to which the license applies
- **Maintenance End** - the date at which the product maintenance period expires
- **Quantity** - the total count of licenses of this type
- **In Use** - the total count of licenses of this type that are currently active

Administrators can perform the following actions on this list:

- **Refresh** - displays the latest list of floating licenses
- **Add Licenses** - allows you to add license files to the License Server's database
- **Remove Licenses** - allows you to remove license files from the License Server's database

Settings - allows administrators to modify the following settings:

- **Host Name** - displayed as read-only
- **Port** - displayed as read-only
- **Modify** - click this button to edit the Host Name or Port number
- **Start Service** - starts the licensing server
- **Stop Service** - stops the licensing server

Stopping and re-starting the service is beneficial, for example, if a client has crashed while XMetaL was in use, and the license may not have been released. In this case, stopping and starting the service frees up these licenses without needing to wait for the server to do so.

User License

This view displays the user license file contents. Administrators can perform the following actions:

- **Save to File** - saves the license file to a location of your choice
- **Copy Server Address to Clipboard** - copies the URL to the clipboard, to allow for sharing of the server address

Glossary

attribute	A value that is associated with an element but is not part of the content of the element.
block element	An element whose content is preceded and followed by line breaks.
browser	A program that communicates with Web servers and is used for retrieving and displaying documents from the World Wide Web or an intranet. Most browsers use a graphical interface to provide access to text, images, audio, and video.
CALS table model	A widely used DTD for table markup, described in the U.S. Department of Defense SGML standard MIL-M-28001B. XMetaL Author supports a definition of the CALS DTD developed by the OASIS consortium and described at www.oasis-open.org .
cascading style sheet (CSS)	A way to specify document formatting that is supported by browsers. XMetaL uses cascading style sheets to format the document pane in Normal and Tags On views. A cascading style sheet generally consists of one or more rules that define element appearance. These style sheets are said to be cascading because several style sheets can be applied to the same document. See www.w3.org for more information.
catalog files	One or more files that map external identifiers for DTDs, rules files, or entities to a filename. Also called OASIS catalog files. For more information on catalog files, see OASIS Technical Resolution 9401:1997 .
CDATA	Character data. A type of content in which any markup delimiters (such as '<' and '&') that appear are treated as ordinary characters.
CDATA section	A markup construct beginning with the characters '<![CDATA[' and ending with ']>', inside which all content is treated as character data.
content model	An expression in a DTD that defines the content of a particular element.
current element	The element containing the insertion point or selection. If an entire element is selected, the current element is the parent of that element, not the selected element itself.
customization	A set of files that determines the formatting and authoring functionality in XMetaL Author. Customizations can be applied at the document level or at the application level.
DOCTYPE declaration	Document type declaration. A declaration that associates an XML or SGML document with a DTD, and may contain additional markup declarations.
Document Object Model (DOM)	The Document Object Model (DOM) is an abstract definition of an API (application program interface) for manipulating XML document structures. The DOM is a Recommendation of the World Wide Web Consortium (W3C), developed and maintained by the W3C DOM Working group. XMetaL follows the DOM Level 1 Specification . The DOM was designed to represent XML structures, but can represent SGML structures (such as CALS tables) if they are also found in XML.
DTD	Document Type Definition. A set of definitions, written in a formal notation, that defines the structure and content of a document.
element	The building blocks of XML and SGML documents. Elements are named according to their function in the document, for example, headings, lists, and paragraphs.
empty element	An element that cannot have any content.
entity	A named body of data that you can refer to from within a document.

