XMetaL® 20 Author

User's Guide

2025 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
Panes....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
XMetaL CTM Editor....42
General Properties....44
Change list....44
Display As....45
Followed by....46
On Insert....46
Text layout....47
Treat As....48
Global properties....49
Virtual element....49
In-Parent element....49
Assets (unsupported)....50
Macros....51

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Macro design guidelines....52
Record a macro....52
Create a keyboard shortcut....53
Associate a macro with a toolbar button....53
Associate a macro with a menu item....53
XMetaL API for providing asynchronous operations....54
Options....55
Managing documents....58
Creating documents....58
Templates....59
Opening and closing documents....60
If XMetaL cannot find the DTD, Schema, or Rules file....61
WebDAV-enabled folders....62
Managing open documents....62
Saving documents....64
Character encoding....65
Creating well-formed XML documents....67
Defining an element....67
Defining an attribute....68
Inline attribute editor....69
Archiving linked documents....70
Printing....71
Working with a repository....72
Editing documents....74
Selecting tags and text....74
Finding and replacing text....75
Search patterns....76
Finding and replacing elements....77
Finding and replacing entities....78
Checking your spelling....78
Using the spell checker....79
Using the background spell checker....83
Main word lists....85
User word lists....86
Language settings....88
Checking a selected word's spelling and synonyms....88
Using the thesaurus....89

Thesaurus options 90
Tracking your changes....91
Cross-file Operations....92
Finding and replacing across files....92
Spell checking across files....94
Replacing results across files....95
Running cross-file operations....96
Results pane....97
Text case assistant....101
Working with Markdown documents....102
Authoring structured content....103
Validation and rules checking....103
Validation using Schematron....104
XMetaL customizations....106
Working with elements....107
In-place, look-ahead element list....109
Setting attribute values....110
Inserting and editing lists....110
Images....112
Tables....113
Working with entities....122
Create a text entity....123
Create an external entity....123
Create a graphic entity....123
Special characters and symbols....123
Inserting CDATA sections....124
Inserting comments....125
Inserting processing instructions....126
Importing databases....127
Choosing a database....127
Creating a query....128
Table joins....129
Formatting table output....130
XML templates support....132
Insert Template Settings....136
MathML support....141
Quick navigation tool....143

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Finding and executing XMetaL commands....143
Viewing and customizing favorites....146
Application utilities....150
Document Ex commands....151
Bookmarks and comments....155
Adding bookmarks and comments....155
Bookmark manager....157
Comments UI....161
Context Menu for Bookmark....164
XMetaL utilities....167
Find text on WEB....167
Find text on WEB utility toolbar....169
Settings in WEB Browser....170
Context Menu for Web Operations....173
Integration with ChatGPT, Microsoft Copilot, Google Gemini, DeepSeek, and Grok....176
Toolbar....180
Settings....182
Context Menu for AI Assistant....185
Integration with Grammarly....188
Toolbar....191
Context Menu for XGrammarly....192
XMetaL Project....196
Docs Desk....201
Edit....202
Find Document....202
Find Content....204
Tools....209
Archive Project....209
Spell Check Project....210
Resources Map....211
Links....214
Insert References....214
Find Cross-References Candidates....218
Set Keywords....221
Find Keywords Candidates....223
Find and Validate Links....225
Keyboard shortcuts....228

3rd party viewers....233
Appendix A: XML basics....234
Valid vs. well-formed documents....235
DTDs and Schemas....235
Document type declarations....235
Elements....237
Attributes....237
Entities....238
CDATA sections....240
Comments....240
Processing instructions....240
Appendix B: W3C XML Inclusion (XInclude) Support....241
Appendix C: XMetaL Licensing Server....243
Installing XMetaL Licensing Server....243
Using XMetaL Licensing Server Admin....243
Glossary....245
Index....250

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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.

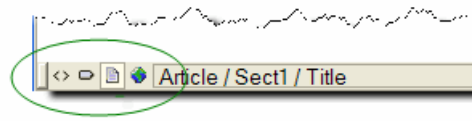
Sample files

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.

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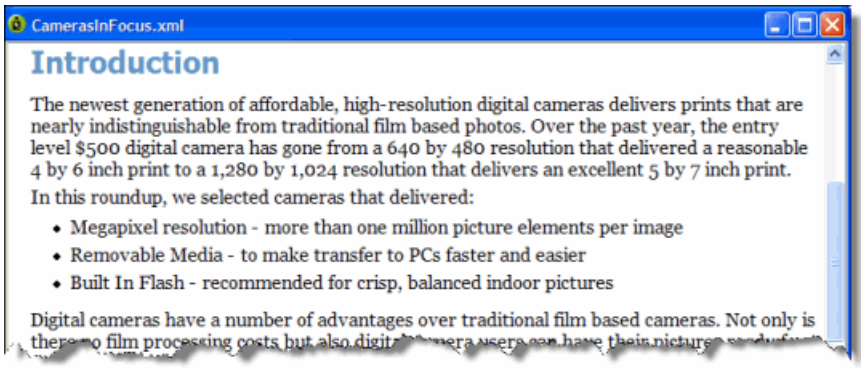
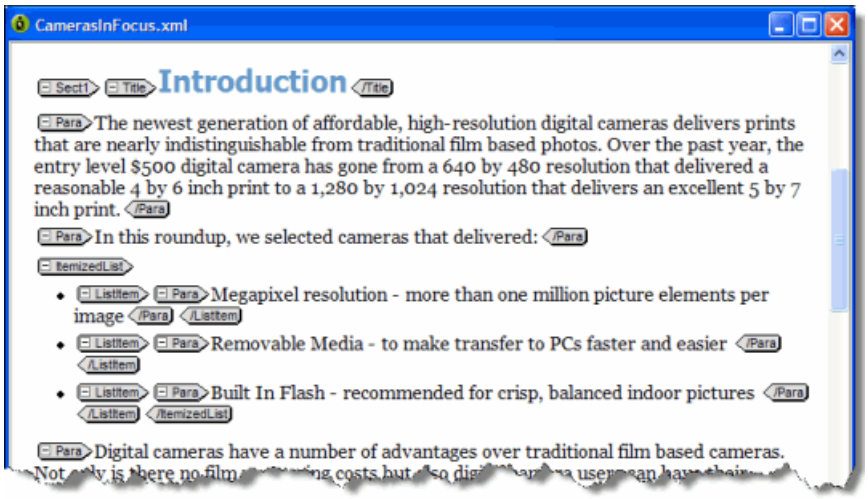


Tags On view

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 55
You can set options through the **Tools** menu.

Inserting CDATA sections on page 124
You can insert CDATA sections using the **Insert** menu.

Authoring structured content on page 103
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)

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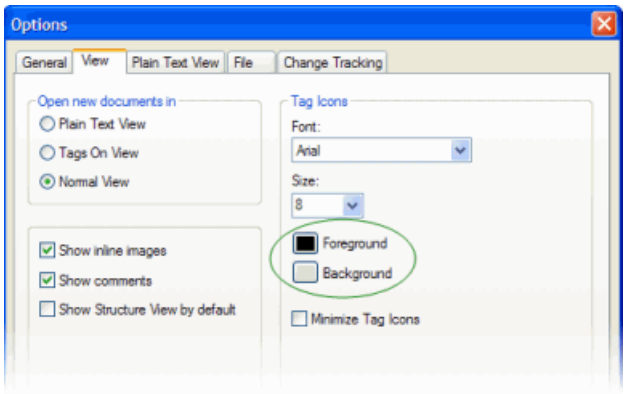


3. Choose a color.

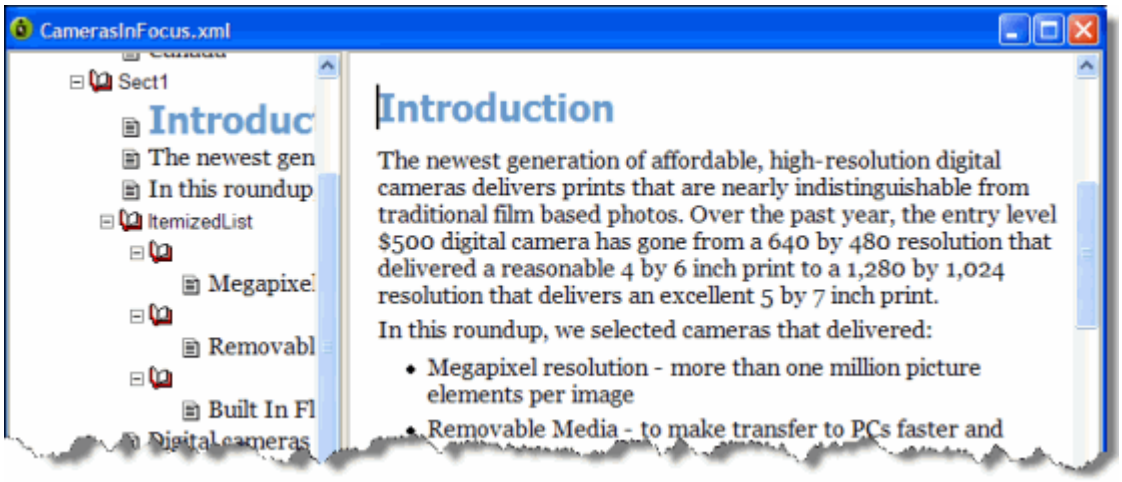
Tip: You can specify custom tag and text colors by creating a custom palette.

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 55
You can set options through the **Tools** menu.

Panes

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

To do this	Follow these steps
Show/hide a pane	• Click the **View** menu and select a pane to show or hide it, or • Right-click on the pane header (or click the **Window Position** icon), and select **Hide** from the menu to hide a menu.
Dock a pane	• Double-click the title bar, or • Click and hold the title bar, and then drag the pane to its docked position, or • Right-click on the pane header (or click the **Window Position** icon), and select **Docking** from the menu. When you are docking a pane, docking hotspot indicators appear. While dragging a pane, you may move your mouse cursor over one of the indicators. When you release the mouse, the pane you are docking will snap to the indicated docking position.
Un-dock a pane (make it float)	• Double-click the title bar, or • Click the title bar and drag the pane from its docked position, or • Right-click on the pane header (or click the **Window Position** icon), and select **Floating** from the menu.
Pin a pane	Click the sideways pin (pins are displayed sideways when a pane is un-pinned)
Un-pin (auto hide) a pane	• Click the upright pin (pins are displayed upright when a pane is pinned), or • Right-click on the pane header (or click the **Window Position** icon), and select **Auto hide** from the menu. When a pane is un-pinned, placing the cursor on the pane's tab slides open the pane.

The following panes are available:

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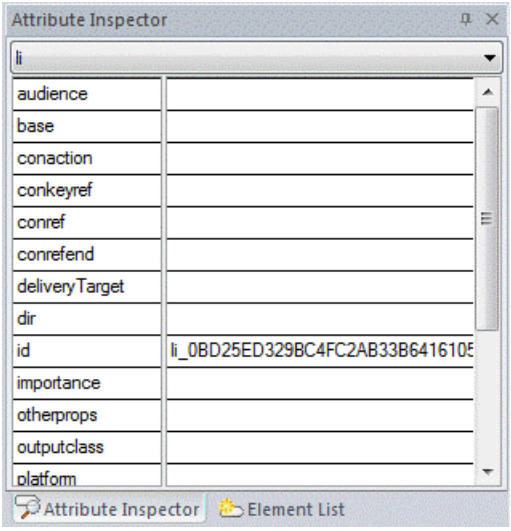
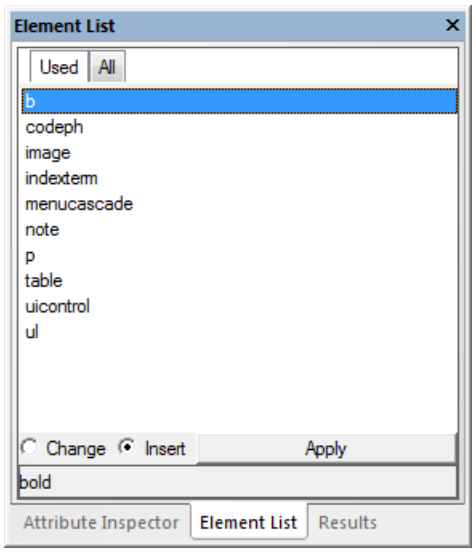
- **Attribute Inspector.** Displays the attributes for the current element and lets you set attribute values.

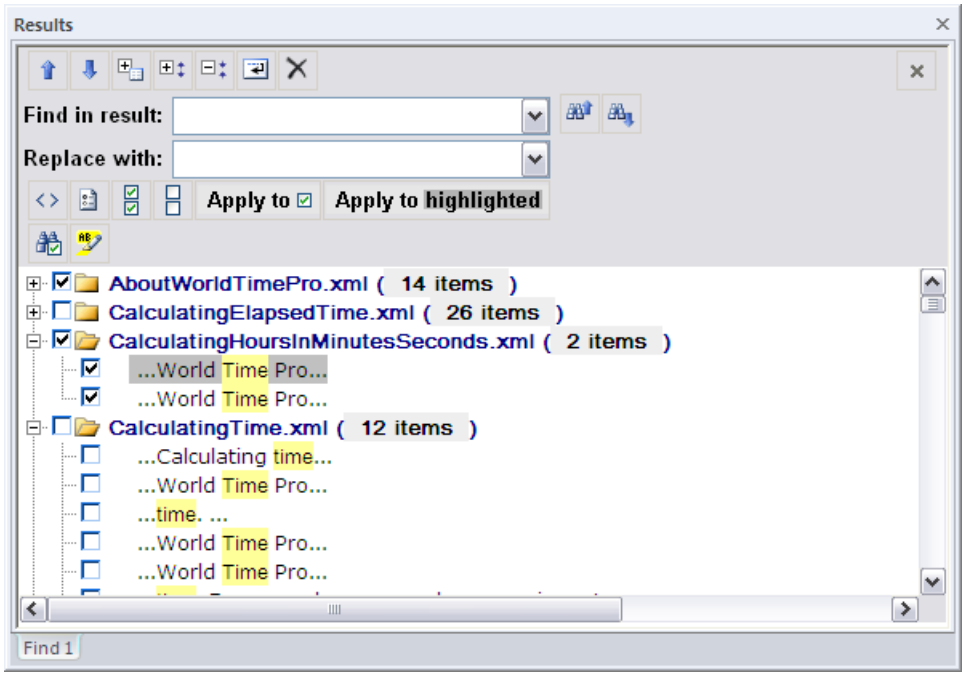


To do this	Follow these steps
Sort attributes alphabetically	1. Hover the mouse over the Attribute Inspector pane. 2. Right-click to display the action menu. 3. Select **Sort Attributes**.
Sort attributes by displaying required attributes at the top of the list NOTE: Secondary sorting is alphabetically	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	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 107

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 110

You can set attribute values through the Attribute Inspector.

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Results pane on page 97
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 50
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 EditorThe 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

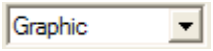
Button	Name	Description
	Style Element	Lists the elements that can be inserted at the cursor location
	Bold	Applies or inserts an element designated as bold
	Italics	Applies or inserts an element designated as italic
	Underscore	Applies or inserts an element designated as underscore
	Overline	Applies 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

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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

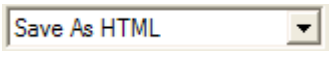
Button	Name	Description
	Run Current Macro	Runs the selected macro
	Select Current Macro	Shows the selected macro
	Record Macro	Records all keystrokes as a new macro
	Stop Recording	Stops recording keystrokes to the new macro
	Macros	Opens the Macros dialog

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

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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 65
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 123
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.

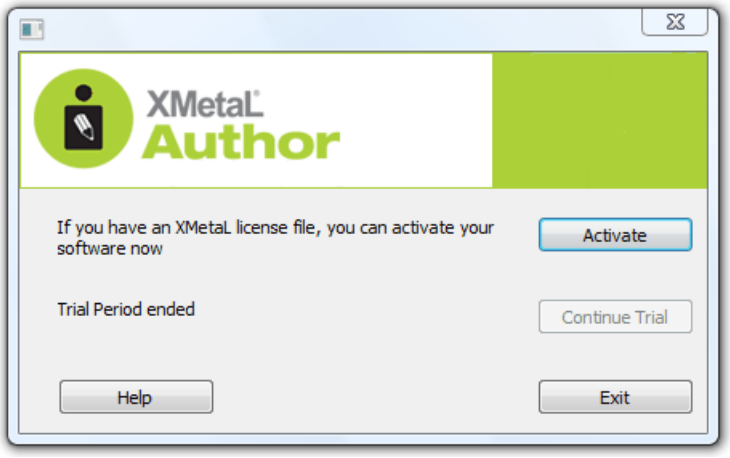
You can view/edit your licensing information by clicking **Help** > **Licensing**. The following fields will be displayed:

- **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.

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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 80

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 88

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 90

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

XMetaL customizations on page 106

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\<version>\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\<dtdname>.tbr`.
- **DTD-specific toolbars for current user only.** . `%APPDATA%\SoftQuad\XMetaL\<version>\<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 106

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.

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- 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

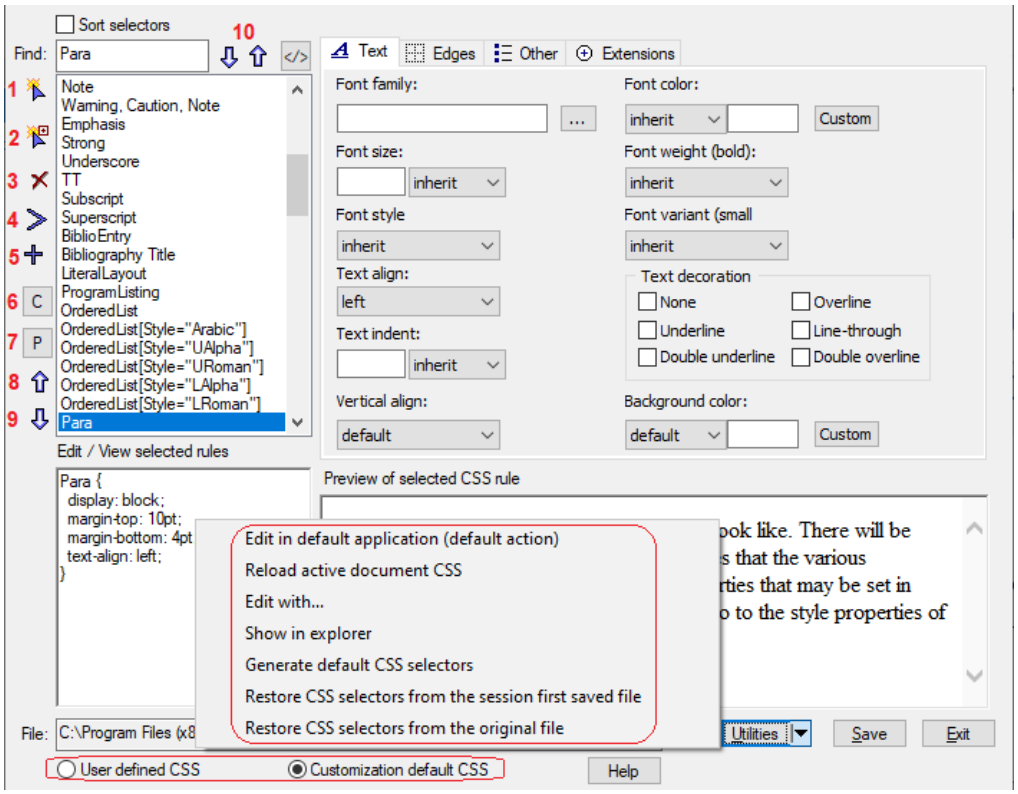
Opening XMetaL Styling Assistant Editor

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.

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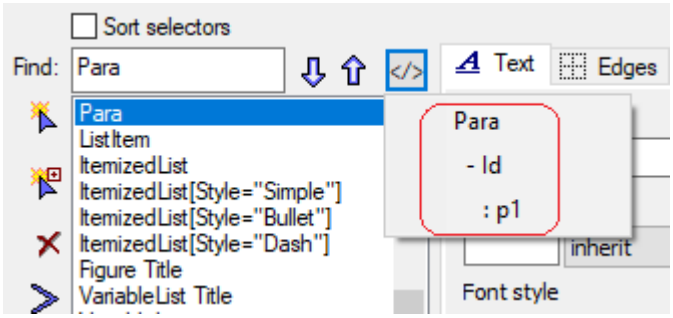
# on image	Description
	

Save button and Utilities options

The Save button applies and saves CSS styles as the default action.

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

- Edit in the system default application.
- Reload active document CSS.
- 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"

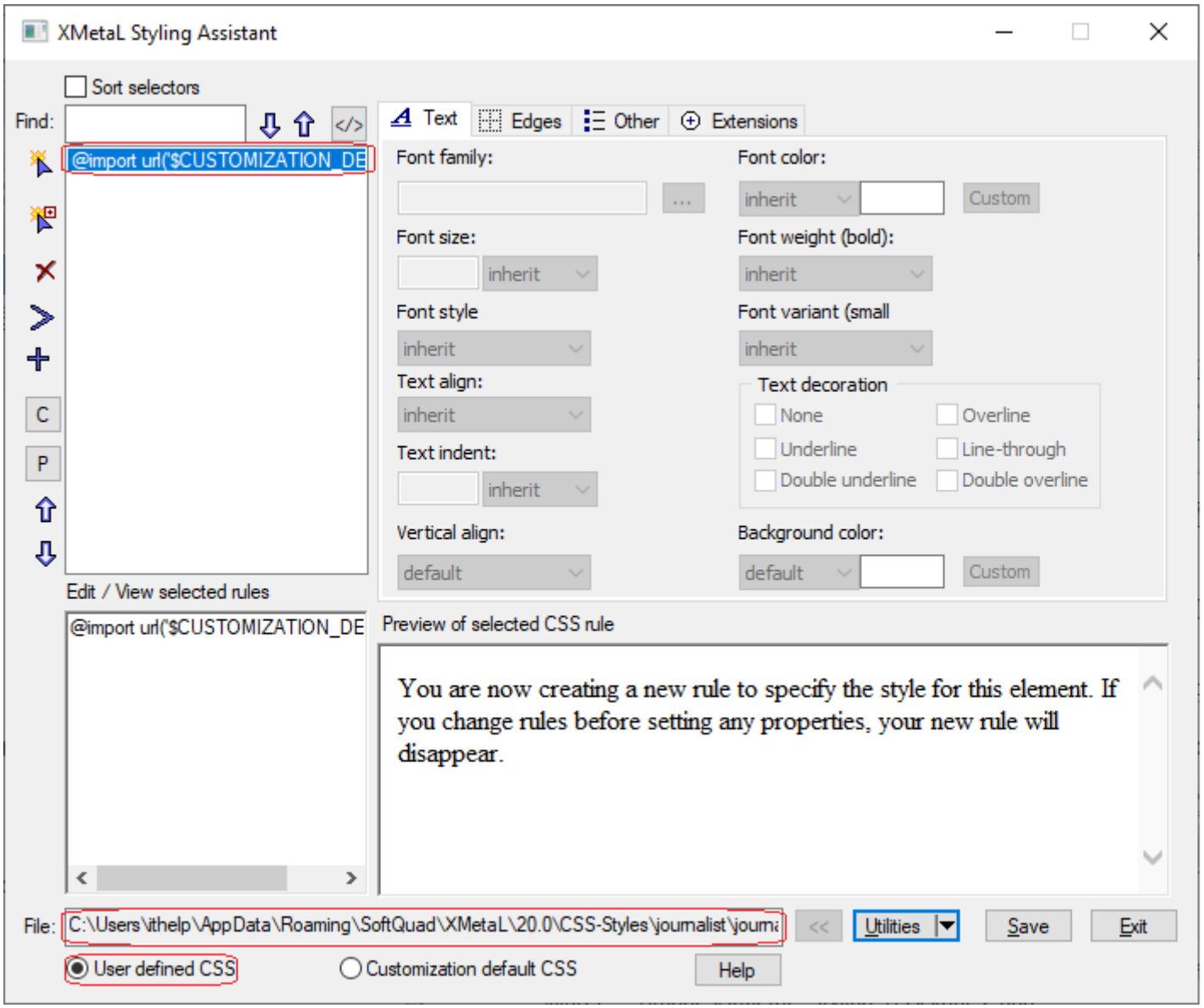
Users can switch between "User defined CSS" and "Customization default CSS" modes.