entity reference	A reference, using a specific syntax, to an entity. When the document is displayed in a browser or editor, the entity reference is replaced by the text or file that the entity represents.
external entity	A type of entity that represents another file.
external identifier	A way of identifying an external file. External identifiers can appear in a document type declaration and in external entity declarations, where they identify the external file that the entity refers to. In SGML files, external identifiers can consist of a system identifier, a public identifier, or both. In XML files, external identifiers must contain a system identifier, which may be preceded by a public identifier.
external identifier map file	A file that associates external identifiers with filenames on the system.
followed-by element	An element that is inserted following the occurrence of a specific element. Followed-by elements are configured in XMetaL Developer as part of the customization (.ctm) file.
form	A data-entry interface usually associated with specific elements in an XMetaL document. Forms are designed in the XMetaL Forms Toolkit (XFT) either as dialog boxes that are launched from an XMetaL macro, or as content that appears as part of an element.
general entity	These can be text entities, external entities, or graphic entities.
generated text	Text that is not part of the document content, but is generated by a display program and displayed at the beginning or end of an element's content.
graphic entity	A type of general entity that represents an external multimedia file, for example, a graphic, video, or audio file.
hypertext	Text that can be used to link to another document or another location in the same document. The viewer can display the linked document or location by clicking the text.
ID	A unique identifier. The value of an ID attribute must not be used for any other ID attribute in the document.
IDREF	A reference to an ID. IDREF attribute values do not have to be unique; more than one IDREF can refer to the same ID.
in-place control	An ActiveX control that is embedded in the Normal and Tags On document panes in XMetaL Author or XMetaL XMAX, and communicates with XMetaL Author or XMetaL XMAX so that changes in the control can modify the document, and vice versa.
inline element	An element that does not have a line break before or after its contents. They are often used for typeface modifications.
internal subset	An optional part of the document type declaration that may contain markup declarations.
ISO	International Organization for Standardization.
ISO 8859-1 character set	The character set for special or accented characters that is widely used in HTML documents. This character set is also called ISO Latin 1. It includes characters required for most western European languages.
macro	A sequence of XMetaL operations that can be run as a unit via a keyboard shortcut, a toolbar button, or a menu item. Macros can be recorded from within XMetaL Author, or created by inserting scripting code into a macro file using XMetaL Developer.

marked section	A markup construct in XML and SGML documents that designates the content for special processing. The parameters of the marked section specify the type of processing. A common use of marked sections is to cause a portion of the document to be treated as text, not markup.
marked section parameter	Keywords that determine how to process a marked section in an SGML document. The available keywords are INCLUDE (process the section normally); IGNORE (do not process the section); CDATA (treat elements and entity references in the content as text, not markup); RCDATA (treat elements in the content as text, not markup); and TEMP (the section is temporary).
markup	Special instructions or indicators in a document that specify how the enclosed content is to be processed by an application. Element tags are an example of markup.
MCR file	A macro file. An MCR file is an XML-based customization file containing XMetaL macros, or scripts.
mini-template	The mini-template contains elements and prompt text that you can replace with your own content.
namespace	A feature of XML that permits documents to contain identically-named elements defined in more than one DTD or schema.
notation	A declaration in a DTD that specifies a file format that can be used for files represented by graphic entities. For example, if GIF files are to be used, a notation declaring the GIF format must be present in the DTD.
OASIS	Organization for the Advancement of Structured Information Standards, a consortium dedicated to promoting structured information standards such as XML and SGML. For more information, see www.oasis-open.org .
parameter entity	An entity that is used to insert declarations in a DTD or internal subset.
PCDATA	Parsed character data. The most common form of text content in XML and SGML documents. In PCDATA text, any markup, such as element start and end tags and entity references, is interpreted with its normal meanings.
pretty-printing	Saving an XML or SGML file so that it is easily readable in Plain Text view by adding whitespace, for example, by indenting lists to reflect a nested structure.
PRE-like elements	Elements that are formatted to look like the HTML <PRE> element; that is, with all whitespace preserved exactly as it was entered.
processing instruction	An instruction that is not interpreted as part of the document's content, but rather interpreted by an application that is processing the file.
public identifier	A system-independent string that is used to represent a DTD or entity file. Part of an external identifier.
RCDATA	Replaceable character data. SGML files can have RCDATA elements and marked sections, in which any element start- or end-tags that occur are interpreted as text, but any entity references are interpreted in the normal way.
remote file	A file on an http or Web server.
required attribute	An attribute that must be present in order for the document to be valid.
required element	An element that must be present in order for the document to be valid.
rules checking	An XMetaL feature that ensures that you do not break the required structure as you edit your document; it does this by allowing you to insert only valid elements. Rules checking is less stringent than validation in that it checks that no errors have been made, but does not check that the markup is complete.

Rules file	An XMetaL-specific alternative to a DTD. All of the files comprising a DTD are compiled into a single binary rules file. Rules files can be issued to XMetaL users who are not authorized to modify the DTD.
Schema	An XML standard for defining the structure, content, and semantics of an XML document.
SDATA entity	A type of text entity whose content is specific to a particular processing application or platform. These entities are often used to represent platform-specific characters, and codes for formatting systems (such as troff or TEX). SDATA entities are permitted only in SGML files.
selector	In a cascading style sheet, a selector is an expression, representing one or more elements, that a style property can be associated with. A selector can represent an element, several elements, an element with a specific ancestor, an element in a particular class, etc.
semantic tables	A group of elements that is not marked up with one of the supported table models (CALs and HTML) that can be formatted as a table.
SGML	Structured General Markup Language. A standard for describing the structure of a document using markup. SGML is described by the ISO 8879 standard 1986). HTML and XML are applications of SGML.
SGML declaration	An SGML declaration is a file associated with a DTD that contains information about the character set, markup delimiters, quantity settings, and special markup features that are available in documents that use that DTD.
SQDIR	The variable that is used to represent the folder in which XMetaL is installed.
standalone document	An XML document that an application can parse without referring to an external DTD. A standalone document may still require a DTD in some situations, for example, if it is being edited.
system identifier	Part of an external identifier. A system identifier is generally the filename of the file (for example, a DTD or entity set) that the external identifier refers to. In XML documents, system identifiers are required in external identifiers, and are interpreted as URLs.
tags	An element begins with a start-tag (for example, <PRE>) and ends with an end tag (for example, </PRE>).
TBR	Toolbar file. Toolbar and menu customizations are saved in TBR files.
text entity	A type of general entity that stands for one or more text characters.
Unicode	A standard for electronically encoding the characters of many of the scripts used to write the world's languages, as well as special symbols such as mathematical symbols. Unicode is the character encoding specified by XML. For more information, see www.unicode.org .
URL	Uniform Resource Locator. A URL is the address of a file, written in a format that can be interpreted by a Web server.
valid document	An XML or SGML document is valid if it conforms to the rules in the DTD or Schema.
W3C	World Wide Web Consortium, an industry association for the development of World Wide Web technologies. For more information, see www.w3.org .
WebDAV	World Wide Web Distributed Authoring and Versioning, the Internet Engineering Task Force standard for collaborative authoring on the Web. WebDAV is a set of extensions to the Hypertext Transfer Protocol (HTTP) and Secure Hypertext Transfer Protocol (HTTPS) that facilitates collaborative editing and file management between users located remotely from each other on the Internet.

well-formed document	An XML document that is structurally correct according to the XML standard. There are several aspects to well-formedness, the most important of which are: the document must have only one top-level element, and all elements must be properly nested.
whitespace	One or more space, tab, carriage return, or line feed characters, in any combination.
World Wide Web	This is a generic term for the collection of Web servers and browsers. Usually abbreviated as WWW, or simply called 'the Web'.
XML	Extensible Markup Language. An application of SGML that describes the structure and content of a document. Originally designed for displaying content over the Internet. XML is an initiative of the W3C. For more information, see www.w3.org/XML .
XML declaration	A processing instruction that appears at the start of an XML document. This processing instruction indicates the XML version being used, and may specify the character encoding and whether the document needs an external DTD.
XSLT	Extensible Stylesheet Language: Transformations. A language for describing how to transform an XML document into another XML document.
xs:redefine	An element that redefines simple and complex types, groups, and attribute groups from an external schema. For more information, see http://www.w3.org/TR/xmlschema-1#modify-schema