"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.

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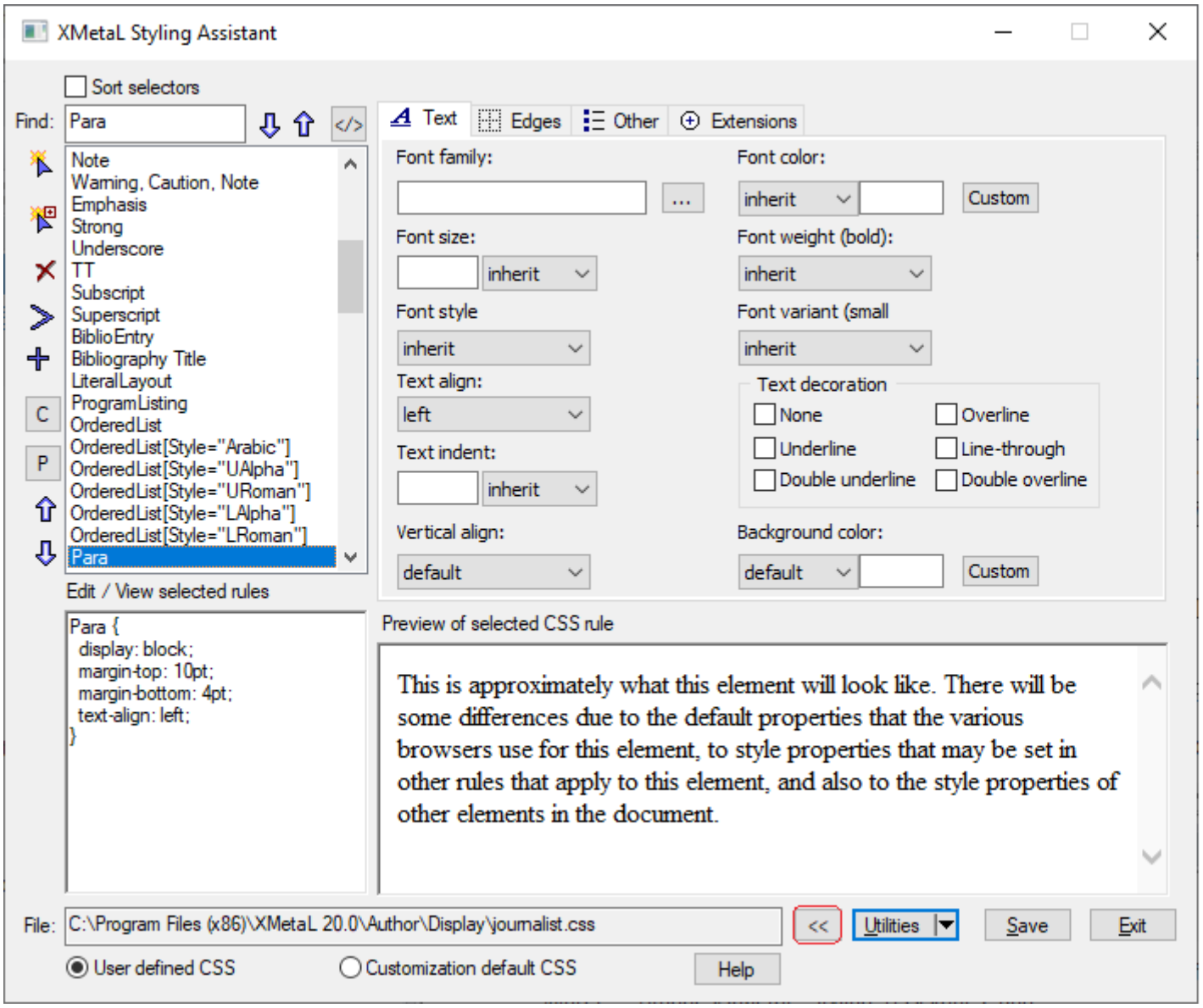


The "<<" button adjacent to the "File text box" becomes active, enabling you to navigate back to the parent CSS.

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.">

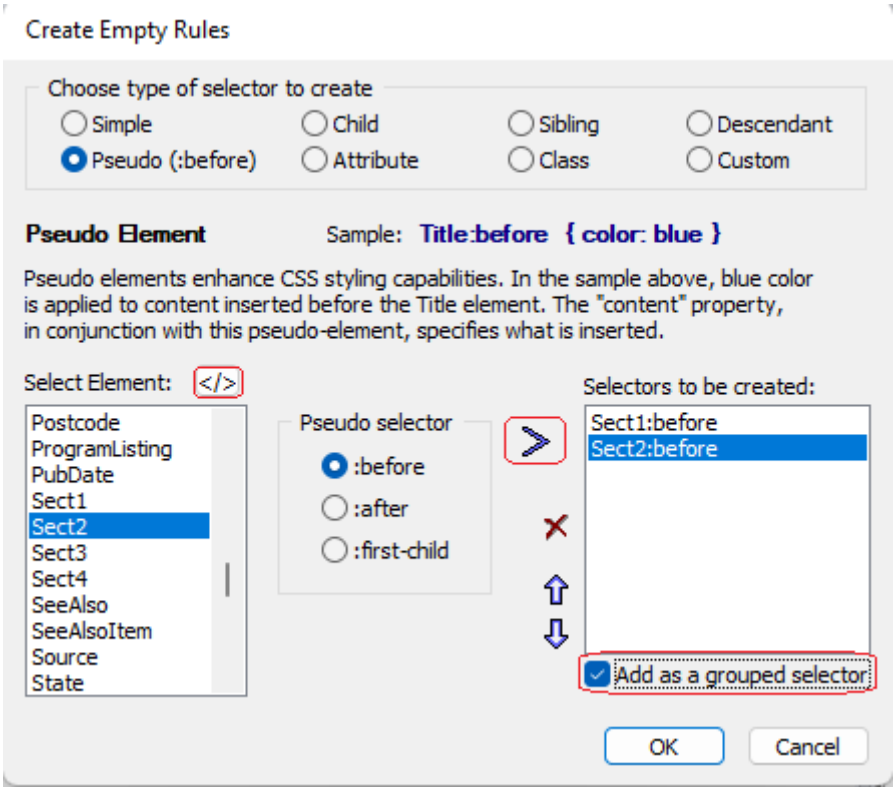
- <MACRO name="CSS styling assistant: close" hide="false" lang="JScript" desc="Close Active Document CSS styling assistant.">
- <MACRO name="CSS styling assistant: refresh content" hide="false" lang="JScript" desc="Reload Active Document CSS styles into the styling assistant.">
- <MACRO name="CSS styling 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:

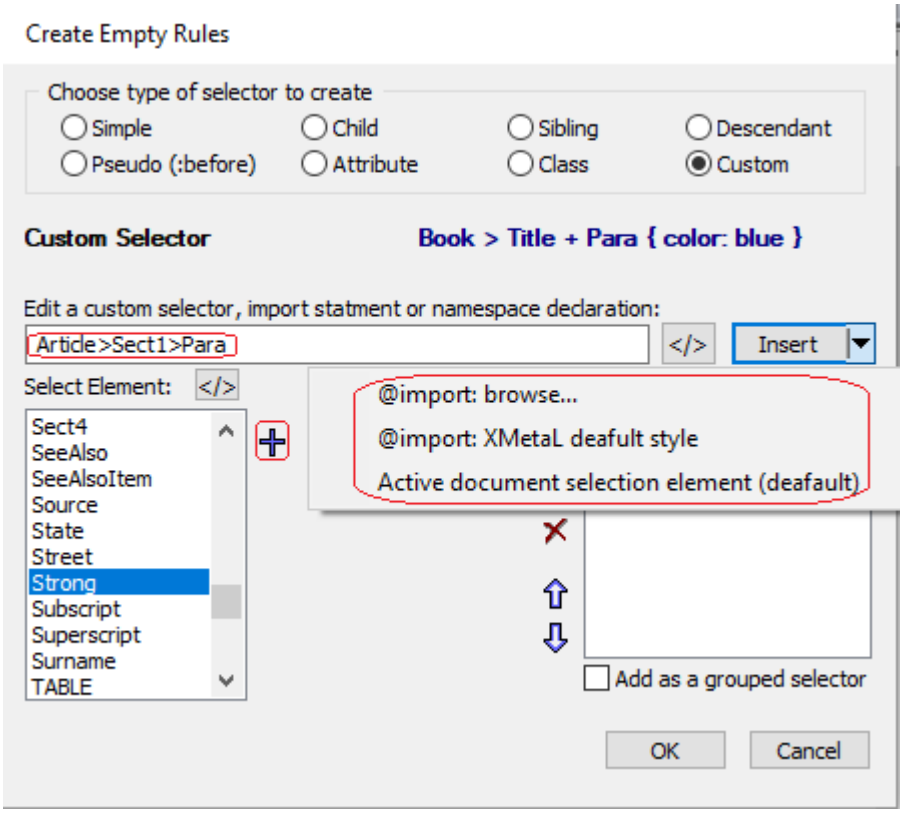
```
Book Title {color: blue;}
```

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".

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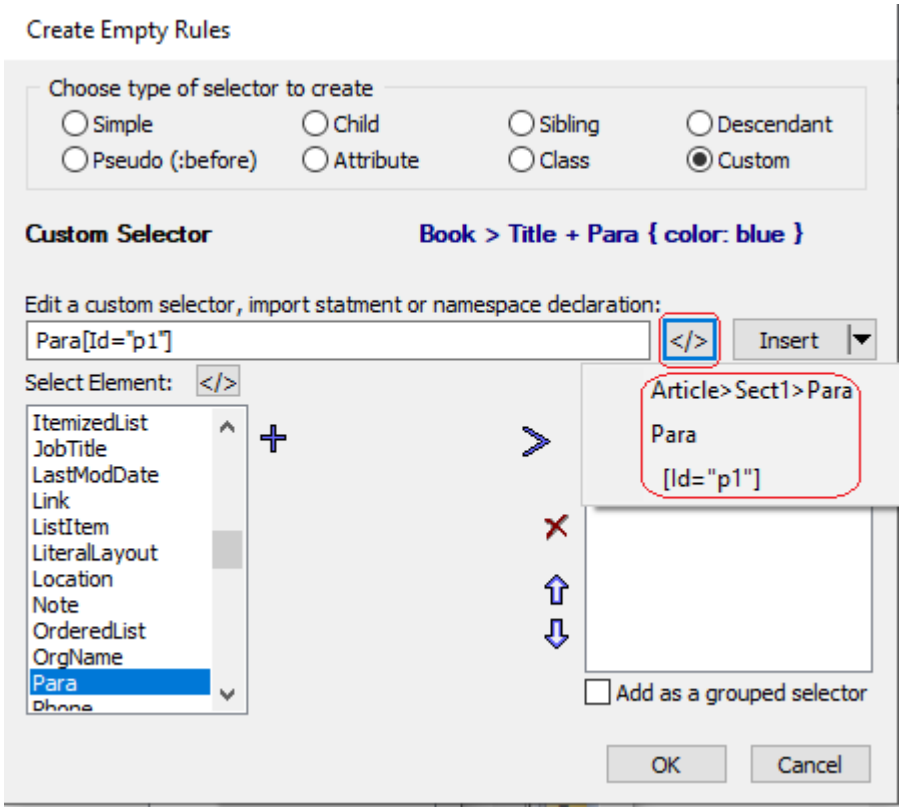

Creating the new selector "Para[Id="p1"]" and setting the text font color to be blue in XMetaL Styling Assistant Editor results in the following style rule. This causes the element "Para" with @Id="p1" to appear in blue:

```
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.

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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;
```

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```
}
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-overline and double-underline)
letter-spacing	-
word-spacing	-
text-transform	-
vertical-align	sub and super only
line-height	-

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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	-

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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

XMetaL CTM Editor

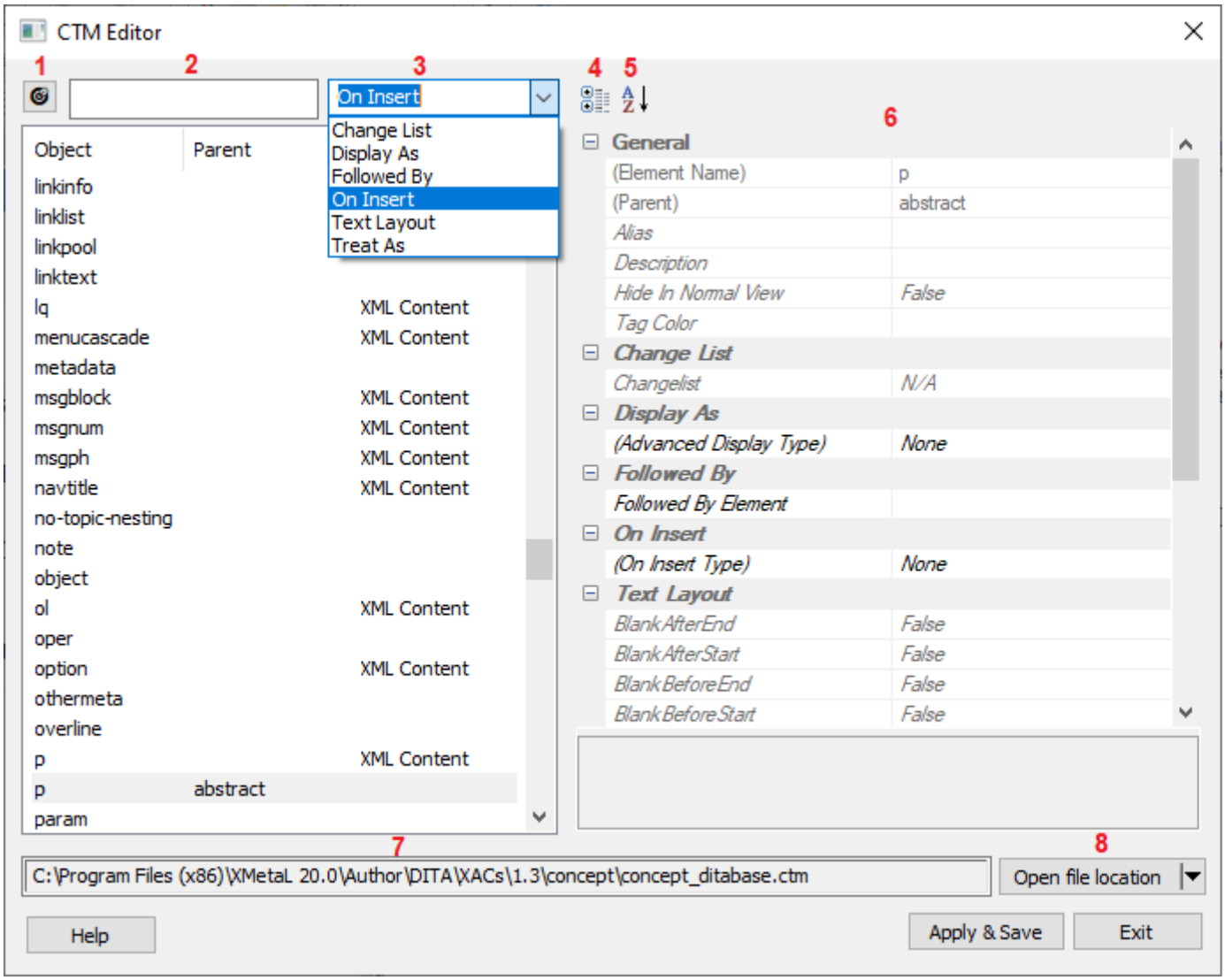
In the XMetaL Author user environment, the behavior and visual presentation of elements are managed via the Customization (CTM) file. Modifying CTM properties enables customization of the authoring interface to align with specific requirements. The XMetaL CTM Editor provides a streamlined interface for viewing and configuring element properties within the CTM file.

Launching XMetaL CTM Editor

To launch the XMetaL CTM Editor, navigate to **Tools > CTM Editor** from the main menu after opening a document.

The CTM associated with the active document is automatically loaded into the editor.

XMetaL CTM Editor functionality



# on image	Description
1	Locate the element at the current cursor position within the active document.
2	Search the element within the list.
3	Select the CTM properties category. The category type or related information for each element is shown in the third column.
4	Expand or collapse the categorized CTM properties in the CTM properties panel.
5	Display CTM properties in either categorized or alphabetical order within the CTM properties panel.
6	CTM properties panel for the selected element.
7	The full path of the CTM file being edited.
8	Open file location: • **Open with:**Opens the CTM file using the user's preferred application. • **Open include:**Allows the user to select and open the included CTM file in the editor.

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Clicking an element name displays its properties in the CTM Properties panel on the right side of the editor, where they can be modified. Properties can be defined per element or globally using the #GLOBAL element. Additionally, an In-Parent context or a Virtual element can be specified.

General Properties

General properties determine basic element characteristics including an alias, if you want to call the element by a different name, and a description.

Alias

You can enter a real-language name for the selected element in the Alias field. This is useful when the element name is not very descriptive, or in cases where authors speak a language other than the language of the DTD. For example, if the element that you want authors to use for main titles is '<DT>', you can use the Name field to give the element the real-language name 'Document Title'—or its equivalent in the language of the authors.

If you do not enter a real-language name for the element, the element name from the DTD is used. This name is displayed in tags and in the Element List.

Description

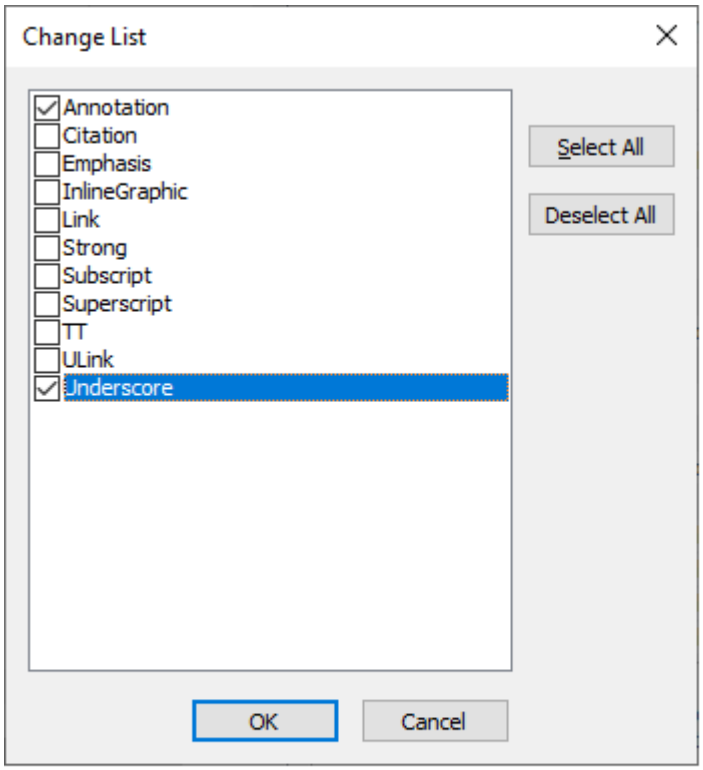
You can type a description of the element in the Description text box. If you do not enter a description, the element name from the DTD is used instead. This text is displayed at the bottom of the Element List.

Change list

You can specify which elements are available in the change list in XMetaL Author through the Change list property.

In XMetaL Author, the change list is displayed at the left end of the Formatting toolbar. The list contains the names of elements that the current element can be changed to. The Change List dialog displays the list of valid elements.

Since all configurations in this dialog box are relative to a parent element, you may have to re-configure several parents in order to cover all contexts in which the element can occur. For example, if you have two list elements, for example, Bulleted and Numbered, that can occur inside Book, Chapter, Section, and Para, you must include Bulleted and Numbered in the change list for each parent.



Display As

The Display As properties let you associate forms or controls with an element.

You can specify a form or control by clicking the browse button in the **Advanced Display Type** property.

XFT Form

You can customize your documents and templates with forms (or dialogs). These are associated with specific elements to facilitate data entry and the XML authoring process.

You can use the XFT Form Wizard to set up forms that are bound to XML content by an XPath expression. By using the wizard you can specify the following:

- How to run the form (Embedded or Modal)
- How to display the form (Replace, Before, After)
- When to display the form (Always, Dynamic Script)

If you select Dynamic Script, you must create a script for XMetaL to call before it displays the form. Use this script to create business rules that determine whether or not to display the form at run-time.