Index

- .bmp files 105
- .css files 51, 99
- .ctm files 51, 99
- .emf files 105
- .eps files 105
- .gif files 105
- .ico files 105
- .ini files 47
- .jpg files 105
- .mcr files 43, 99
- .mdb files 120
- .pcx files 105
- .png files 105
- .rld files 51
- .rls files 51
- .rlx files 51
- .svg files 105
- .tbr files 23, 99
- .tga files 105
- .tif files 105
- .wmf files 105
- .xls files 120

3rd party viewer 216

A

- accelerator keys 125
- accepting tracked changes 84
- access keys 125
- adapter configuration file 65
- assets
 - adding objects to an asset folder 42
 - asset templates 42
 - creating 42
 - creating a new folder 42
 - My Assets folder 42
- Attribute Inspector 13, 103
 - sort 13
- attributes 220
 - case-sensitivity 220
 - creating in well-formed documents 61
 - default values 220
 - finding 70, 85
 - removing 70, 85
 - searching for 70, 85
 - setting values 103
 - special characters in 103
 - types 220
- autonumbering 37

B

- background spell checking 76
 - automatically correcting spelling 77

- background spell checking (*continued*)
 - manually correcting spelling 77
 - turning on 77
- Blank XML Document template 51
- blue diamond (to denote empty elements) 100
- bookmark manager 142
- bookmarks 142
- bookmarks and comments 142
- browse for DTD 54
- browsers
 - adding, for Page Preview 9
 - associating with buttons on Preview toolbar 9
 - removing, for Page Preview 9

C

- CALS tables 106, 107
- caption, in HTML table 108
- cascading style sheet editor 26
- cascading style sheets 51, 99
 - :after pseudo-element 37
 - :before pseudo-element 37
 - counters 37
 - extensions 36
 - left indent property 36
 - miscellaneous properties 36
 - prefix options 36
 - Structure View 12
 - Structure View options 36
 - style properties 36
 - supported properties 38
- case-sensitivity 220, 221
- case, names 217
- catalog files 219
- CDATA sections 117, 223
- changes
 - accepting tracked 84
 - rejecting tracked 84
 - tracking 84
- character data sections 223
- character entities 221
- characters
 - non-ASCII 116
 - special 116
- checking markup 96
- checking spelling 71, 72, 73, 76, 77
 - automatically correcting 77
 - manually correcting 77
- closing
 - documents 53
 - multiple documents 53
- comments 223
 - displaying 118
 - inserting 118
- configuration file 47

- content
 - authoring 96
- copy full path 55
- copy table cells 110
- copying text 67
- counters
 - counter-increment 37
 - counter-reset 37
 - initializing 37
 - multi-level 37
 - styles 37
- create
 - assets 42
 - macro 43
 - menu 24
 - templates 52
 - toolbar 24
- cross-file 86, 87, 89, 90
 - operation 85
- CSS
 - supported properties 38
- current element 100
- custom palette, for tag and text colors 11
- customization file 51, 99
- customizations 99
- customizing the user interface 23
- customizing XMetaL Author 43, 47
- cutting text 67

D

- database import 120
 - choosing databases 120
 - choosing fields 121
 - formatting table and element output 123
 - table joins 122
 - updating tables 120
- databases 120
- declaration subset 219
- default view, setting 47
- definition lists 103
- deleting text 67
- diamond (to denote empty elements) 100
- display properties
 - supported CSS selectors and elements 38
- docked panes 13
- docking indicator 13
- DOCTYPE 218
 - internal subset 219
- Document Ex 138
- document instance 218
- document status bar 9
- document type declaration 218
- document type name 218
- document views 9
- documents
 - closing 53
 - creating 96
 - linked 63
 - moving between 55
 - opening outside XMetaL 55
 - saving 58

- download referenced components 65
- dragging-and-dropping text 67
- DTDs 218
 - internal 219
- duplicate IDs 89

E

- edit
 - element properties 103
- edit as partial document 54
- editing
 - accepting tracked changes 84
 - rejecting tracked changes 84
 - source 9
 - text 67
 - tracking changes 84
- editing documents without a DTD 60
- editing options 54
- Element List 13, 100
- element properties 103
- elements
 - block 100
 - case-sensitivity 220
 - changing 100
 - creating in well-formed documents 60
 - current 100
 - empty 100, 220
 - finding 70, 85
 - inserting 100
 - joining 100
 - read-only 100
 - removing tags 100
 - replacing 70
 - selecting 67
 - splitting 100
 - wrapping and unwrapping 100
- empty elements 100, 220
- enlarging the document pane 20
- entities 115, 221
 - case-sensitivity 221
 - external 115, 221
 - for images and multimedia files 115, 221
 - for special characters and symbols 221
 - for text files 115, 221
 - for XML or SGML files 115, 221
 - graphic 115, 221
 - naming conventions 115
 - opening external 115
 - opening external entities 53
 - parameter 221
 - text 115, 221
- entity references 221
 - finding 71
 - replacing 71
 - replacing text 68
 - replacing with text 71
- error checking 73
- external entities 115, 221

F

file naming recommendations 58
 files
 closing 53
 creating a blank XML or SGML document 51
 creating a blank, well-formed XML document 51
 creating from a template 51
 creating new 51
 DTDs 218
 opening 53
 opening outside XMetaL 55
 printing 64
 saving 58
 Schemas 218
 fill cell attributes 111
 find
 across files 87
 in files 87
 Find and Replace 68
 find in files 85
 find markup
 across files 86
 find selected text on WEB 154
 find text on WEB 154
 finding
 attribute values 70, 85
 elements 70, 85
 entity references 71
 text 68, 85
 text in an element 68
 using pattern matching 69
 finding a word on Google 130
 finding a word on Wiki 130
 floating panes 13
 followed-by element 99
 Formatting toolbar 16
 full-screen mode 20

G

generated text
 counters 37
 graphic entities 115, 221
 graphics 105

H

HTML tables 106, 107

I

identifier
 external 219
 public 219
 system 219
 images 105
 BMP files 105
 EMF files 105
 EPS files 105
 formats supported 105

images (*continued*)

 GIF files 105
 hiding 47
 ICO files 105
 inline 47
 inserting 105
 JPG files 105
 PCX files 105
 PNG files 105
 showing 47
 SVG files 105
 TGA files 105
 TIF files 105
 WMF files 105
 importing
 databases 120
 Excel spreadsheets 120
 inline images, showing 47
 insert
 definition list 103
 elements 100
 list 103
 XInclude 224
 inserting
 CDATA sections 117
 comments 118
 marked sections 117
 processing instructions 119
 inserting elements 100
 interface
 document views 9
 introduction 9
 pane buttons 13
 panes 13
 internal DTD 219
 internal subset 219
 ISO 8859-1 character set 58

J

Journalist customization 9, 99

K

keyboard shortcut, creating in menus 24
 keyboard shortcuts 125
 keyboard shortcuts (for lists) 103

L

language settings for spell checker and thesaurus 81
 languages 78, 79, 81
 setting a default 81
 Latin-1 character set 58
 licensing 21
 linked documents
 archiving 63
 list items, inserting 103
 lists 103
 bulleted 103
 converting paragraphs to 103

- lists (*continued*)
 - converting to paragraphs 103
 - converting types 103
 - definition 103
 - inserting 103
 - nested lists 103
 - numbered 103
 - sorting 104
- local content 103