For example, the following script shows how a dynamic display script can be used to conditionally display a form, depending on the parent of the form node.

```
// Put this script in the Script Text box of the XFT Form Wizard
// Get the form control
// Its node member is the DOMNode of the element to be tested
var aipc = Application.ActiveInPlaceControl;
```

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```
// If the node's parent is "Publisher" ...
if (aipc.node.parentNode.nodeName = "Publisher") {
// ... then display the form
aipc.ShouldCreate = true;
}
else {
// ... otherwise do not display the form
aipc.ShouldCreate = false;
}
```

In-Place Control

You can use in-place ActiveX controls to represent elements in Normal and Tags On views and determine their behavior. When you specify that an element is to be displayed as an in-place control, you must specify a script prefix. This prefix is used in your macros to enable the control to communicate with XMetaL. You also have the option of specifying Bitmap Printing. This option has been provided because some controls (for example, the Internet Explorer WebBrowser Control) do not print using the standard ActiveX mechanism. If one of your controls does not print using the default mechanism, you should enable this option.

Refer to the documentation for the ActiveX control to learn about possible limitations and restrictions associated with the control.

Associate an element with an in-place control

You can use in-place ActiveX controls to represent elements in Normal and Tags On views.

1. In the Advanced Display Type property, select the **In-place Control** option.
2. In the **ProgID/ClsID** text box, type the identifier for the control you want to use.

   Note: Note: If the control you want to use does not appear in the list, you can find its ClsID or ProgID by consulting the control documentation for the control or by searching the registry (advanced users only).

3. Type a script prefix.
4. Set the **Use Bitmap Printing** option.
5. Click **OK**.
6. Create the macros that enable the control to communicate with XMetaL.

Followed by

You can configure XMetaL to create an element of your choice when Enter is pressed at the end of a particular element.

By default, if you press Enter inside a specific block element, XMetaL Author creates a new element of the same type, if the DTD or schema allows it. You can change the default behavior if it is not permitted by the DTD or schema, or if you want a different element to be created. The original element must be defined as a block element in the CSS style sheet for the document.

On Insert

The On Insert properties let you specify default content or a script to be run whenever you insert a particular element.

You can choose the following from the **On Insert Type** dropdown:

- **None.** No content or script is to be inserted.
- **XML content.** Lets you specify a mini template.

- **Script.** Lets you specify script and script language.

MiniTemplate

The MiniTemplate property contains the default content for the selected element. You can use this property to indicate the markup that is to be inserted for this element. The default content can contain *replacement text*, which appears in an element by default when the element is inserted. Replacement text is contained in 'xm-replace_text' processing instructions.

If no content is specified, XMetaL inserts replacement text based on the element name. For example, for an element named 'Para', the replacement text is '{Para}'. XMetaL does not insert replacement text if none is specified in the Content section and Paragraph is selected in the Treat As section.

The default content must start with the specified element, not a sub-element. This allows you to specify default attribute values for the element.

Script

You can specify a script to be loaded and run whenever a particular element is inserted. Most scripts are written in JScript or VBScript, but you can use any language for which you have a scripting engine that conforms to the Microsoft Scripting Engine Interface. The name of the language must correspond to the **ProgId** (for example, PerlScript or Python) of the ActiveX control that implements the script engine.

Inserting a mini-template

For example:

```
<Title><?xm-replace_text {Book Title} ?><Title>
```

When the <Title> is inserted, it contains the text '{Book Title}'. Authors can select this text and type over it with real content.

Inserting a script

The following example illustrates the specifying of default content using a template and using a script.

Consider the following template:

```
<Warning><Para>
<?xm-replace_text {Warning}?>
</Para></Warning>
```

The same results can be obtained with this VBScript code:

```
Selection.InsertElement "Warning"
Selection.InsertElement "Para"
Selection.InsertReplaceableText "{Warning}"
```

Note: The Selection.InsertWithTemplate method can be used in a script to insert elements and their default content.

Text layout

You can set text layout properties to determine how an element appears in Plain Text view. These properties can be set on a per-element basis or globally.

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XMetaL makes XML source files (as displayed in Plain Text view) easier to view by inserting indentation and line breaks and distinguishing between content and markup. This formatting is called text layout or pretty printing. You can specify this setting through the Disable Text Layout property in the Global properties.

Text layout properties are also available on a per-element basis. For example, you can

- Preserve space or indent content
- Add blank lines before or after tags
- Change tag color

Layout options are applied to files saved from Tags On and Normal views. These options are also applied when you switch from Tags On or Normal view to Plain Text view.

Preserve Space

When you turn on Preserve Space for a parent element, any Element Options changes you specify for child elements are ineffective. If you want to use the Preserve Space option for a parent element, be sure that all child elements have the appropriate Element Options selected.

Treat As

You can configure XMetaL to treat selected elements as paragraphs, toggling elements, image elements, or list elements.

You can also rank the elements of each type. Whenever XMetaL can insert a paragraph, image, or list element, it inserts the **first-ranked** valid element of the required type. If the first element in the given ranking is not valid, XMetaL tries to insert the second-ranked element, and so on.

Paragraphs

Designating an element as a paragraph element determines how the element is processed:

- If you attempt to enter text where text is not allowed but where a new paragraph is allowed, XMetaL uses one of the elements designated as paragraph elements to create a new paragraph element and places the text inside the new element.
- If you press Enter at the end of any element and there is no followed-by element or required element and the element cannot be split, XMetaL inserts one of the elements designated as a paragraph element.
- When adding items to the list of elements in the Paragraph Order, only items that have been set as paragraphs can be added.

Toggling elements

You can assign inline elements to the **Bold**, Underscore, and *Italic* buttons. When an element is assigned to one of these buttons, clicking the button inserts an empty inline element at the cursor location or surrounds selected text with the inline element markup (if the assigned element is valid in that location). You can also click the button to remove markup for the assigned element from the selected text.

You can also assign an element to a macro. In this case, the macro should be assigned to a toolbar button.

Images

You can designate an element as an image element. The following attributes are available on image elements:

- Source (a filename, a URL, or an entity name used to map to the image)
- Height
- Width

- Alt Text
- Valign
- Scale

Lists

You can use special list editing features to insert and edit list elements. The following list types are available:

- Numbered lists
- Bulleted lists
- Definition lists

Numbered and bulleted lists consist of a list element containing one or more list item elements. Some lists may have a list header element.

Definition lists are two-part lists that consist of a list element and two kinds of sub-elements: term elements and definition elements.

Global properties

You can specify some properties for all elements on a global basis. Global properties are available through the #GLOBAL element.

Disable text layout

This property is set to Yes by default, meaning that all text layout properties for every element are disabled. In order to set any of the Text Layout properties for any element, this property must be set to No.

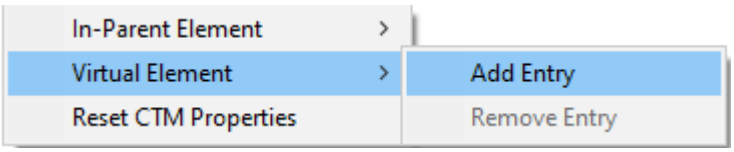
Paragraph order

When authors press **Enter** at the end of a paragraph element, XMetaL inserts a new paragraph element. The default behavior is to insert the same paragraph element type after the current paragraph. You can use the Paragraph order to set up a list of elements (which you have previously set as Paragraph types using the TreatAs property) that XMetaL tries to insert. If XMetaL cannot find a valid element to insert from the list, no element is inserted.

Virtual element

Elements that you specify as Virtual elements are added via script in the macro editor with the AddElement() and AddElementToInclusion() methods.

To add or remove a virtual element, right-click an element in the CTM editor and select **Virtual Element > Add Entry** or **Virtual Element > Remove Entry**.



In-Parent element

You can define a context for an element by specifying an In-Parent element. If no In-Parent element is specified, the properties apply to the element in all contexts.

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When you define an In-Parent element you are informing XMetaL Author that the properties assigned to this element apply only in a specific context. To assign an In-Parent element, right-click an element in the CTM editor and select **In-Parent element.**

Assigning an In-Parent element

For example, to assign properties to all Title elements in the following document, you do not need to specify an In-Parent element. However, to assign properties only to Title elements that appear within Chapter elements, you need to specify Chapter as the In-Parent element.