M

- macro files 99
- macros 43
 - associate with a menu item 46
 - associate with toolbar button 45
 - create keyboard shortcut for 45
 - design guidelines 44
 - files 43
 - inserting a tab in a table 113
 - locations 43
 - managing 43
 - recording 45
 - restrictions 44
 - running 43
- Macros toolbar 16
- main word lists 78
 - adding 78
 - removing 78
- marked sections 223
 - in SGML 117
 - inserting 117
 - order of precedence in SGML 117
- marking revisions 84
- markup
 - display options 47
 - source editing 9
- menus, custom 23
- merging tables 112
- Microsoft Access databases, importing 120
- Microsoft Excel spreadsheets
 - importing 120
 - pasting as tables 113
- Microsoft Internet Information Server (IIS) 55
- mnemonic 125
- moving between documents 55
- multiple documents 20
- multiple panes 13
- multiple-file operations 90
- multiple-user settings 23, 43, 47, 99
- My Assets folder 42

N

- names, case-sensitivity in XML 217
- nested lists 103
- new document 51
- non-ASCII characters 116
- Normal view 9

O

- online Help 9
- Open 53
- opening
 - documents 53
 - external entities 53
 - files in WebDAV-enabled folders 55
 - templates 51
- opening document folders
 - outside XMetaL 55
- opening documents
 - outside XMetaL 55
- options
 - auto-saving 47
 - backup 47
 - default extension 47
 - default template 47
 - end-of-line 47
 - File 47
 - font 47
 - General 47
 - most recently used (MRU) list 47
 - show/hide inline images 47
 - syntax coloring 47
 - tab 47
 - tooltips 47
 - View 47
 - word wrap 47
- outline view 12

P

- Page Preview 9
- panes
 - Attribute Inspector 13, 103
 - behavior 13
 - buttons 13
 - docked 13
 - Element List 13, 100
 - floating 13
 - options 13
 - Resource Manager 13, 42
 - Results 13
 - rules for docking and floating 13
- parameter entities 221
- pasting text 67
- pattern matching 69
- personal settings 23, 43, 47, 99
- pin 13
- Plain Text view 9
- Preview toolbar 9, 16
- printing 64
 - headers and footers 64
- processing instructions 217, 223
 - inserting 119
- prompt text 100, 119
- properties
 - editing 103
- public identifier 219
- PUBLIC keyword 219

Q

quick attribute inspector 62
 quick navigation 130
 quick navigation tool 130

R

raw code editing 9
 read-only elements 100
 rejecting tracked changes 84
 replacing

- elements 70
- entity references 71
- entity references with text 71
- text 68
- text with entity reference 68
- using pattern matching 69

 repository 65
 repository adapter 65
 repository configuration file 65
 repository file

- creating 65
- opening 65

 repository integration layer 65
 Resource Manager 13, 42
 Results 13
 results pane 90

- actions 92
- buttons 92

 Reviewing toolbar 16
 revision marking 84
 revisions

- accepting marked 84
- rejecting marked 84
- tracking 84

 rules checking 96
 Rules file 51
 rules for pinning and un-pinning 13
 running

- macros 43

S

sample files 9
 saving

- documents 58
- multiple documents 58
- options 47
- validating before 58

 Schemas 218
 Schematron

- options 97
- validating 97

 screen tips 47
 SDATA entities 217
 Search options 68
 search patterns 69
 searching 68

- for attribute values 70, 85
- for elements 70, 85
- for entity references 71

searching (*continued*)

- for text 68
- using pattern matching 69
- within an element 68

 separator line

- in menus 24
- in toolbars 24

 services

- multiple-file operations 90

 settings

- multiple users 23, 43, 47, 99
- personal 23, 43, 47, 99

 SGML 217

- comments 223
- empty elements 100, 220
- entities 115
- processing instructions 223
- references 217
- source editing 9
- valid markup 218

 shortcut keys 125
 showing inline images 47
 Smart Insert 96
 source editing 9
 special characters 116
 Special Characters and Symbols toolbar 16
 spell check 87
 spell checker 72