```
<Book>
<Title>My Book</Title>
<Chapter>
<Title>Welcome to Chapter 1</Title>
<Para>This is a paragraph...</Para>
</Chapter>
<Bibliography>
<Title>This is my bibliography</Title>
<Entry>This is an entry...</Entry>
<Entry>This is an entry...</Entry>
</Chapter>
</Book>
```

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 106
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 112
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\<version>\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\<dtdname>.mcr` 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\<version>\<dtdname>.mcr` 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.

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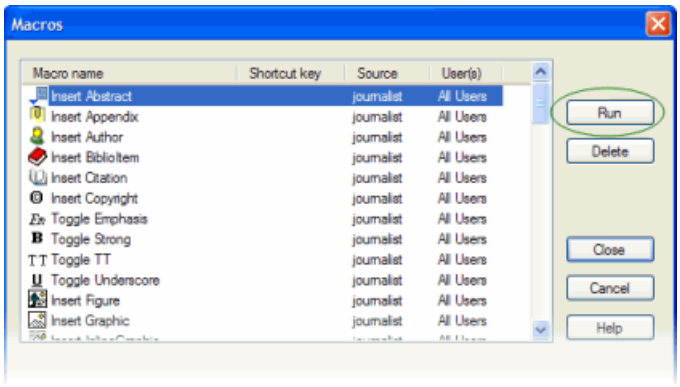


Related Links

XMetaL customizations on page 106

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

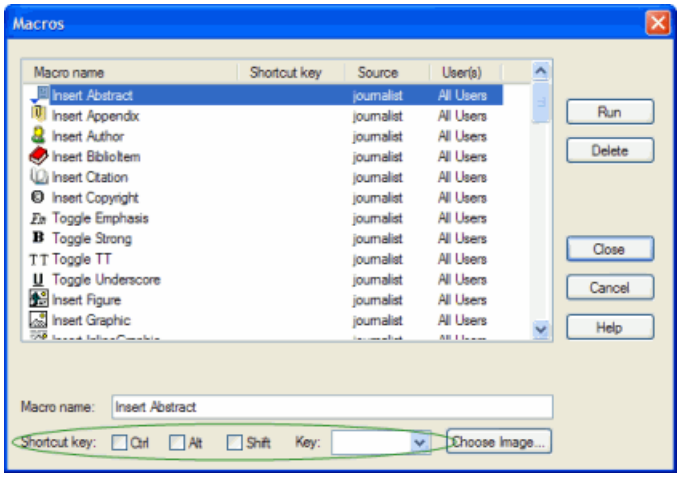
Note: Recording is limited to keyboard actions only.

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.
4. (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

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

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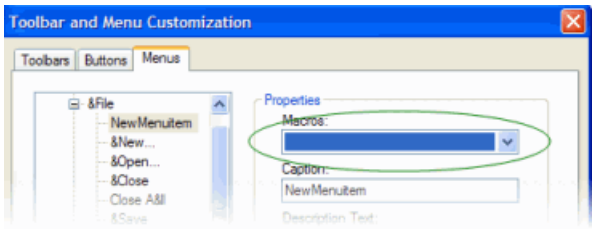

4. Type a name in the **Caption** text box.

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

5. (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:

1. 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.
2. 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.
Enable bi-directional text support	Allows users to create text in languages that are right to left **Note:** A system restart is required for changes to take effect. **Note:** Turning off the 'Check spelling while

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Option	Description
	typing' option is recommended when bi-directional text is enabled.
Enable Workbench	Allows users to use Workbench feature in Resource Manager **Note:** A system restart is required for changes to take effect.
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
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

Option	Description
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 80

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 90

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

XMetaL customizations on page 106

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*.

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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.

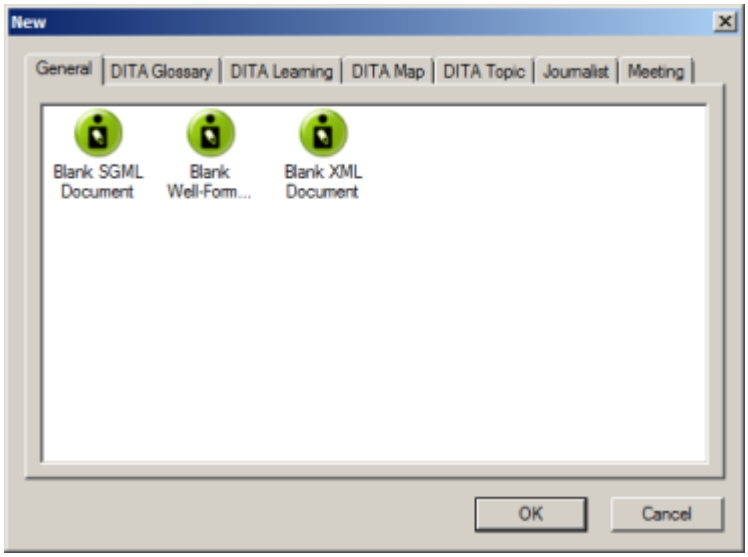
Creating documents

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).



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Related Links

Options on page 55
You can set options through the **Tools** menu.

XMetaL customizations on page 106
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*.

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 106
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 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 107
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**.

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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	Click **File** > **Open** and choose a file, or drag and drop a file onto the XMetaL Author title bar In the **Select Files to Open** dialog, users can open a document in **Tags On**, **Normal** or **Plain Text** view. File navigation options are available in the **Select Files to Open** dialog as follows: • **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 123
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 106

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.

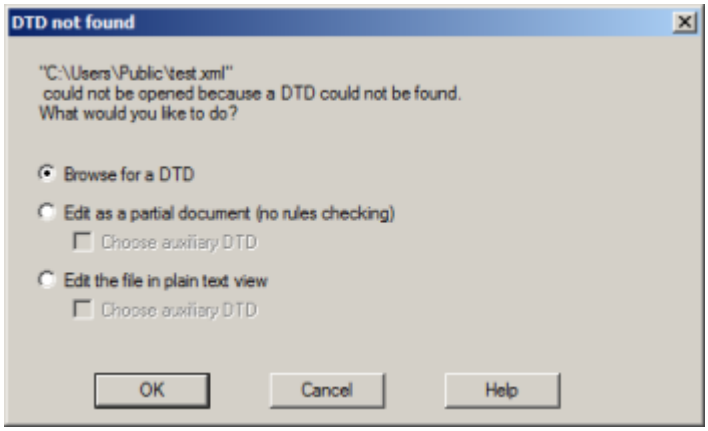
XMetaL may not be able to locate the DTD for any of the following reasons:

- 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 103

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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\<username>\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 106

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*.

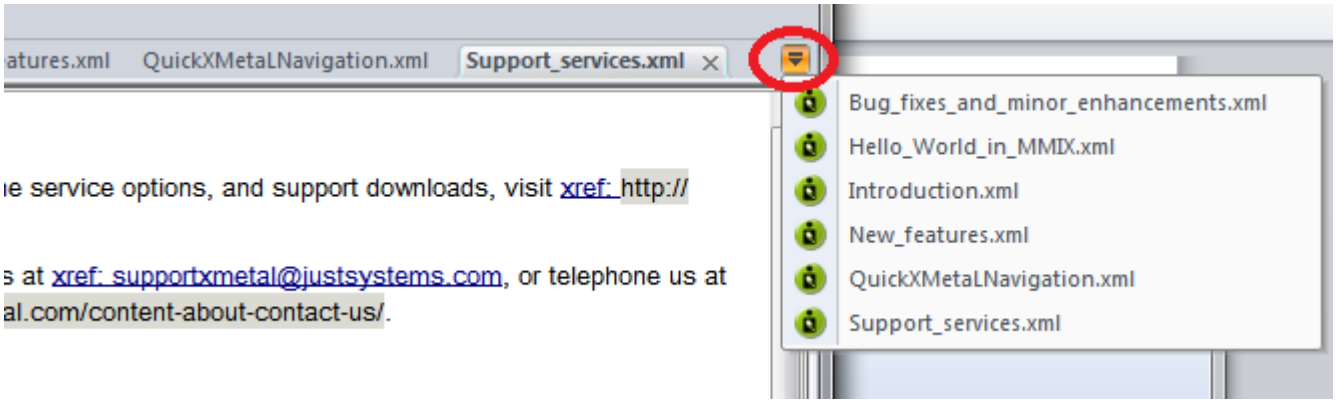
Managing open documents

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**.

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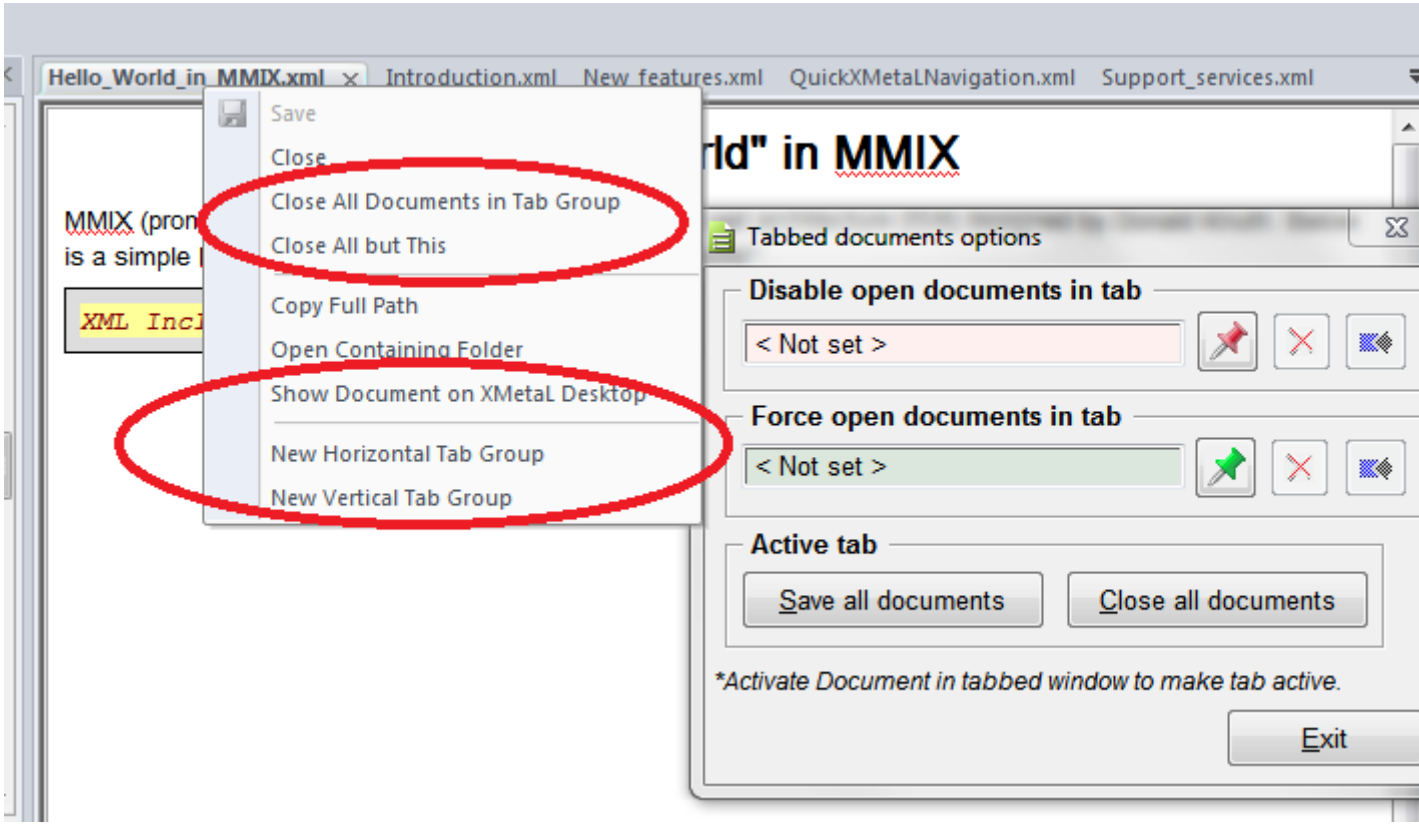

Viewing documents and document folders outside XMetaL

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: • **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 55
You can set options through the **Tools** menu.

Special characters and symbols on page 123
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 103
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.

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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 123

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.

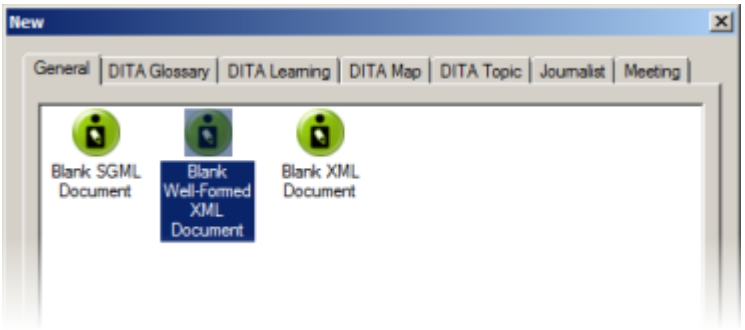
Creating well-formed XML documents

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.

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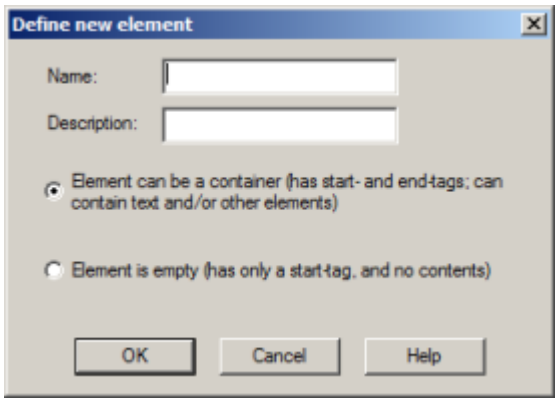
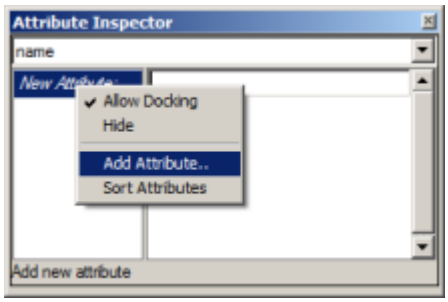


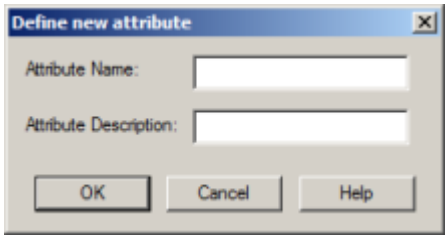
Defining an attribute

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

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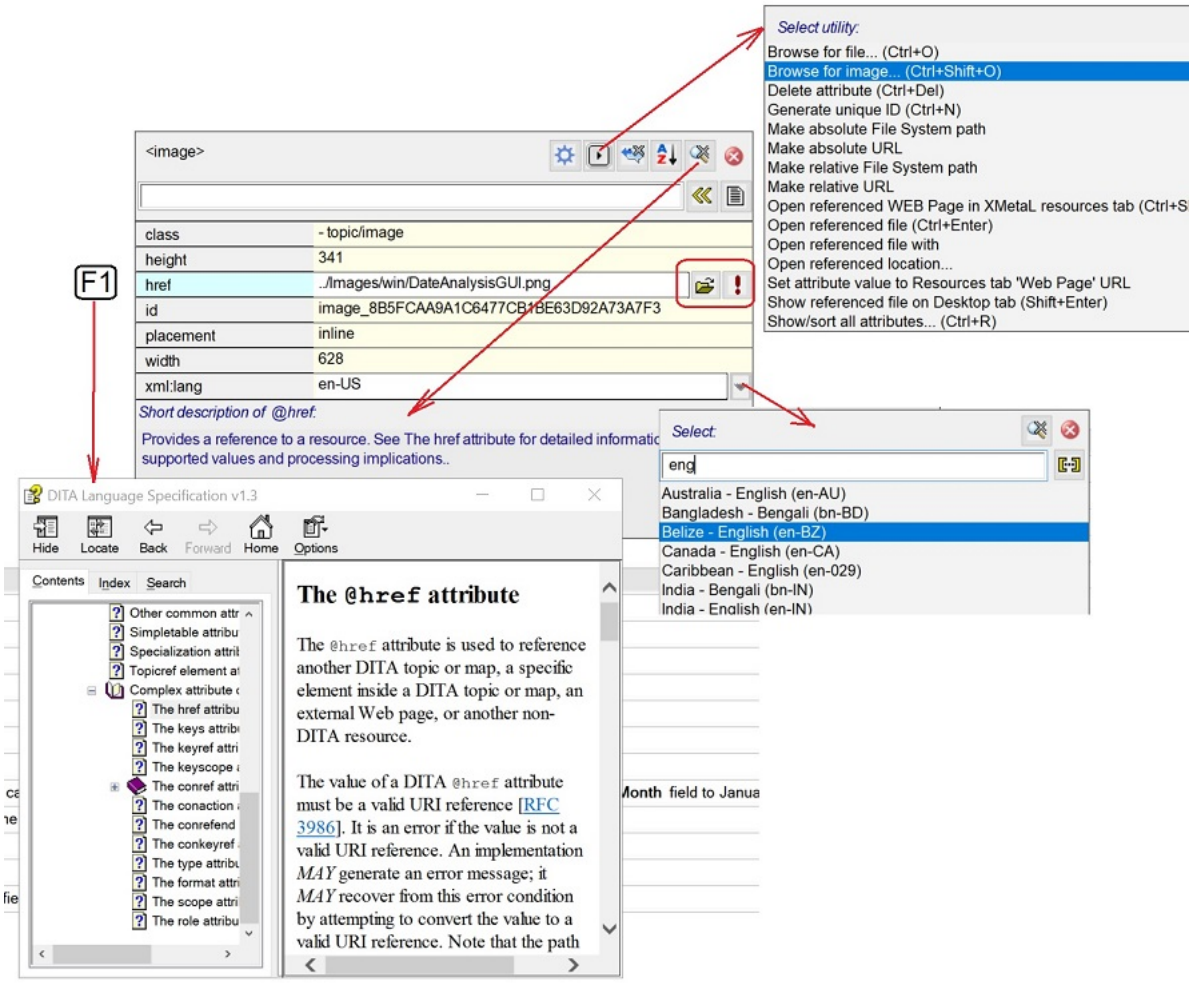


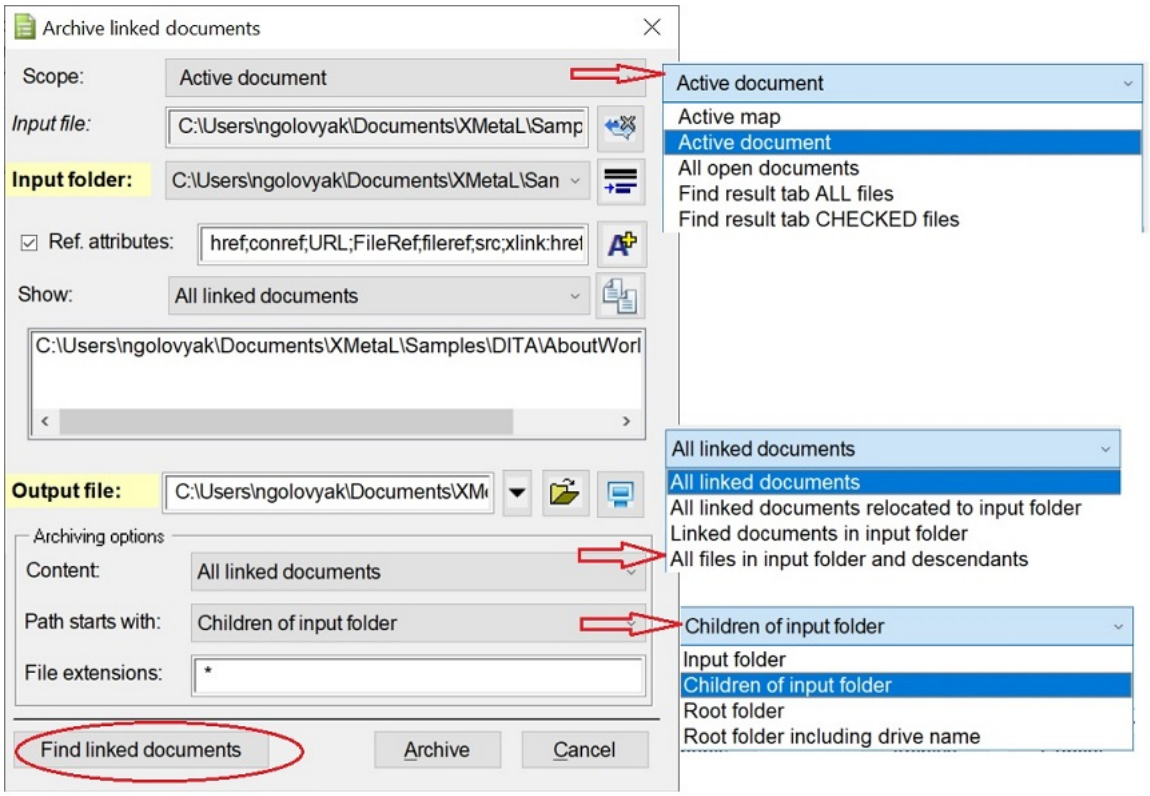
Archiving linked documents

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	Click the button. In the dialog that appears, select the attributes you want to add. **Note:** The **Ref. attributes** checkbox must be selected to enable this function.

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.

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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**.

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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**

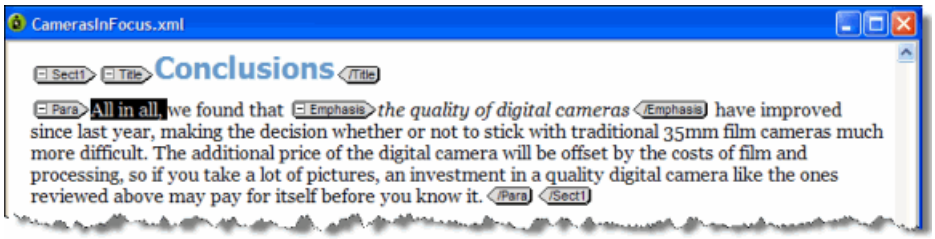
Note: You cannot delete a selection if it includes required elements, and you cannot paste a selection that would cause the markup to become invalid.

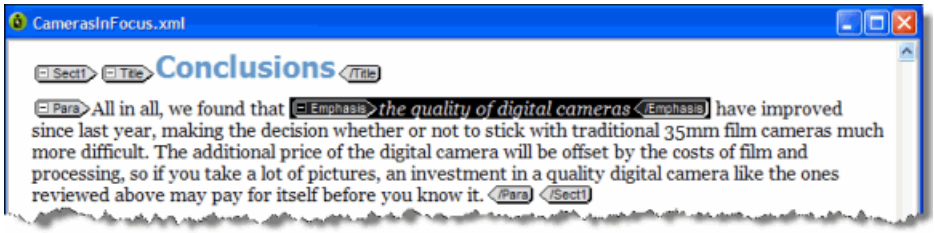
Selecting tags and text

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.





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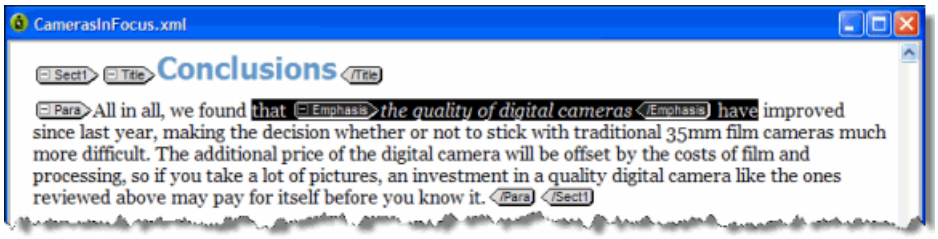


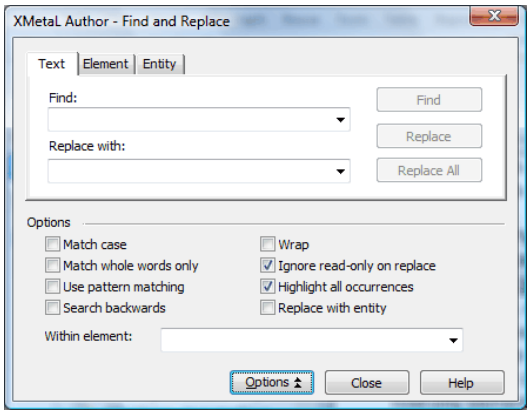
Finding and replacing text

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:

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- 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 92

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 (.).

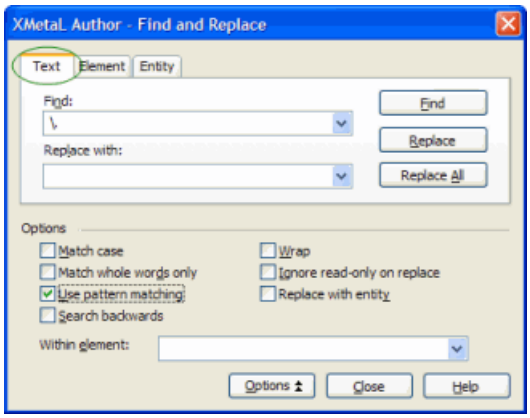


Table 30: Pattern summary

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 Note...)
pattern$	pattern immediately before markup	“sub$” matches “sub” at the end of a paragraph (as in ...sub)
[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 *n*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”

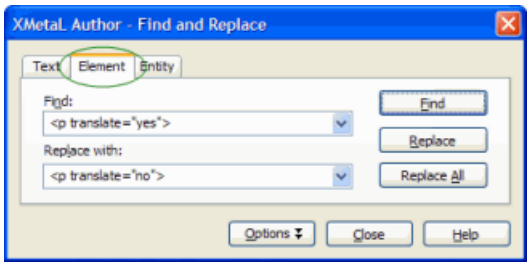
Finding and replacing elements

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 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.

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Removing an attribute

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

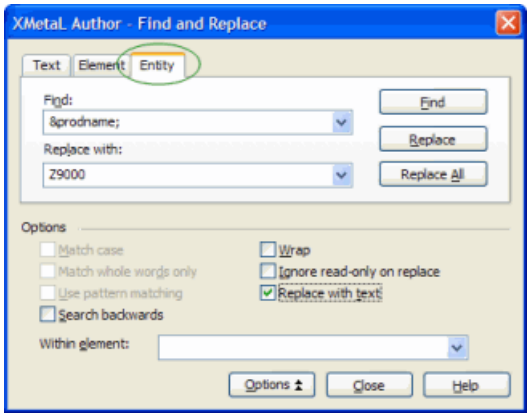
- Delete the attribute value in the Attribute Inspector. If the value is currently set to an empty string, enter a new temporary value, press Enter, and then delete the value.
- Switch to Plain Text view and modify the source.

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 79
You can check your spelling using the spell checker.

Using the background spell checker on page 83
You can check your spelling as you write using background spell-checking.

Main word lists on page 85
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 86
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

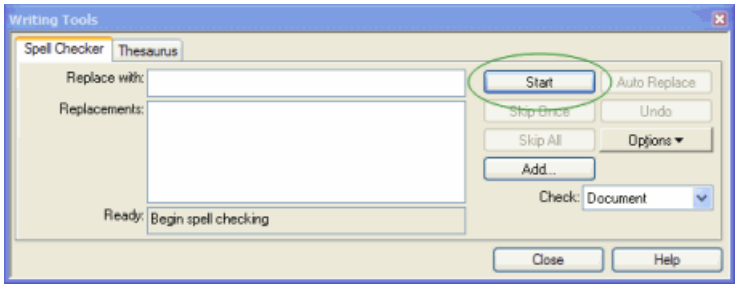
You can check your spelling using the spell checker.

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 85
- *User word lists* on page 86

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

Related Links

Using the background spell checker on page 83
You can check your spelling as you write using background spell-checking.

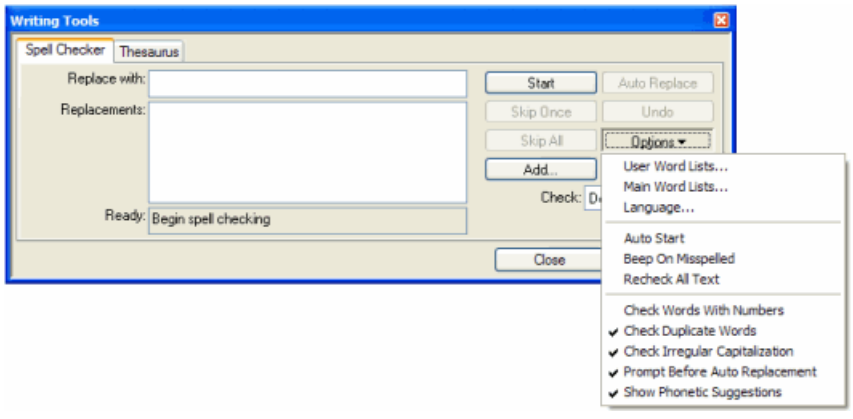
Main word lists on page 85
Main word lists are the built-in word lists for a given language. The default main word list is determined by the language you select. You can use more than one main word list to check your document.

User word lists on page 86
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_AFRIKAANS	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

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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	WT10LDSL.DLL
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 84
Background spell-checking can be turned on or off. The change affects all documents.

Automatically correcting spelling on page 84

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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 84
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 84
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 84
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 84
Background spell-checking can be turned on or off. The change affects all documents.

Manually correcting spelling on page 84
You can manually correct misspelled words with words from the main word list and user word lists.

Main word lists on page 85
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 86
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 84
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.

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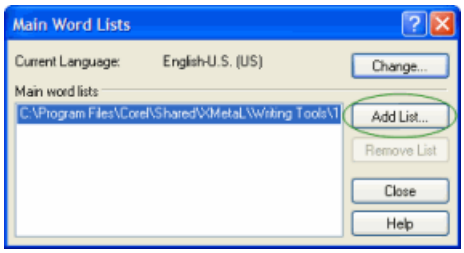
User word lists are unique to your XMetaL Author setup or document. You can add words to your user word list and tell Spell Checker to skip them, replace them with a different word, or suggest alternatives for them.

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 79
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User word lists

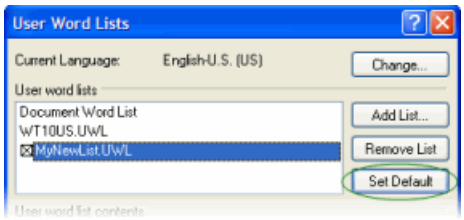
User word lists are unique to your XMetaL Author setup or document. You can add words to your user word list and tell Spell Checker to skip them, replace them with a different word, or suggest alternatives for them.

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.

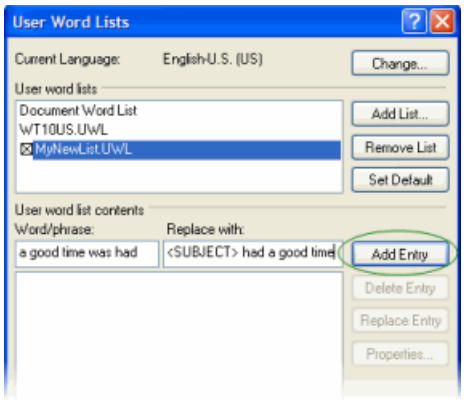
Note: When you ignore a word during spell checking by clicking **Skip All**, that word is added to the document user word list.



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 87
Changing the replacement text for an entry on page 87
Changing an entry on page 87

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.

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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 78

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

Using the thesaurus on page 89

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

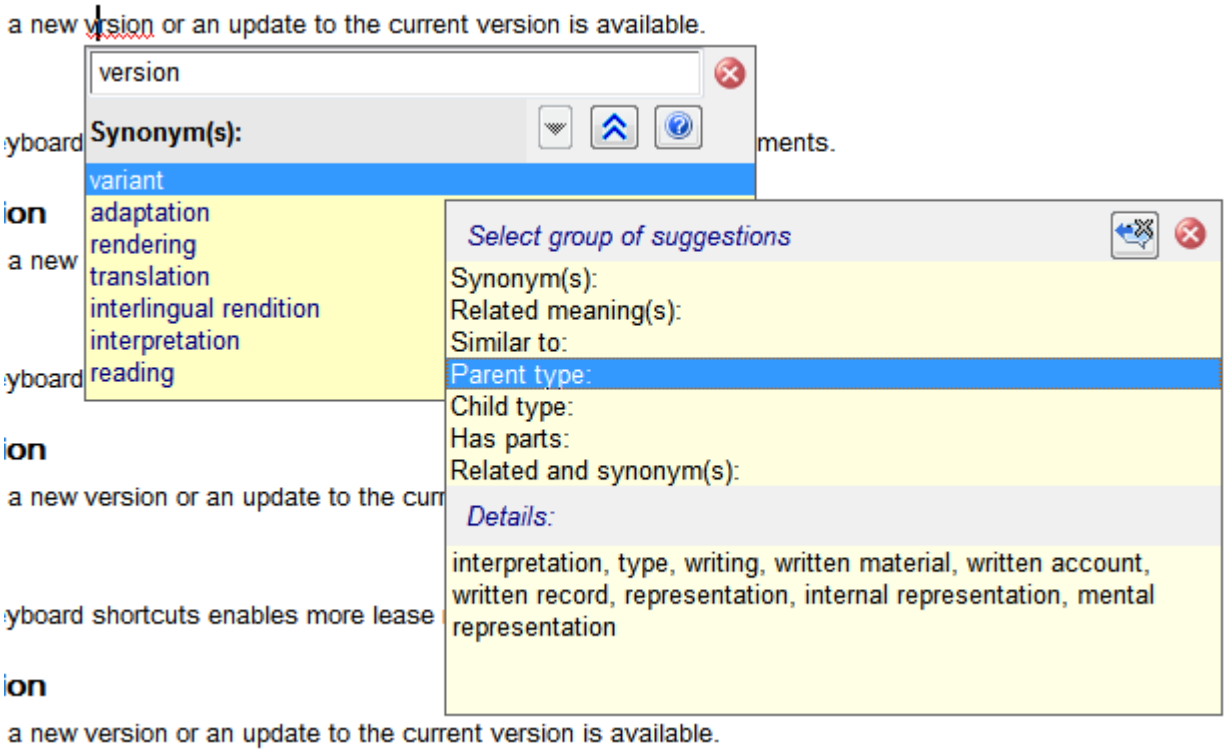
Checking a selected word's spelling and synonyms

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.



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**.

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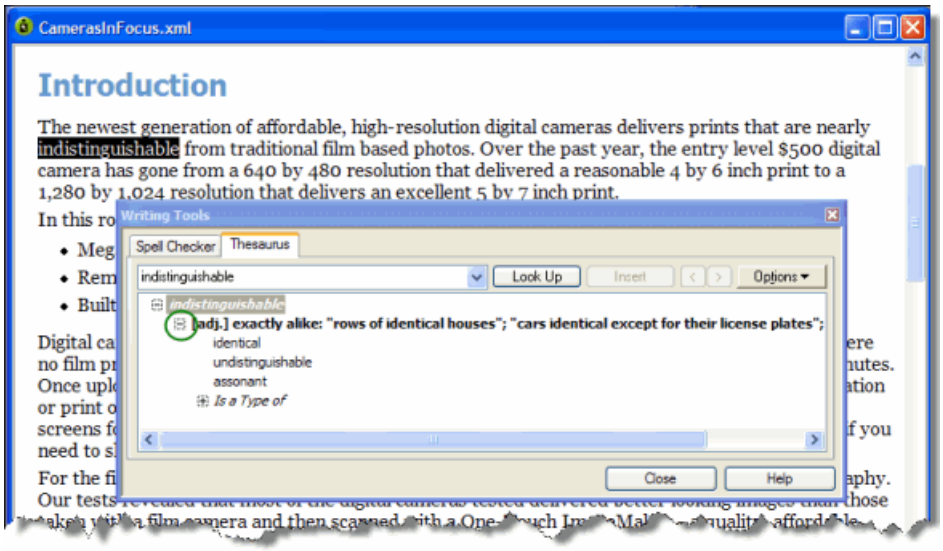
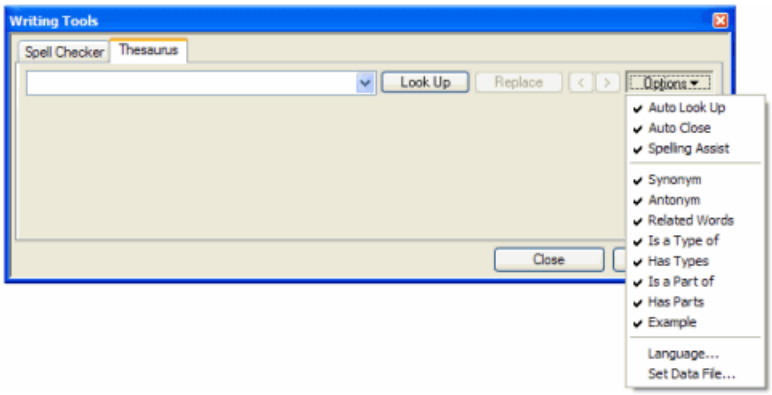


Thesaurus options

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.

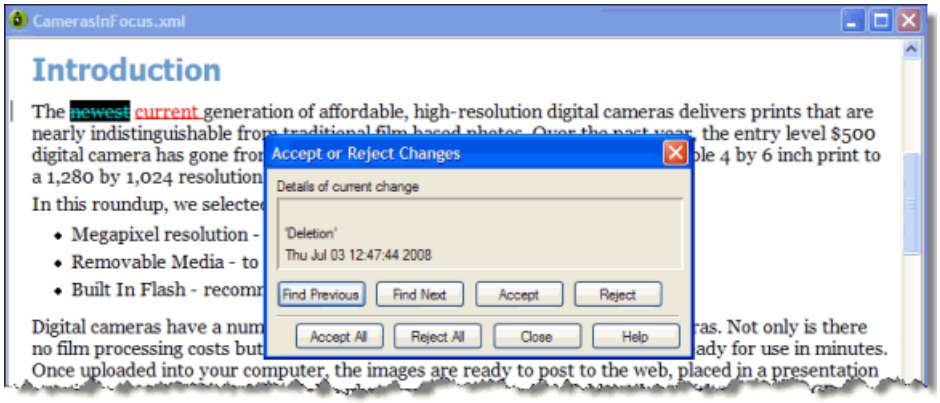
To do this	Follow these steps
Turn on (off) track changes	Click **Tools** > **Track Changes**
Scroll through changes	Click **Tools** > **Accept or Reject Changes**. Then click **Find previous** (**Find next**).
Accept (reject) all changes	Click **Tools** > **Accept or Reject Changes**. Then click **Accept 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 55

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.

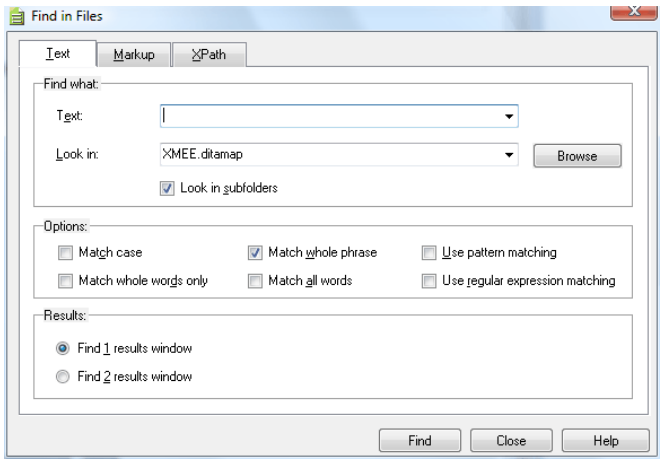
You can search for text, markup, and XPath expressions with the **Find in Files** feature. The results will be displayed in the **Results** pane. The results will be sorted alphabetically by filename. You can remove, select, highlight and replace results, as well as perform new searches on the results.

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 76
   - **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 75
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.

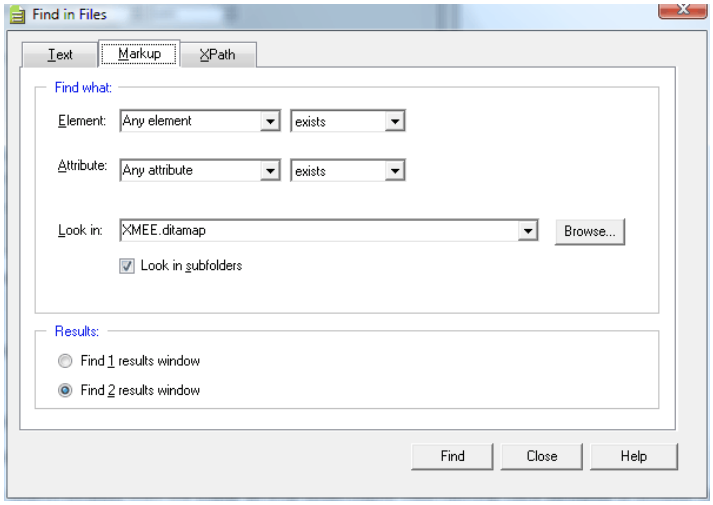
Find markup across files on page 93
You can search for occurrences of specific elements or attributes across files.

Find markup using XPath expressions on page 94
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

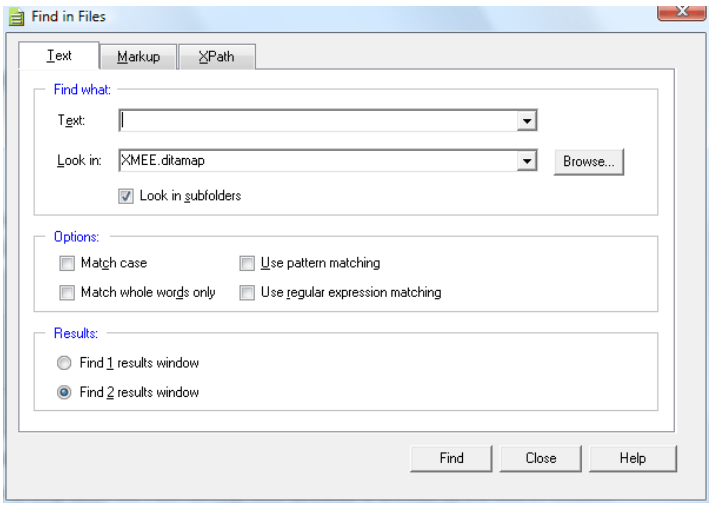
- contains
- equals
- does not equal
- does not exist

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 95.
4. Click the **Replace all checked items** button (Apply to) to replace only the items you have checked, OR click the **Replace all highlighted items** button (Apply to highlighted)

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:

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- 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.

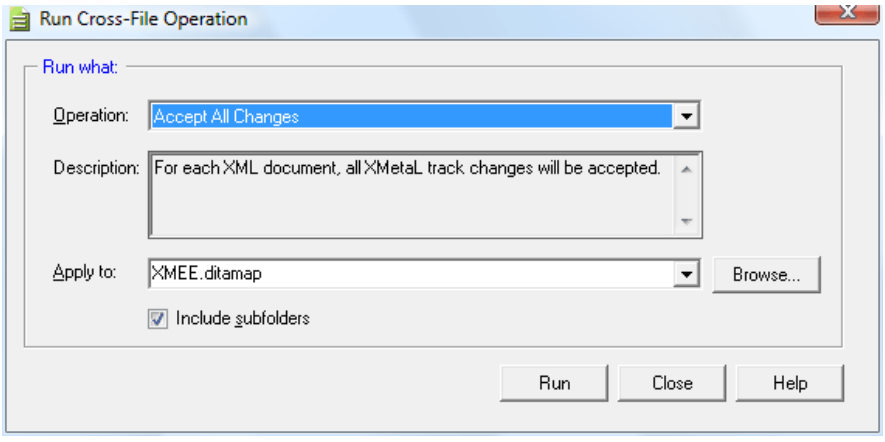
To do this	Follow these steps
Run cross-file operation	Click **Tools** > **Run Cross-File Operation**

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.

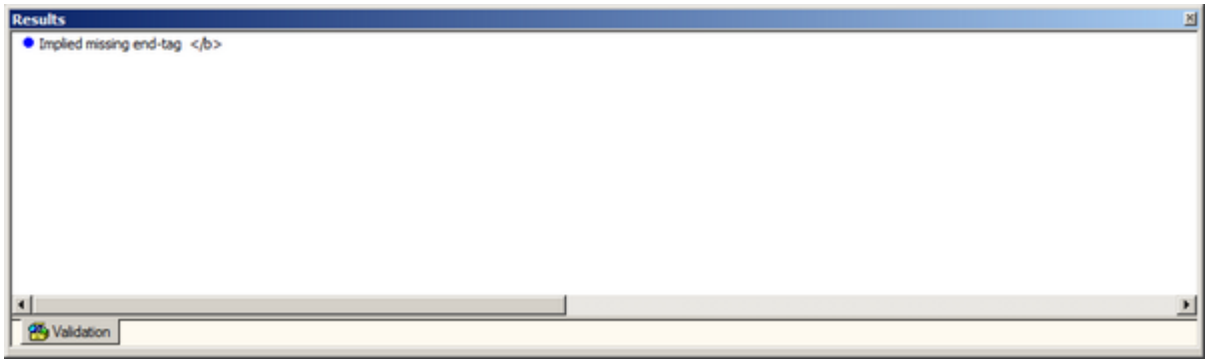
Results pane

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

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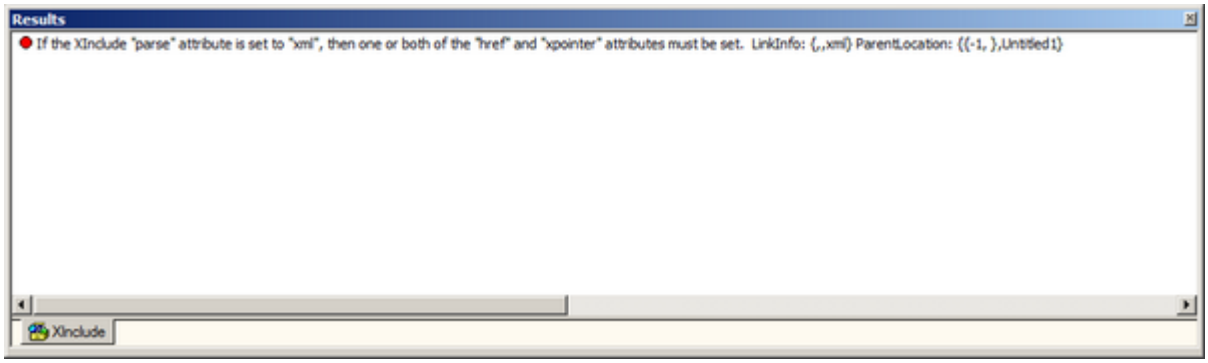
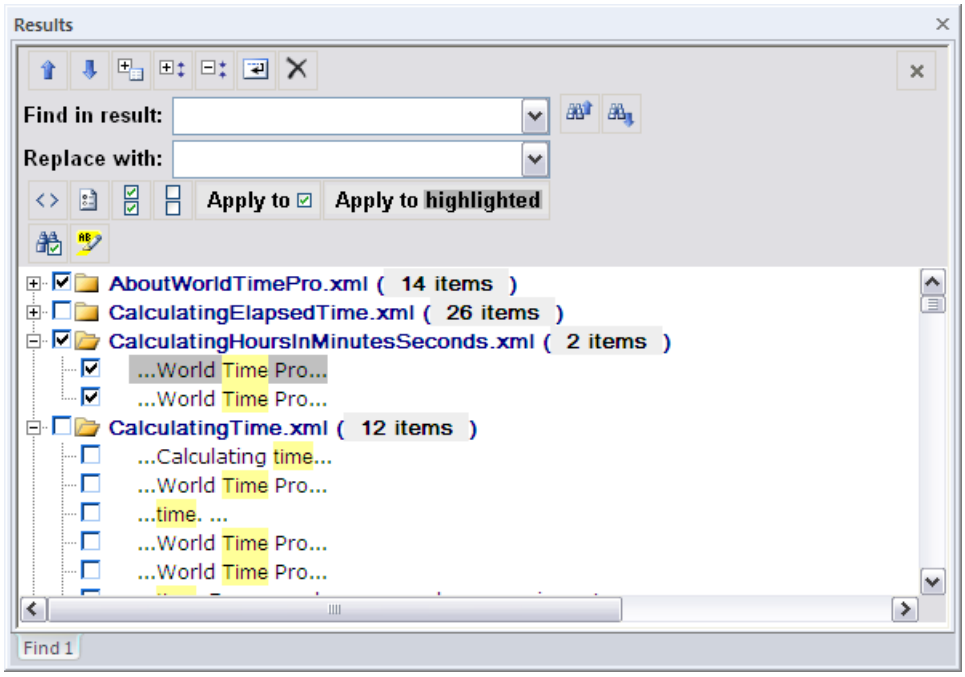
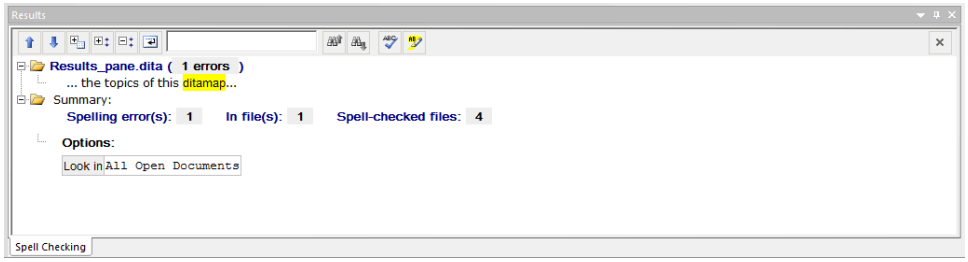


- **Find 1 and 2** - Lists search results for the **Find in Files** feature



- **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

Panes on page 13

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

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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
	Replace highlighted text	Replace all results that are highlighted with the text from the Replace With text field
	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
	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.

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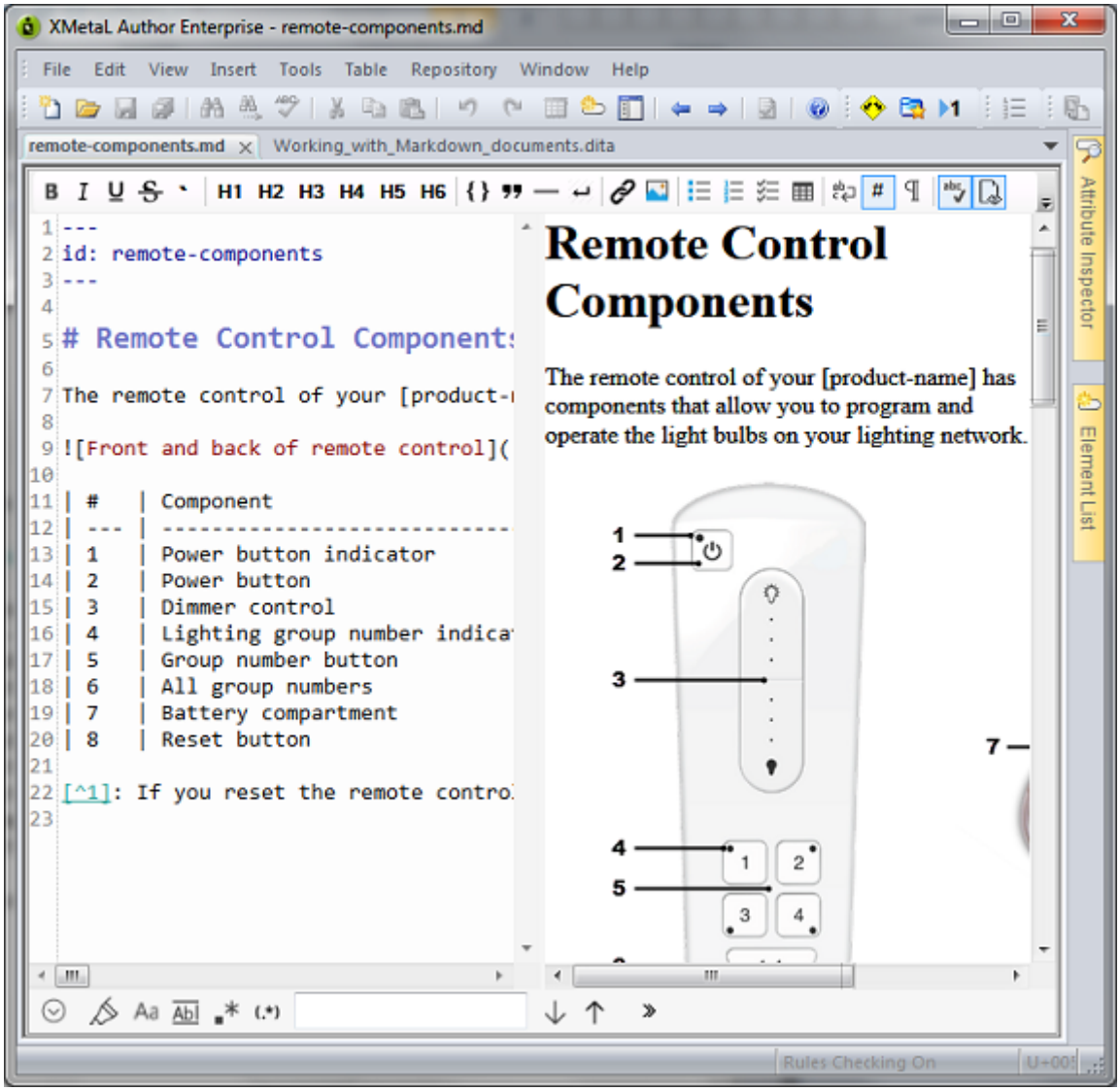
4. The trigger is, by default, **Ctrl + F3**. This trigger key can be edited in the Trigger section by selecting a keyboard trigger from the list.
5. Click **OK** to save changes.

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 234

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**

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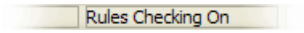
Validation occurs automatically when you save your document or when you switch from Plain Text view to Normal or Tags On view. You can validate an entire document, or you can select a selection of your document to validate. Errors are displayed in the Validation Log.

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 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, user the drop-down list to select a Schematron file to apply, and then click the Schematroll button to run the validatation.
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

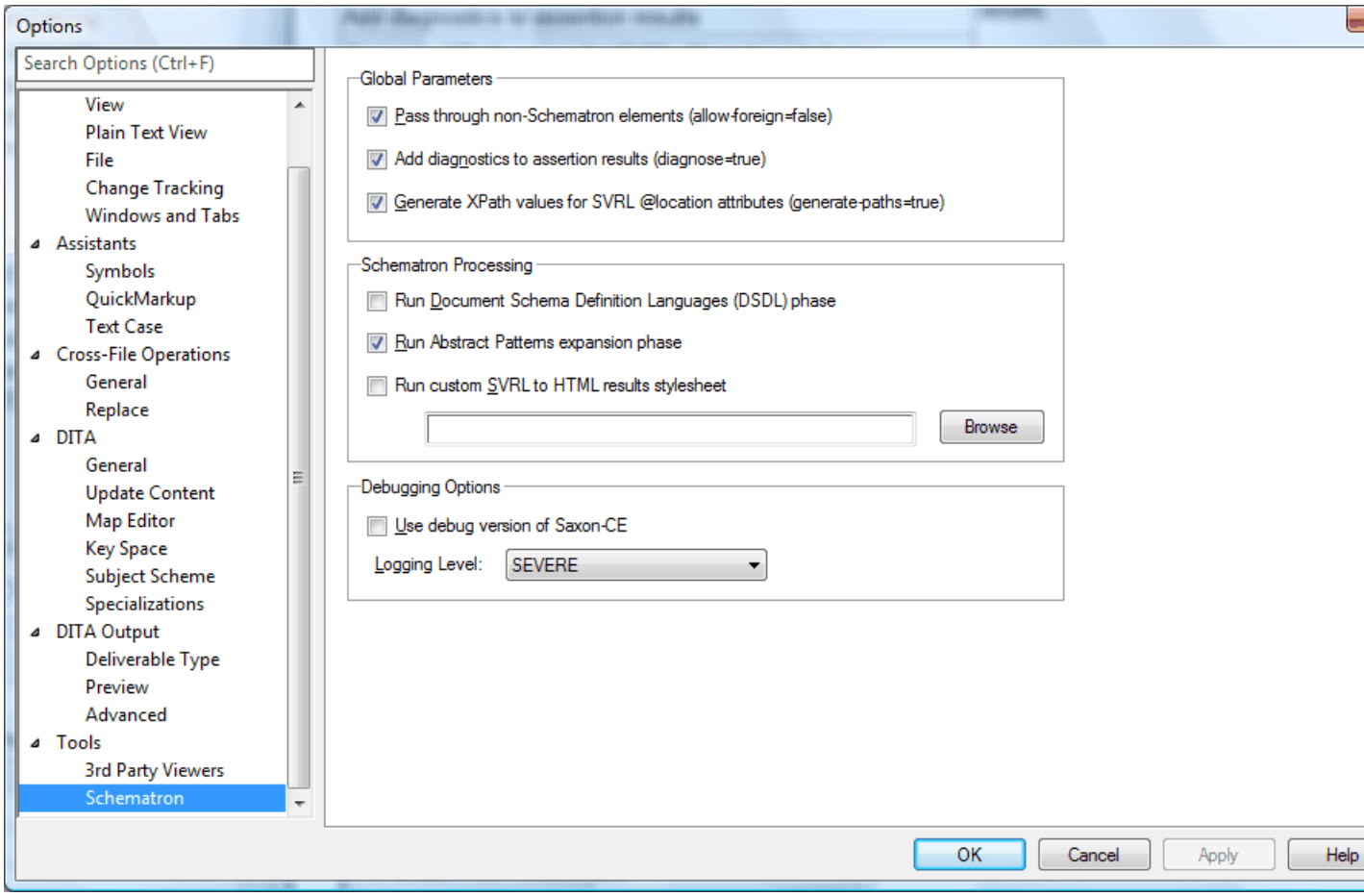
Option	Description
Pass through non-Schematron elements	Please refer to *http://www.schematron.com* for more details.
Add diagnostics to assertion results	
Generate XPath values for SVRL @location attributes	

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/user-doc/1.1/html/coding/logging.html* The default logging level is set to SEVERE.



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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\<version>\`)
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 51
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 55
You can set options through the **Tools** menu.

Creating documents on page 58
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 112
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.

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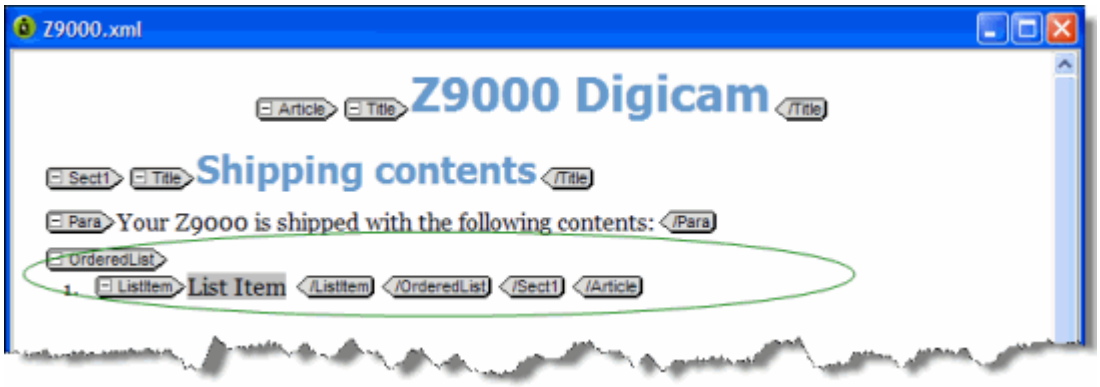
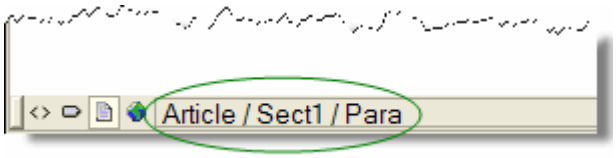


The *current element* refers to the element containing the insertion point or selection. If an entire element is selected, the current element is the parent of that element, not the selected element itself. In Normal and Tags On views, the context of the current element (that is, its position in the 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 `<Strong>` 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

Panes on page 13