- languages 78
- options 73, 78, 79, 80
- word lists 72, 78, 79, 80

 splitting cells into columns 108
 splitting cells into rows 108
 splitting table groups 112
 splitting tables 112
 SQL 120
 Standard toolbar 16
 Structure View 12, 51
 style properties 36
 style sheets 51, 99
 styles

- supported properties 38

 symbol characters 116
 symbols 47, 116
 system identifier 219
 SYSTEM keyword 219

T

tab group

- horizontal 55
- vertical 55

 tabbed interface 20
 Table Advanced toolbar 16
 table caption (HTML table) 108
 table cells

- contracting spanning 109
- copying a selection of 109
- entering tab character 113
- height (HTML) 114
- merging 109
- pastings a selection of 109

- table cells (*continued*)
 - splitting 109
 - width 114
- table grid lines 106
- Table Properties 114
- Table toolbar 16
- tables 106
 - auto-suggest 108
 - CALS 107
 - change body row to header row 107
 - proportional column widths 114
 - captions 108
 - cell properties 114
 - column properties 114
 - column/cell width 114
 - contracting cells 109
 - copy cells 110
 - deleting cells 110
 - deleting columns 110
 - deleting rows 110
 - editing 108
 - fill series 111
 - from database 120
 - header rows 107
 - HTML 107
 - inserting 108
 - inserting caption (HTML table 108
 - inserting cells 108
 - inserting columns 108
 - inserting rows 108
 - merging 112
 - merging cells 109
 - moving rows and columns 108
 - navigating in 106, 125
 - pasting from other applications 113
 - properties 114
 - properties for a selection of cells 114
 - row properties 114
 - row/cell height (HTML) 114
 - sorting 113
 - sorting rows 113
 - splitting 112
 - splitting cells 108, 109
 - splitting table groups 112
 - XML model 123
- tag and text color, specifying 11
- tag-valid markup 96
- Tags On view 9
- templates 51, 52
- text
 - finding 68
 - finding in an element 68
 - replacing 68
 - replacing entity references 71
 - replacing with entity 68
- text case
 - changing 94
- Text Case Assistant 94
- text entities 115, 221
- thesaurus 82, 83
 - data file 83
 - languages 83

- thesaurus (*continued*)
 - options 83
- third-party viewer 216
- toolbar files 99
- toolbars 16
- toolbars and menus 23
 - files 23
 - locations 23
- toolbars, custom 23
- tooltips 47
- tracking changes 84
- treat-as-image 216

U

- un-pin 13
- Unicode 58
- unpin 13
- unwrapping elements 100
- US-ASCII encoding 58
- user word lists 77, 79
 - adding 79
 - default 79
 - entries 79, 80
- UTF-8, UTF-16 encodings 58

V

- valid markup 218
- Validate Document 96
- validate references 89
- validating markup 96
- Validation Log 96
- view results 90
- views 9
- views, setting a default 47

W

- WebDAV 55
 - file caching 55
 - opening files 55
- well-formed documents 60
 - adding new attributes 61
 - adding new elements 60
- well-formed markup 218
- whiteboard 130, 154
- windows 13
- word count 89
- word lists 72
 - main 78
 - user 77, 79, 80
- worksheet tab
 - moving 55
 - scrolling 55
- wrapping elements 100

X

- XInclude attribute 224

- XIncludes
 - inserting 224
- XMetaL configuration file 47
- XMetaL Connector 65
- XMetaL Customization Guide 8
- XMetaL customizations 51, 99
- XMetaL Developer 8
- XMetaL Programmer's Guide 8
- xmetal.ini 47
- XML 217
 - comments 223
 - declaration 58, 217
 - empty elements 100, 220
- XML (*continued*)
 - entities 115, 221
 - processing instructions 223
 - references 217
 - separation of content and format 217
 - source editing 9
 - specification 217
 - version 217
 - well-formed markup 218
- XML table model 123
- XPath
 - expression 87