Panes provide access to the markup in your document and let you organize resources. You can have one or more panes open in your work area at any time. You can dock a pane so that it is attached to the work area border, or the pane can float. You can pin a pane to keep it open, or un-pin a pane 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 67
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.

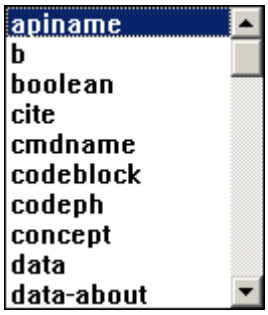
Keyboard shortcuts on page 228

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.

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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

Panes on page 13
Panes provide access to the markup in your document and let you organize resources. You can have one or more panes open in your work area at any time. You can dock a pane so that it is attached to the work area border, or the pane can float. You can pin a pane to keep it open, or un-pin a pane to hide it.

Options on page 55
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 `<UL>` or `<OL>` elements, XMetaL Author recognizes them as list elements. Your DTD should also declare the `<LI>` (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.

1. (optional) If you only want to sort certain list items, highlight the items you want sorted in the list.
2. Click **Edit > Sort**.
   The Sort List dialog box opens.
3. If you selected list items to sort in step 1, select to sort either **Selected Items** or the **Entire List**.
4. 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
5. Select either **Ascending** or **Descending** sorting direction.
6. Click **OK**.
   The list is sorted.

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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	Click **Insert** > **Image** and select an image. - OR - 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. File navigation options are available in the **Choose Image File** dialog as follows: • **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 `<IMG>` element, XMetaL Author recognizes it as an image element. Your DTD should also declare the following attributes of the `<IMG>` element: `SRC`, `ALT`, `HEIGHT`, and `WIDTH`. The Journalist DTD declares the `<Graphic>` and `<InlineGraphic>` elements.

Related Links

Assets (unsupported) on page 50
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 106
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

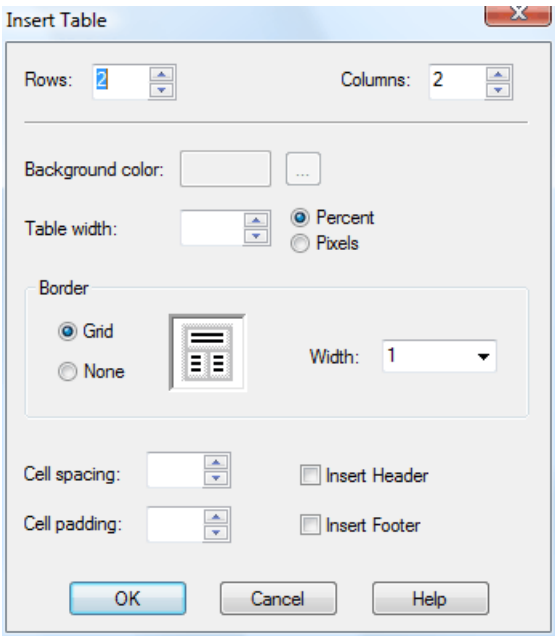
Options on page 55

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.



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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 228

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**

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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.

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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**.

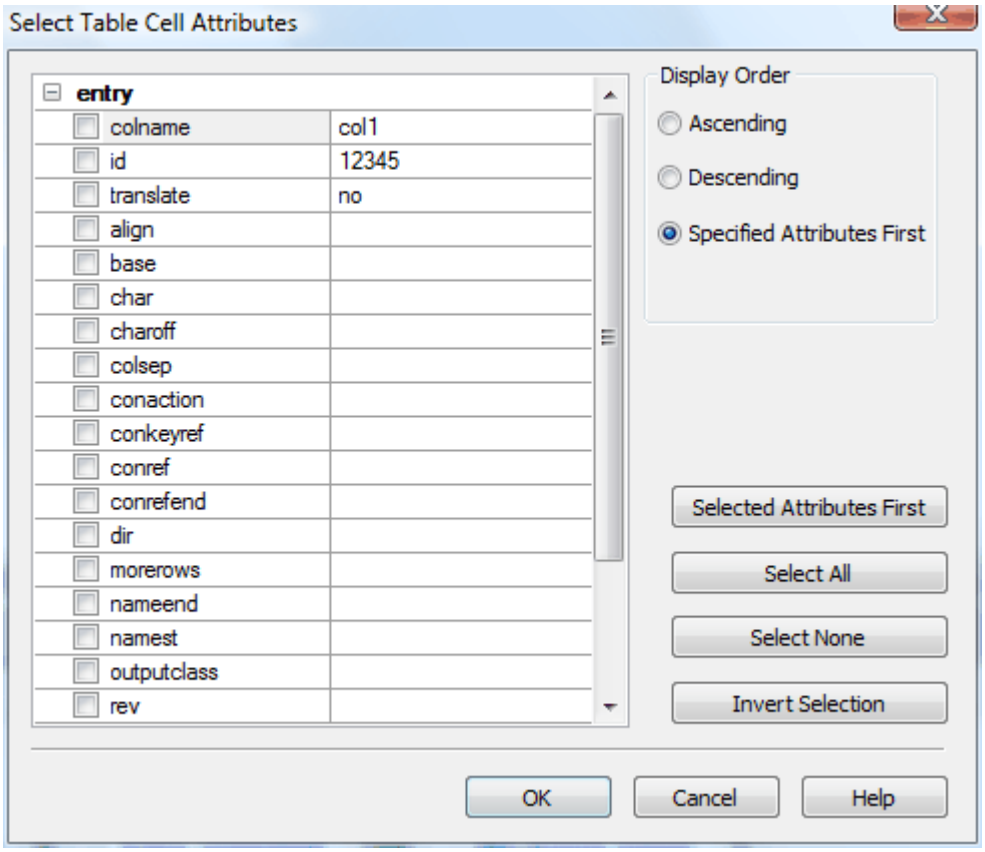
The series is displayed in selected cells in the table.

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 119
Tables that have been split from each other can be merged back into one table.

CALS tables on page 114
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 119
Tables that have been split from each other can be merged back into one table.

CALS tables on page 114
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 119
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.

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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 51

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

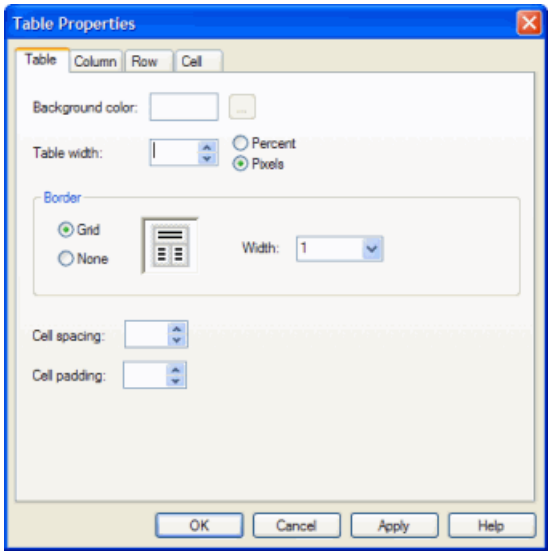
You can set formatting properties in the **Table Properties** dialog or the Attribute Inspector. You can also set some formatting properties when you insert a table (HTML tables only).

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.



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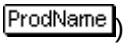
Working with entities

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.

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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 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 65

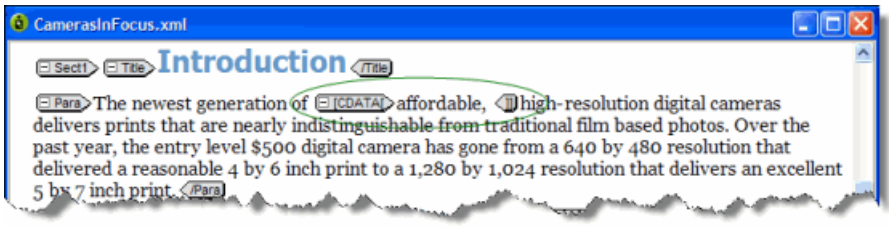
XMetaL Author supports US-ASCII, ISO-8859-1 (Latin-1), and Unicode™ (UTF-8 or UTF-16) character encoding. By default, XML files that you create with XMetaL Author use UTF-8 encoding.

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.

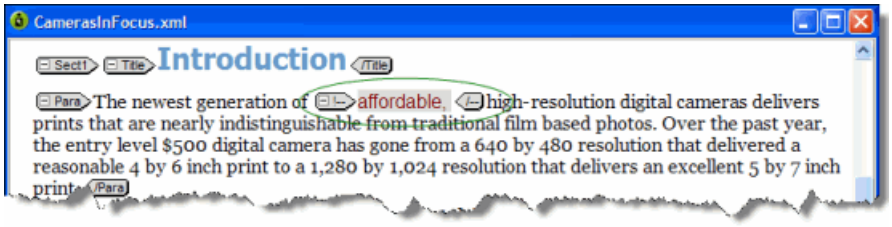
INCLUDE is the default for all marked sections.

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 55

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

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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

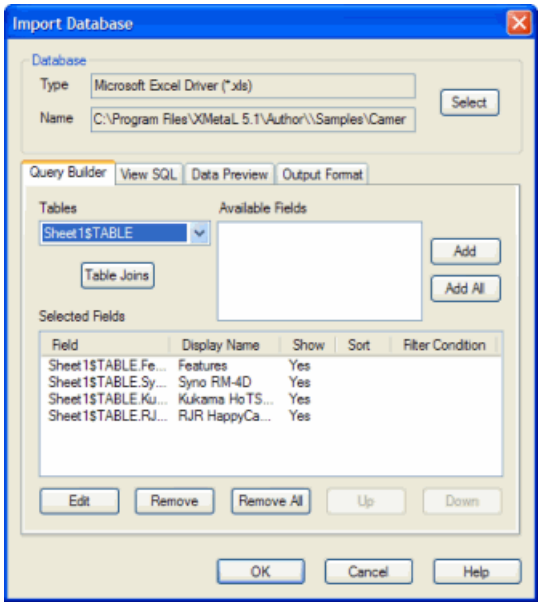
You can import the contents of a database or spreadsheet file into your structured document as a table. When you import a database, you create an SQL query that allows you to import only the data you need and in the format you want. When you import data, you apply elements and attributes that are used 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 51

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.

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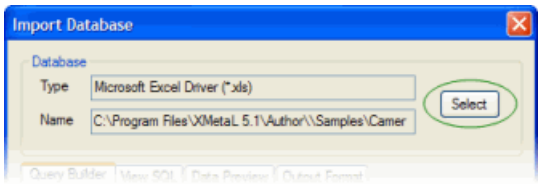
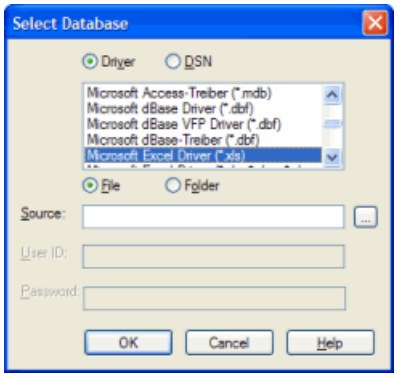
To do this	Follow these steps
Select a database file or folder	In the Import Database dialog, click **Select**. Select the **Driver** option and choose a driver. If you select a Microsoft Access or Microsoft Excel driver, choose the **File** option. If you select any other driver, select the **Folder**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

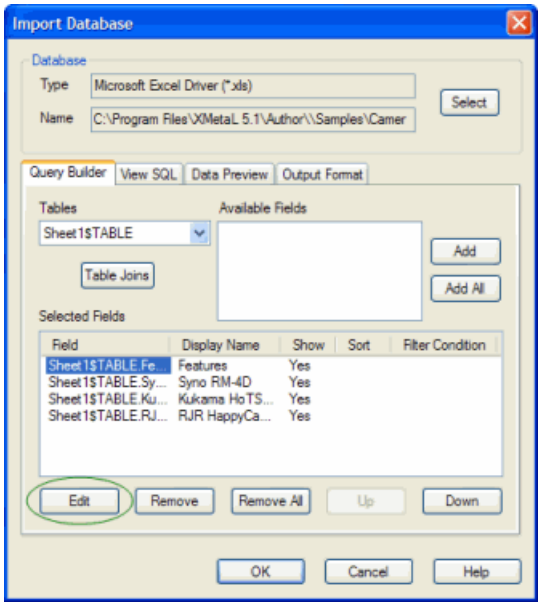
  Note: Hiding a field is not the same as removing it. A hidden field can still be used in a filter condition.

- **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.



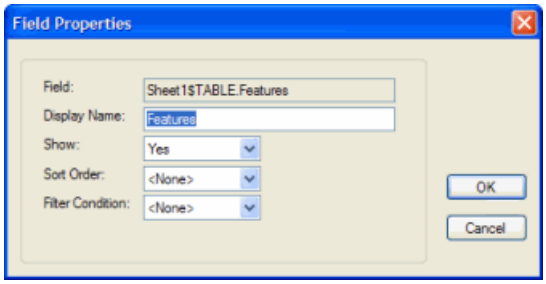


Table joins

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.

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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:

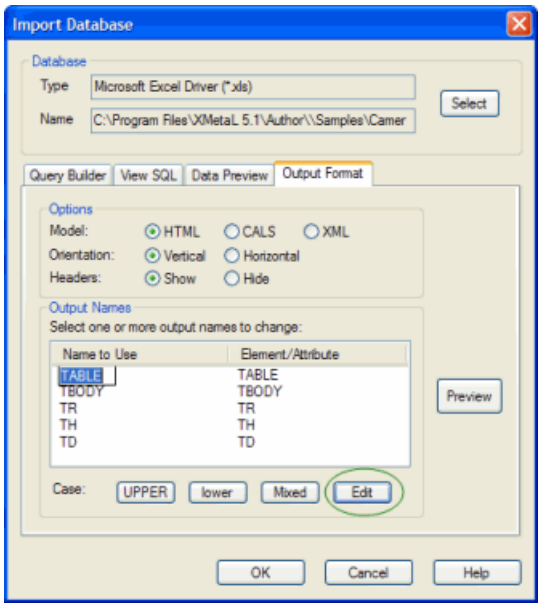
- The table model supported by your DTD.
- An orientation. Choose **Vertical** if you want the fields to be imported as columns (as in the original database) or **Horizontal** if you want the fields to be imported as rows.
- Headers. Choose **Show** to include the table header (the first row) in the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



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XML templates support

XMetaL offers advanced capabilities for creating and inserting templates that contain reusable XML content. This reusable content may include text, elements, images, tables, lists, references, and other common structures. Users can efficiently locate, preview, and insert predefined XML content fragments into a document with just a few keystrokes or mouse clicks.

XML template support is available for DITA and any other customization such as Journalist, DocBook, and S1000D.

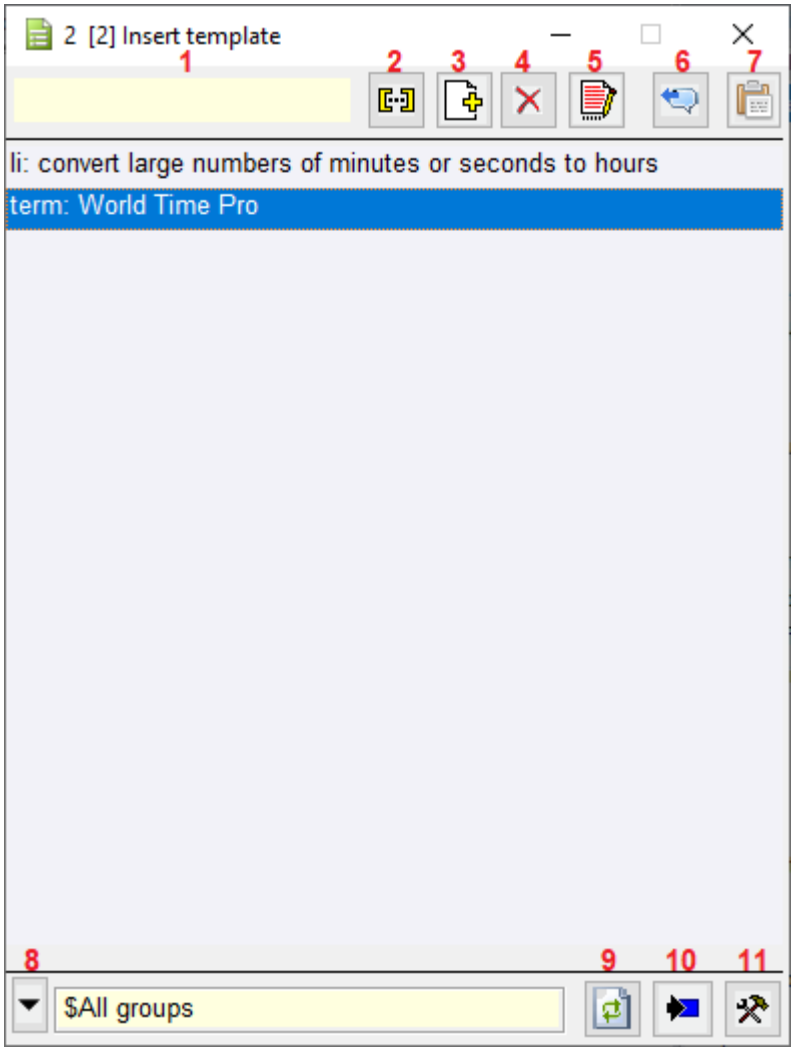
Opening Insert Template dialog

Open the *Insert Template* dialog by using the XMetaL quick navigation tool to run the "Insert XML Template" macro or by pressing **Ctrl+,**.

The dialog displays the templates associated with the active document.

Toolbar buttons in Insert Template dialog

Basic UI setting:



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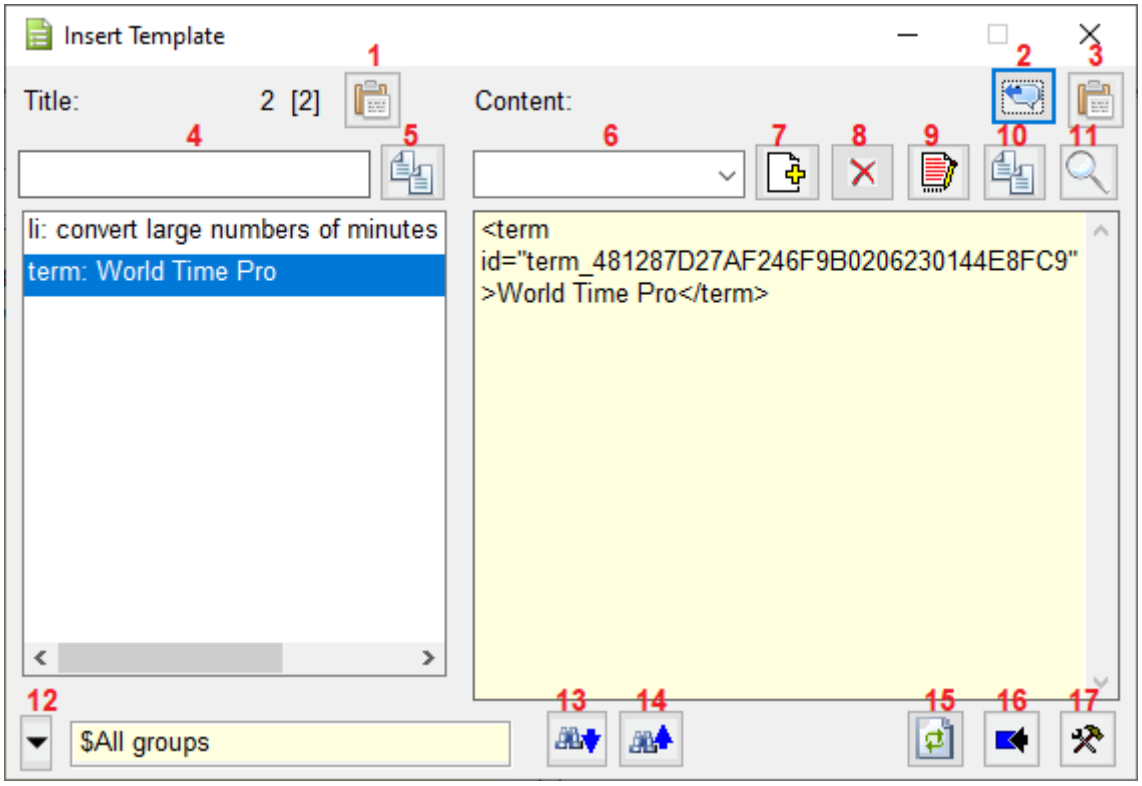
Toolbar button in Basic UI setting:

# on image	Description
1	Search for the title of the reusable template.
2	The current filter is set to "Word contains" or "Word starts with".
3	Create a new template from the fragment.
4	Delete the template.
5	Edit the template.
6	Enable or disable preview in the active document.
7	Paste content.
8	Display the list of available content groups.
9	Refresh the content.
10	Display the template content.
11	Configure reusable content settings.

Full UI setting:



Toolbar buttons in Full UI setting:

# on image	Description
1	Paste the selected title of reusable content into the active document.
2	Enable or disable preview in the active document.
3	Paste the selected reusable content into the active document.

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# on image	Description
4	Search for the reusable template in the Title area.
5	Copy the selected text from the active document into the Title filter.
6	Search for the reusable template in the Content area.
7	Create a new template from a fragment.
8	Delete the template.
9	Edit the template.
10	Copy the selected text from the active document into the Content filter.
11	Find reusable content using the text in the Content filter box.
12	Display the list of available content groups.
13	Find the next item.
14	Find the previous item.
15	Refresh the content.
16	Hide the template content.
17	Configure reusable content settings.

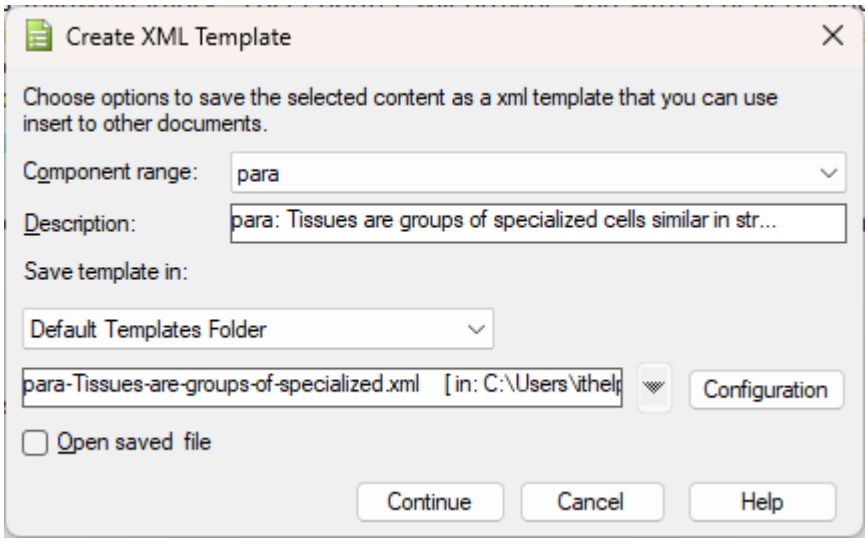
Note:

- Since the title content is used as the file name for the template file, certain characters such as @, :, and /, which are not permitted in file names, will be removed.

Creating new template

To create a new template from a fragment, click toolbar button **#[3]** in the *Insert Template* dialog with Basic UI or **#[7]** in the Full UI dialog.

The *Create XML Template* dialog, or *Create DITA Template* dialog for DITA, is then displayed:



Enter the following information:

- **Component range -** Select the current element, Selected Text, or <ph> element.
- **Description -** Type a description for the XML template.
- **Save reusable template in:** - Specify the directory in which the reusable template should be stored:
  - Project Specific Template folder
  - Default Templates folder or Default DITA Templates folder for DITA
- **Configuration** - It opens template folders configuration
- **Open saved file** - When selected, the saved reusable template file will automatically open in XMetaL.

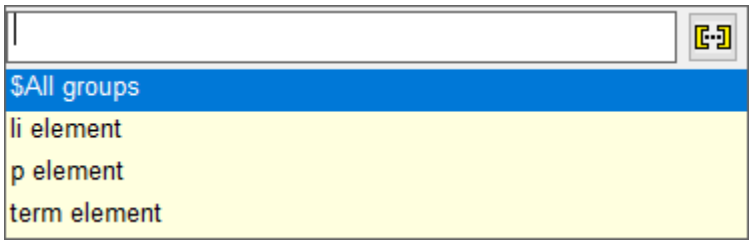
Note: To save a reusable template in a non-default **Project Specific Template Folder**, users must first create a new template configuration file through the *Reusable Content Settings* dialog by following these steps:

- In the *Reusable Content Settings* dialog, click **View File Content** for the active template configuration.
- In the *Active Template Configuration* dialog, click **Add New Configuration** or **Duplicate Configuration**.
- Enter a configuration title and specify the path to the project-specific template folder.
- Save the new configuration.
- Save the reusable content settings.

When the **Project Specific Template Folder** option is selected in the *Create Template* dialog, clicking the **Select Template Folder** button displays the list of available non-default template folder paths. Users may select the desirable non-default template folder.

Content groups

After creating new templates from the fragment, click toolbar button **#[8]** in the *Insert Template* dialog with Basic UI or **#[12]** in the Full UI dialog to display the list of available content groups:



New Template Configuration

If the template configuration folder corresponding to the active document rules does not exist at C:\ProgramData\SoftQuad\XMetaL\WhiteBoard\reusablecontent, clicking the *Create New Template from Fragment* toolbar button (**#[3]** in the XML Template dialog with Basic UI or **#[7]** in the Full UI dialog) opens the *New Template Configuration* dialog:

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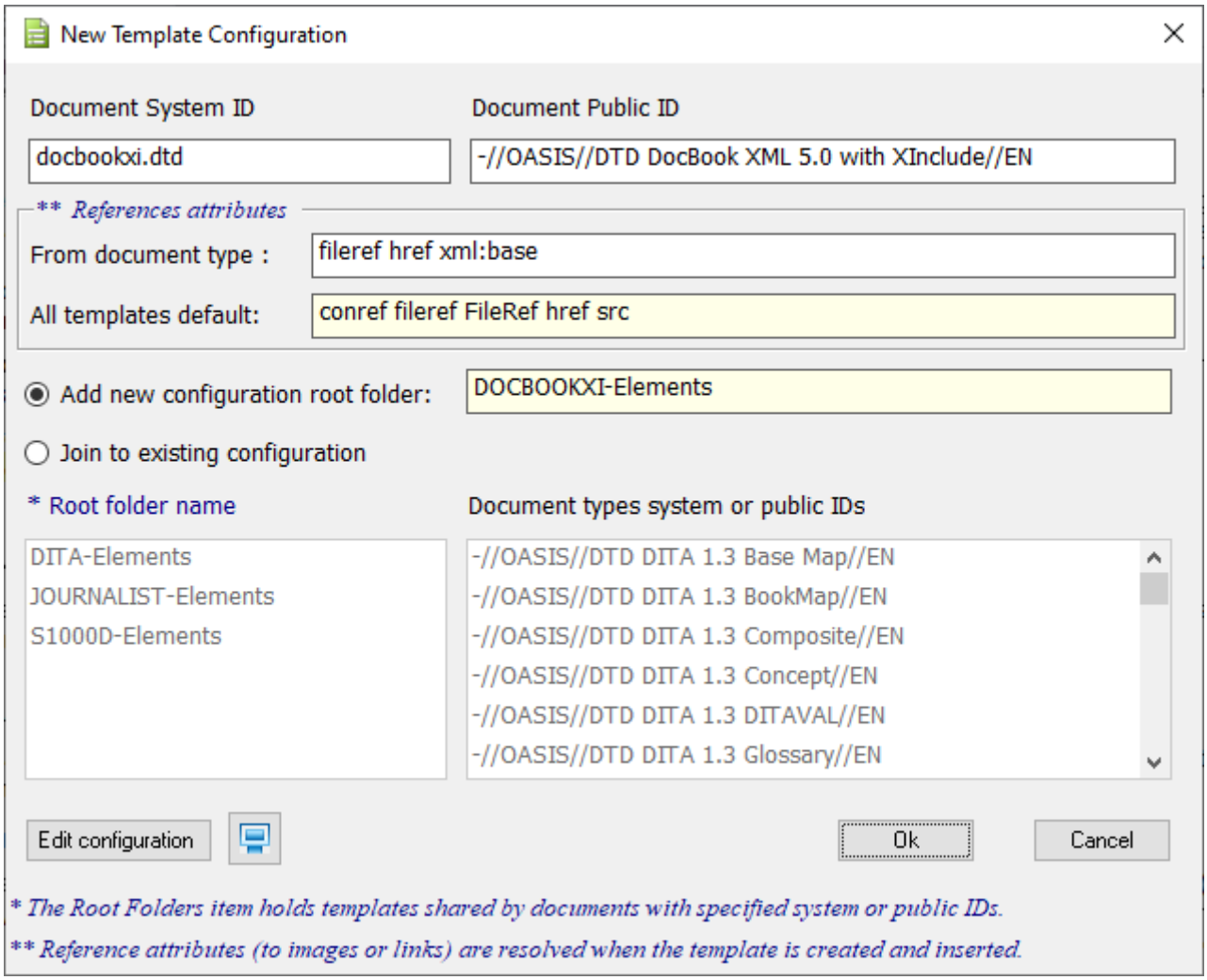


There are two options for configuring a new template:

- Add a new configuration root folder to C:\Users\<USER NAME>\Documents\SoftQuad\XMetaL\ReusableContent.
- Join an existing configuration by selecting the appropriate root folder name.

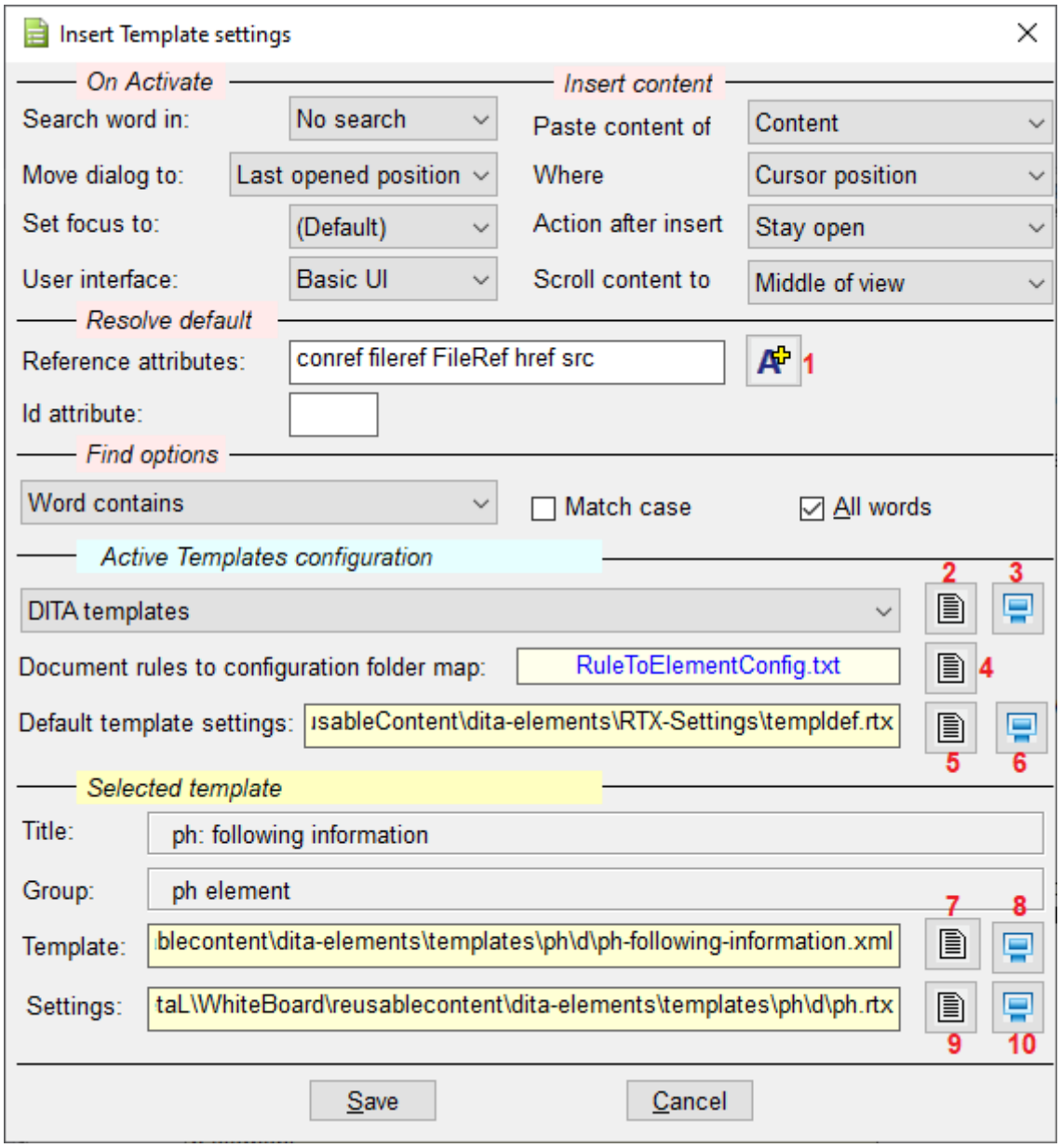
There are two buttons available:

- **Edit the configuration** by opening the **RuleToElementConfig.txt**, which defines the mapping between document rules and the configuration folder.
- **Show the location** of **RuleToElementConfig.txt** on the Desktop tab in Resource Manager.

Insert Template Settings

Opening Insert Template settings dialog

To open the *Insert Template Settings* dialog, click the **Reusable Content Settings** button in the *Insert Template* dialog.



The *Insert Template settings* dialog includes the following areas:

- **On Activate:** Configure settings applied when the *Insert Template* dialog is activated.
- **Insert content:** Configure settings applied when reusable content is inserted.
- **Resolve default:** Define which reference attributes and ID attributes are resolved.
- **Find options:** Set options for locating reusable content in the *Insert Template* dialog list.
- **Active Template configuration:** View and edit the reusable configuration file, access the document rules file and default template settings file, and create a configuration map.
- **Selected template:** Display information about the selected template, including title, content group, template file location, and template settings file location.

Toolbar buttons in Insert Template settings:

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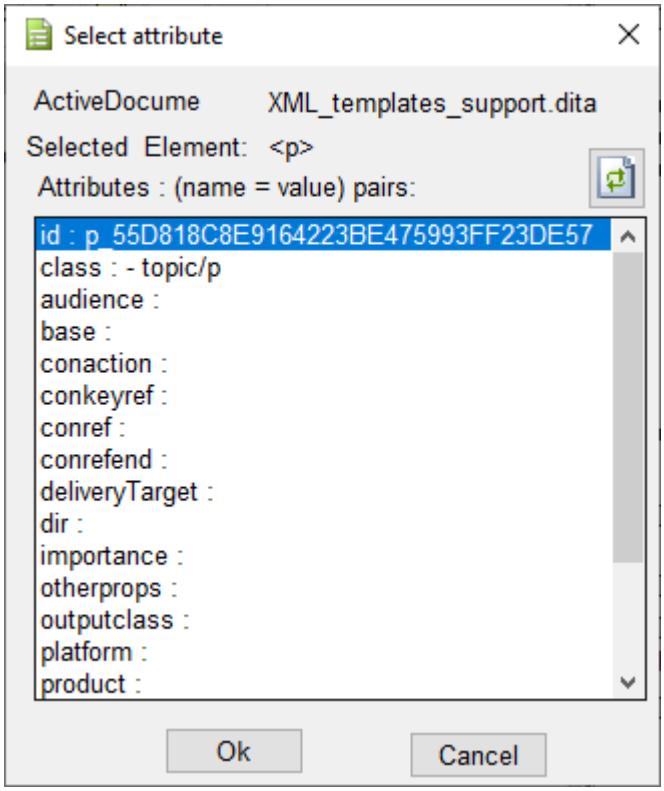
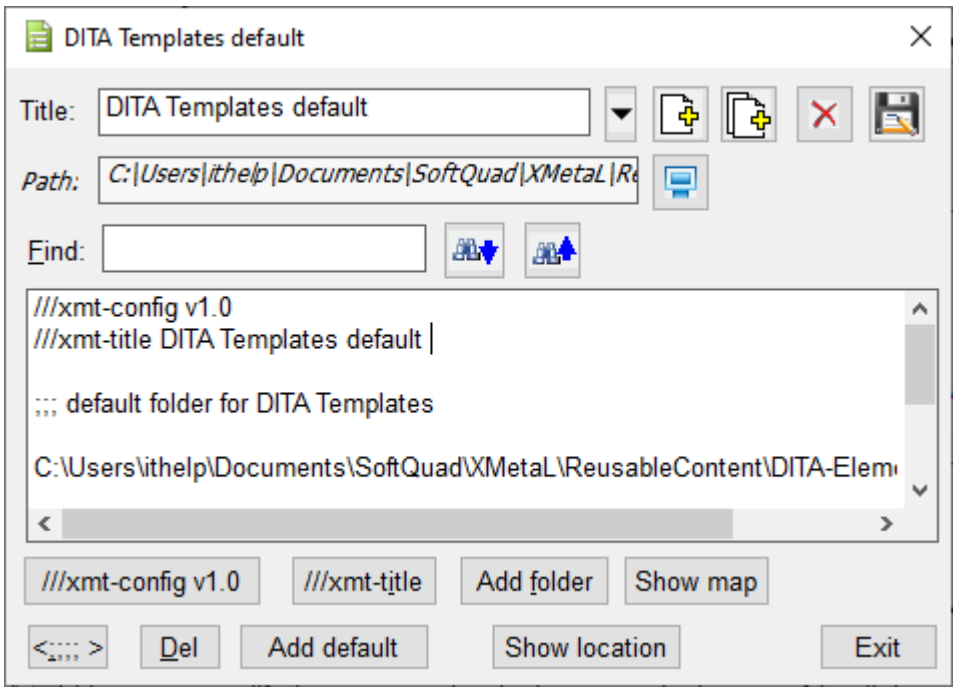
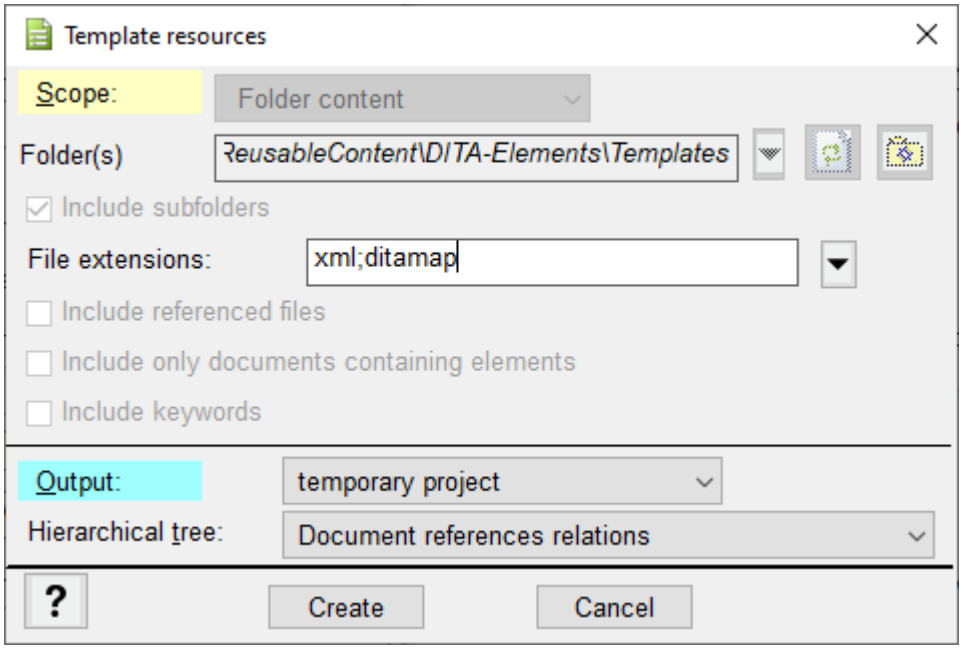
# on image	Description
1	Open the *Select attribute* dialog to choose an attribute of the selected element in the active document:  The selected attribute is added to the *Reference attributes* box.
2	Open the *Active template configuration* dialog to view or edit the reusable text file content (.rtc):  Users can modify the content using the buttons at the bottom of the dialog.

# on image	Description
	Additional features include: • Display available configurations. • Add a new configuration. • Duplicate an existing configuration. • Delete a template. • Save the modified content. • Show the configuration file location. • Search for text within the editor using buttons to navigate to the next or previous match.
3	Open the *Template resources* dialog to create a template configuration map:  Once created, the map opens in Resource Manager.
4	View the file content of the document rules to configuration folder map (RulesToElementConfig.txt).
5	View the file content of the active template settings (templdef.rtx).
6	Show the file location of the active template settings on the Desktop tab in Resource Manager.
7	Open the selected template file (.xml).
8	Show the selected template file location on the Desktop tab in Resource Manager.
9	Open the selected template settings file (.rtx).
10	Show the file location of the selected template settings on the Desktop tab in Resource Manager.

How to modify or delete the existing configuration root folder

- To manually modify the configuration, open RuleToElementConfig.txt by selecting **View file content** button **#[4]** for RuleToElementConfig.txt within the *Insert Template Settings* dialog. This file is located at C:\Users\<USER NAME>\Documents\SoftQuad\XMetaL\ReusableContent. Edit or remove the #FOLDER entry that defines the root folder name, including any associated public and/or system identifiers.

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- For a more structured approach, it is recommended to first remove the appropriate whole #FOLDER entries or entries for specific folders from the configuration file, then run the **Insert XML template** macro using **[Ctrl + ,]**. This action opens the *New Template Configuration* dialog, allowing users to either create a new configuration root folder or join an existing one. This method ensures that all necessary subfolders and default settings are properly generated.

MathML support

MathML (Mathematical Markup Language) is an XML-based markup language used for Microsoft Copilot mathematical notation and its content. It's an open standard developed by the W3C (World Wide Web Consortium) to natively integrate mathematical formulas into web pages and other documents. XMetaL provides enhanced support for creating and editing MathML elements.

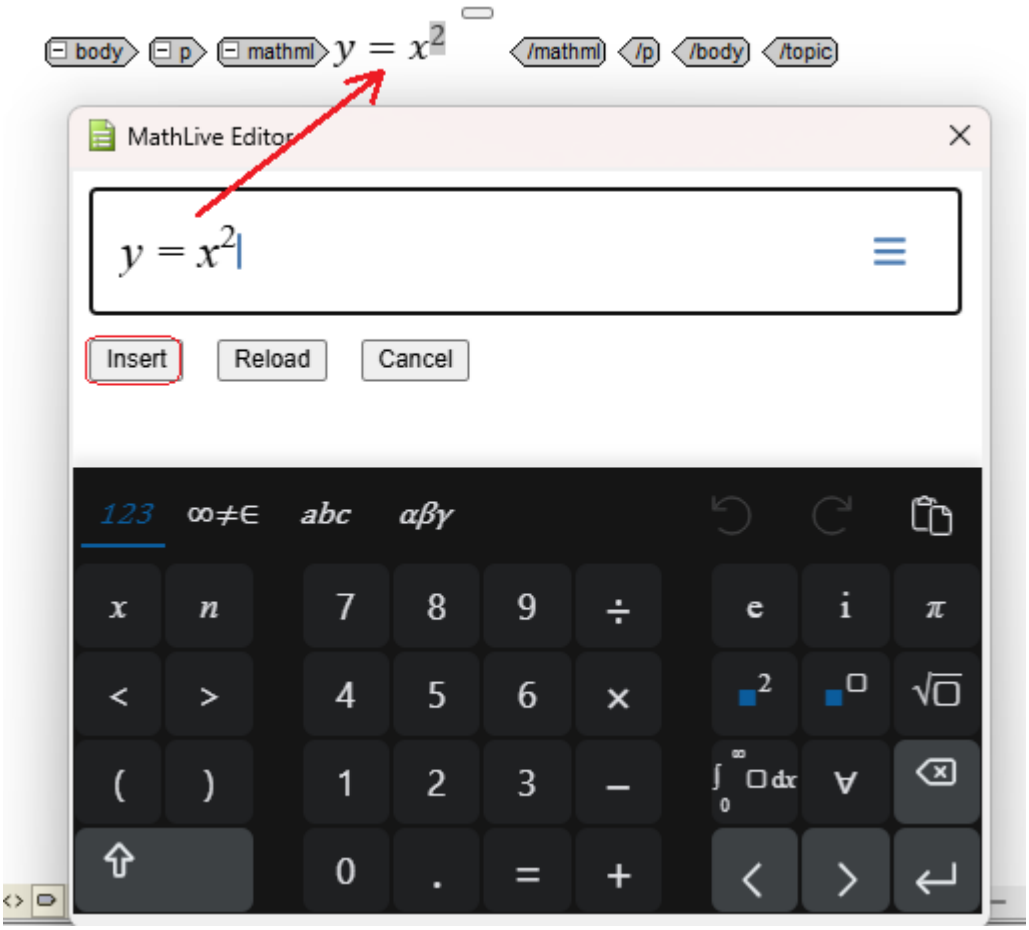
XMetaL supports MathML editing through either the MathLive editor or the MathType editor. Users can activate the preferred MathML editor by running the “Activate MathLive MathML Editor” or “Activate MathType MathML Editor” macro through XMetaL quick navigation tool (Ctrl+/).

When MathLive editor or MathType editor is activated, inserting a MathML container element, such as

```
<mml:math> or <mathml>
```

automatically opens the MathLive editor or MathType editor.

The mathematical formulas entered in the MathML editor is inserted into the MathML container element by clicking the **Insert** button.



In the MathML editor, a variety of mathematical formula templates is available through the toolbar buttons and the menu.

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You can modify formulas in the document by double-clicking the MathML container element, which opens the MathLive or MathType editor.

After insertion, mathematical formulas are displayed as inline graphics directly within XML documents.

You can toggle between the XML tag view and a graphical view. Selecting the “Show source” button in the upper-right corner of an inserted MathML image switches the view to the source. To return to the graphical MathML view, collapse and then expand the “equation” element. The graphical view provides options to zoom in or out using [Ctrl +] and [Ctrl –], and to reset the element size to its default using [Ctrl + 0].

Note: To use the MathType editor, the following are required:

- Internet access
- Python installed

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.

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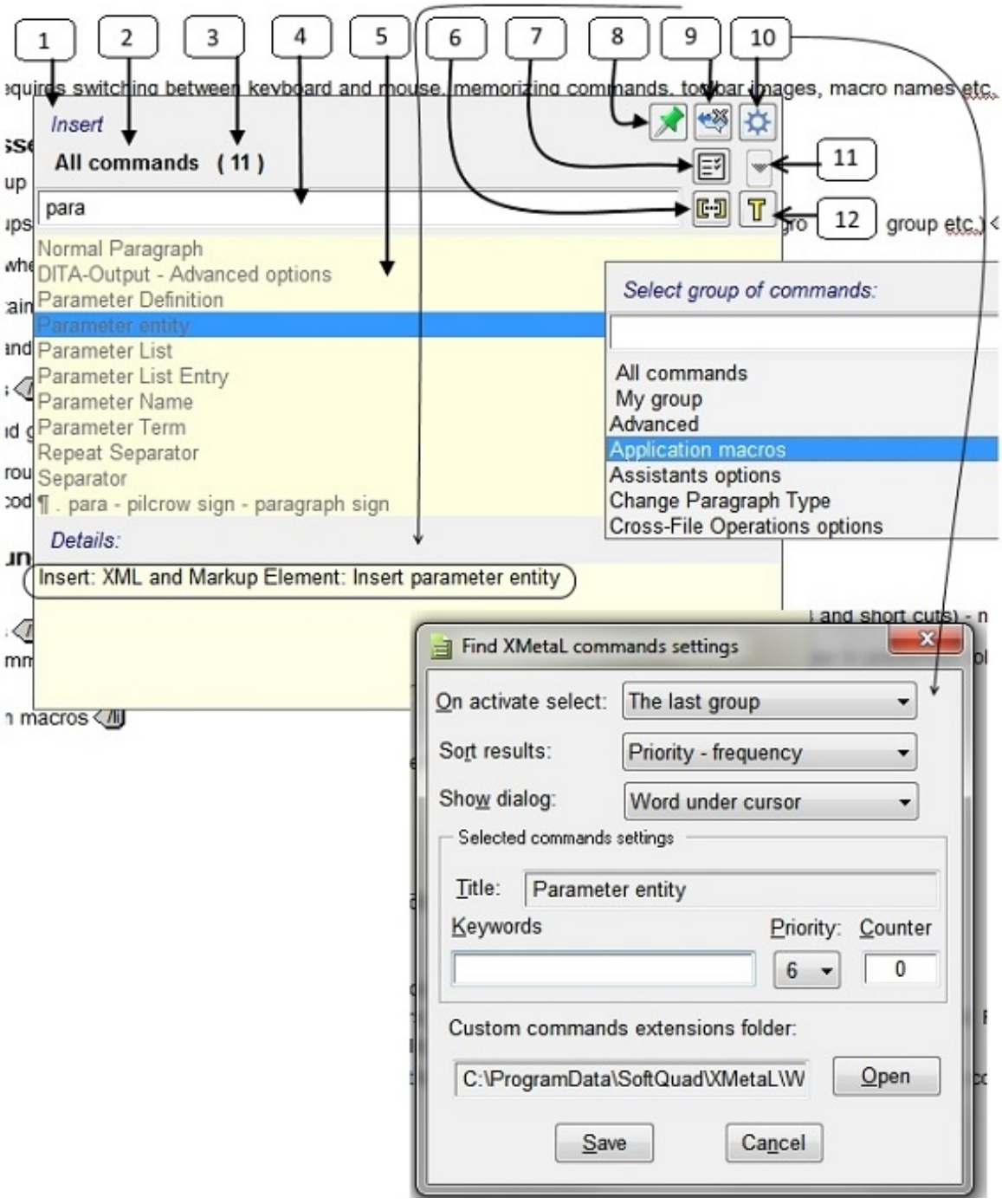
Favorite actions can include calls to third-party applications where the parameter can contain a path, word under cursor, or selected text in an active document. XMetaL includes examples, some of which show how to, for example, find selected text on the web or pass text to free web translation services.

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
	• Shift+Up • Shift+Down	If My group of commands is selected, move the selected command up or down
	Esc	Close menu
	• Ctrl++ • Ctrl+- • Ctrl+Shift++ • Ctrl+Shift+-	Resize dialog
	• 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.

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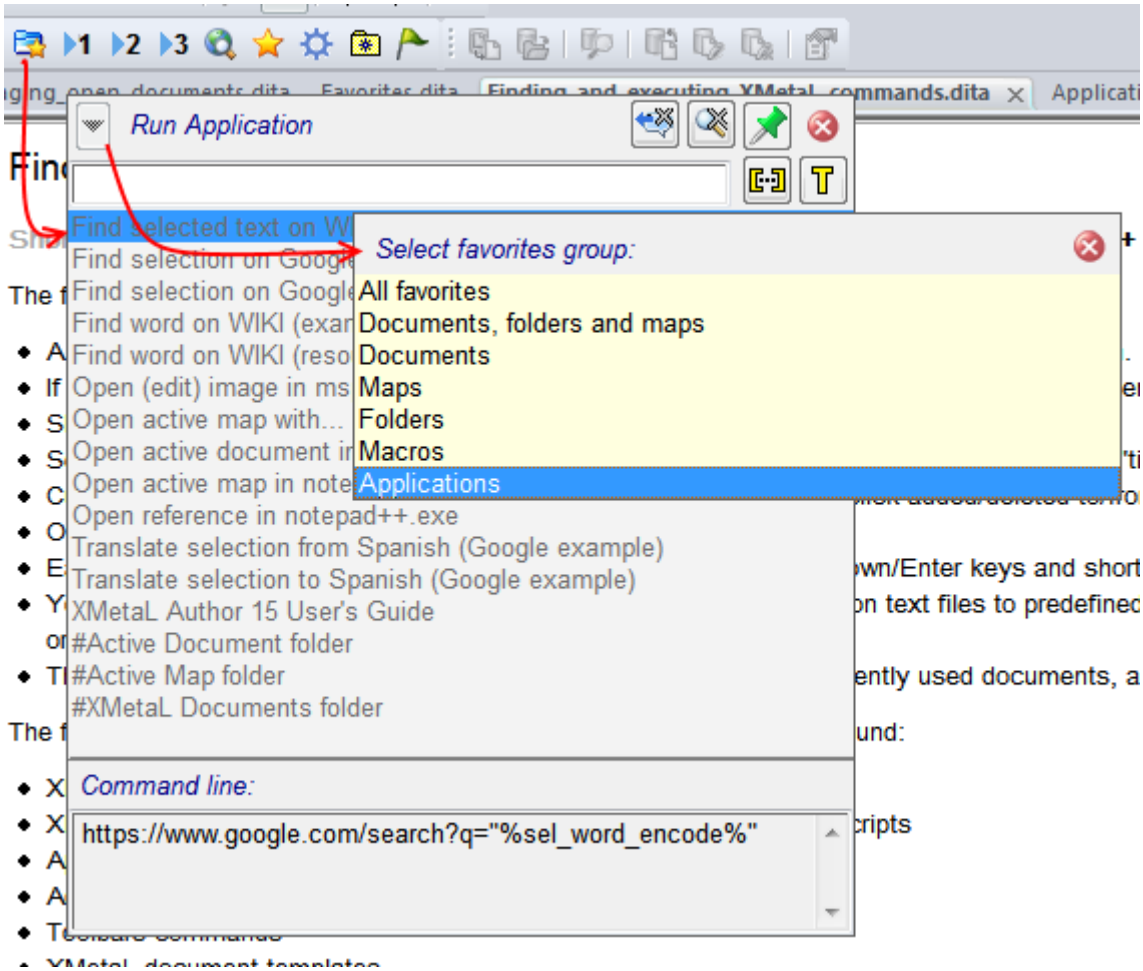
- If you frequently use some of the commands, go to Preferences and change the command priority (default is "6"), "1" is highest and the command will appear either close to the top or bottom of the list depending on the set value.
- if you search for your favorite folder, type the "[" character in the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

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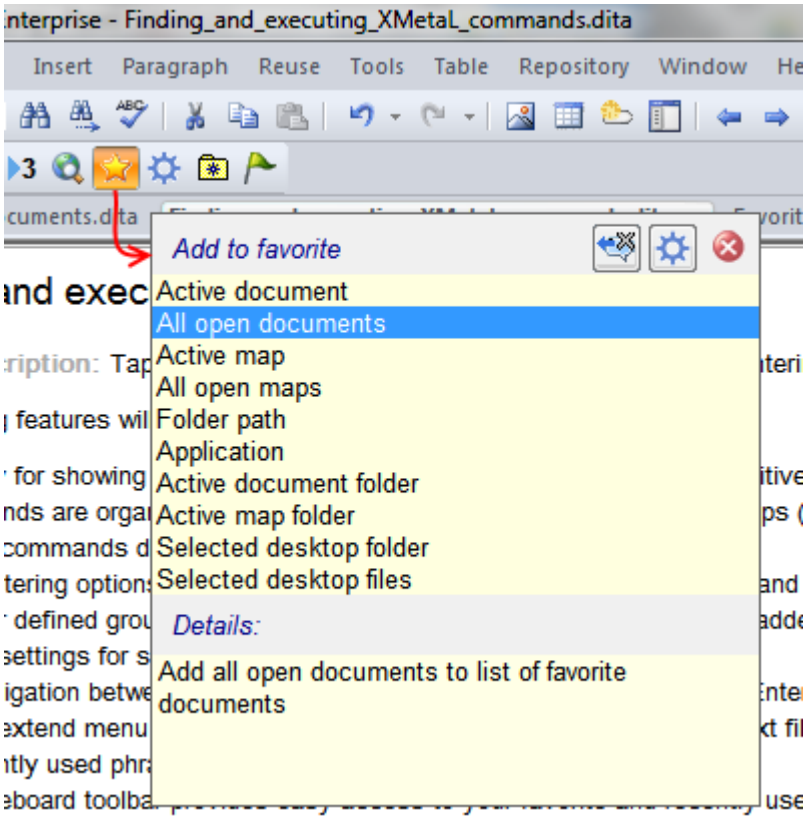
You can add favorite actions by clicking the icon in the Whiteboard toolbar and then selecting one of the options in the **Add to favorites** dialog.

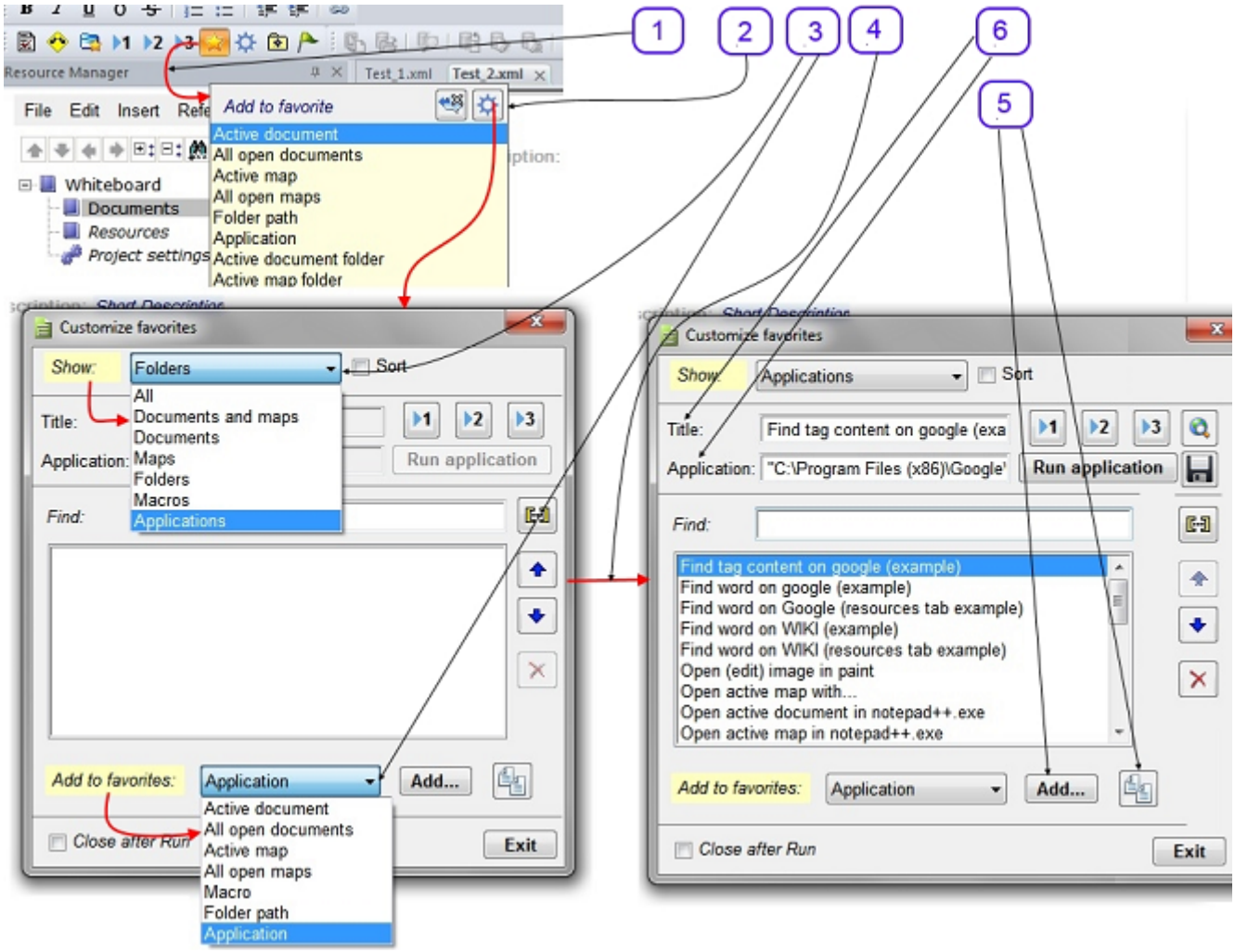


Customizing favorite applications

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 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

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- %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.

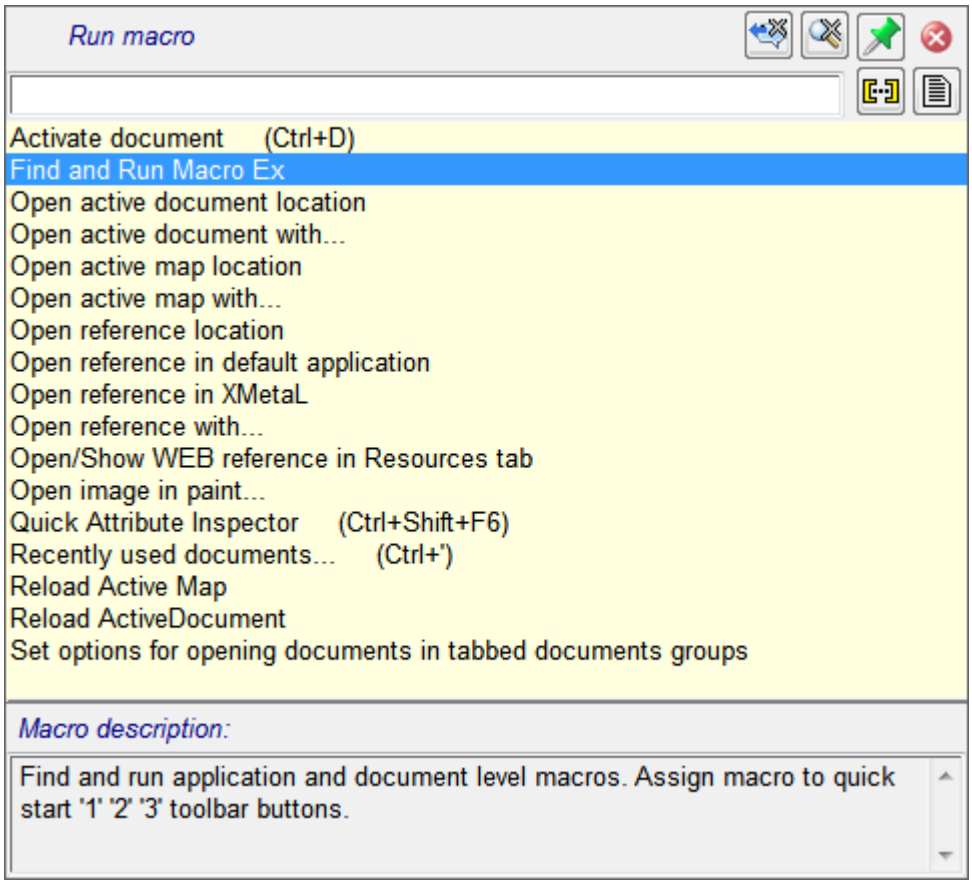
For more customizing the buttons:

- 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.

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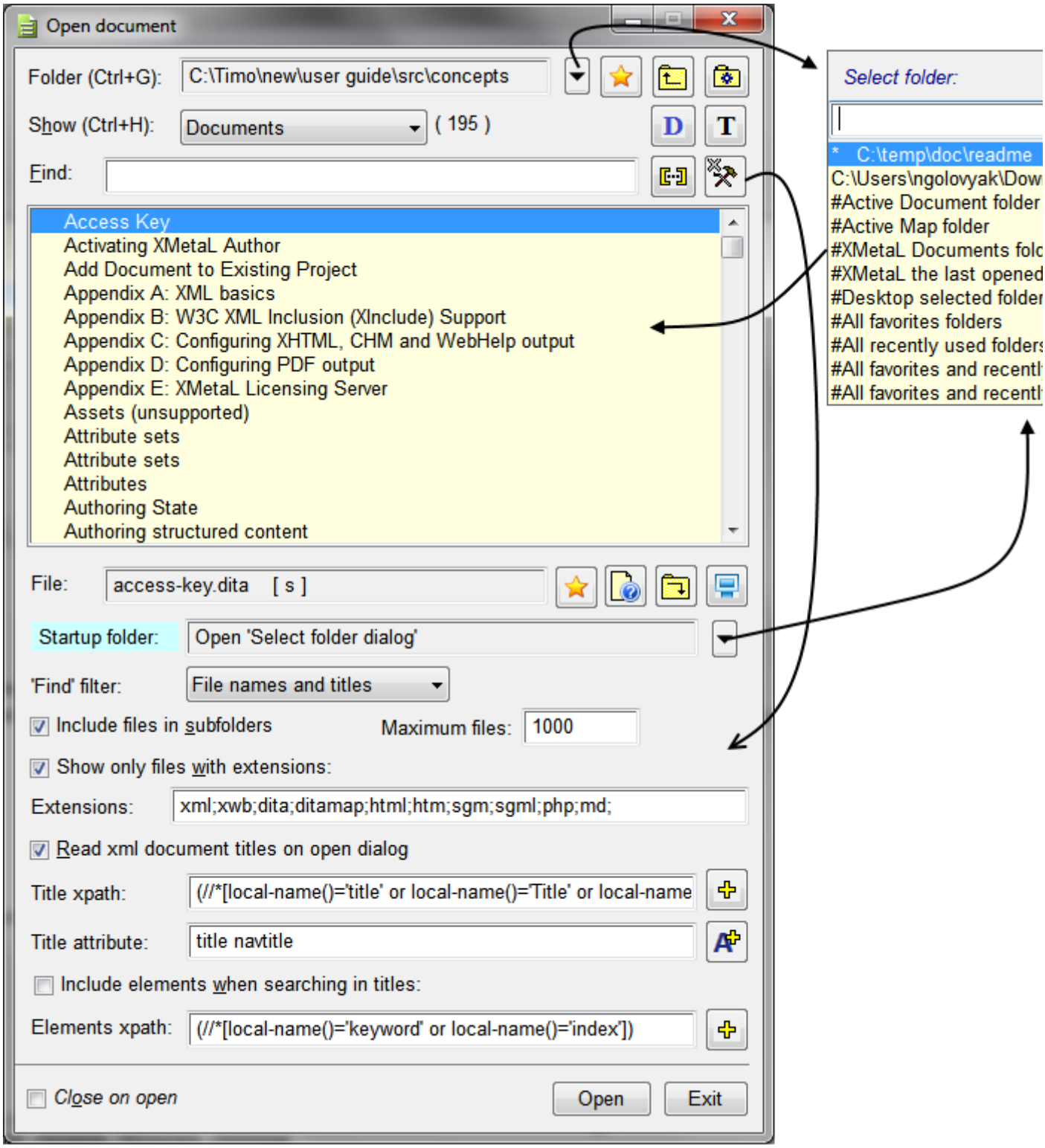


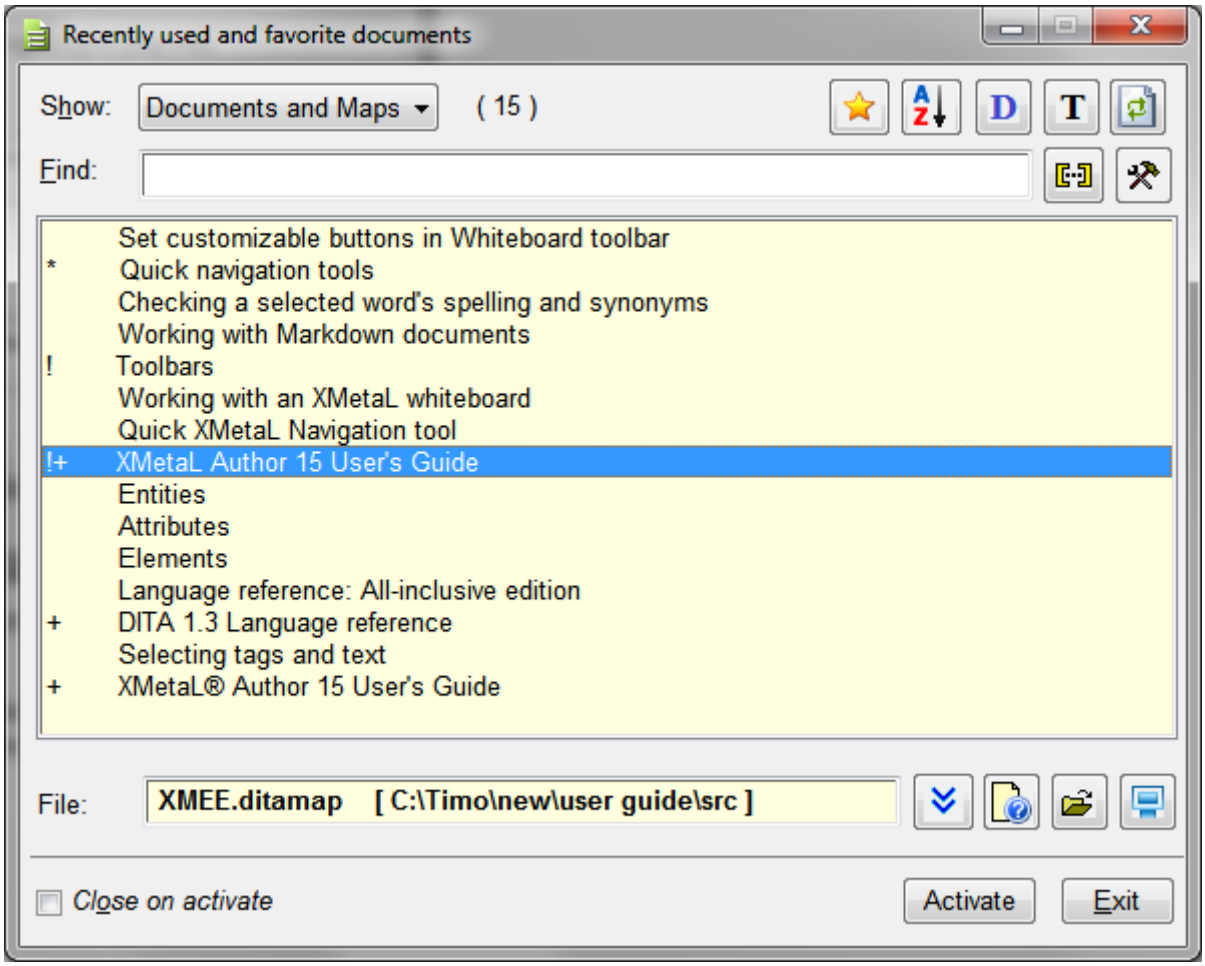
Recently Used documents Ex feature

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 alterative 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.

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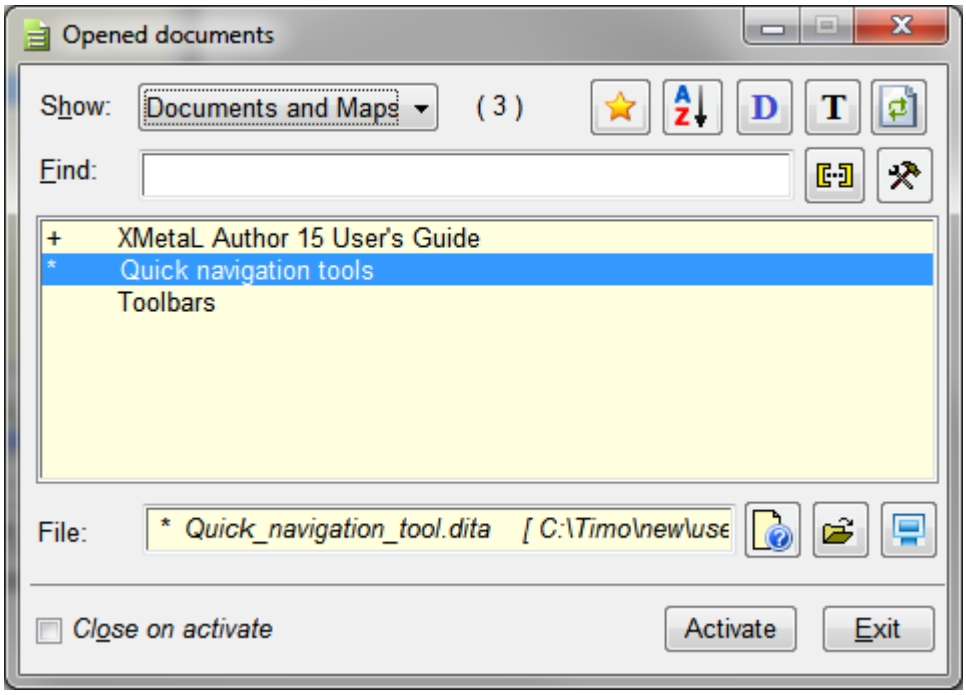
Opened documents
Show:
Documents and Maps
(3)
Find:
+ XMetaL Author 15 User's Guide
* Quick navigation tools
Toolbars
File:
* Quick_navigation_tool.dita [C:\Timo\new\use
Close on activate
Activate
Exit

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

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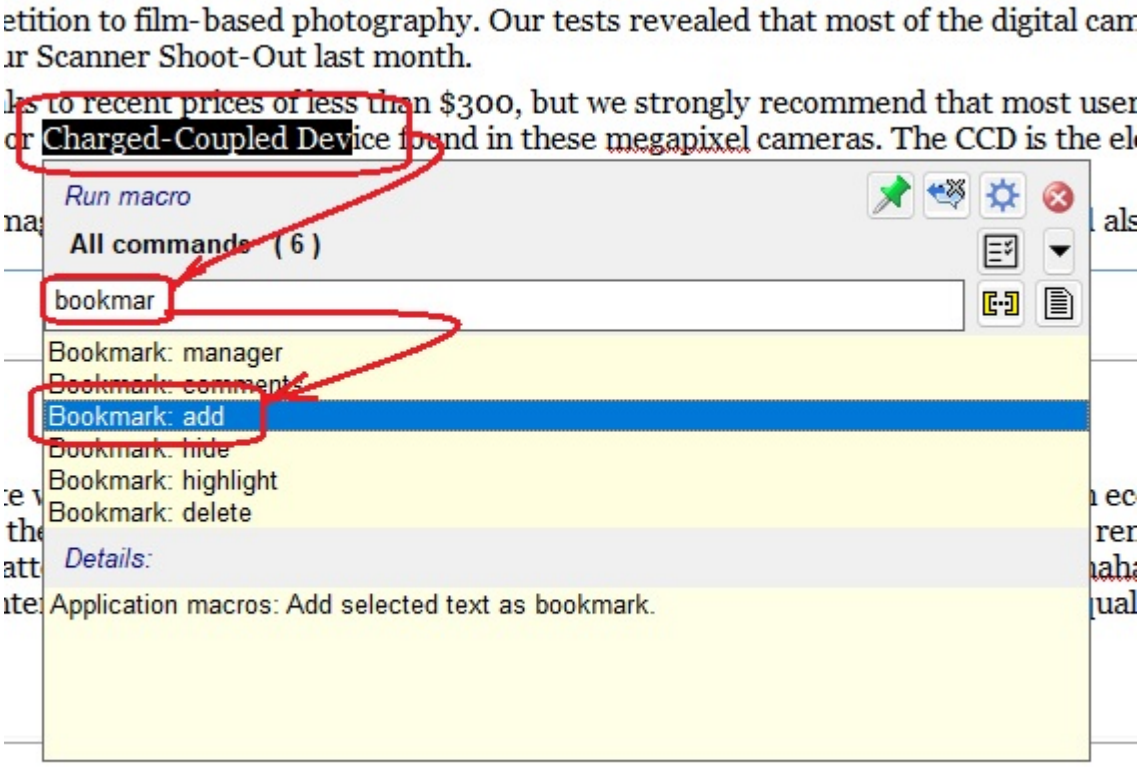
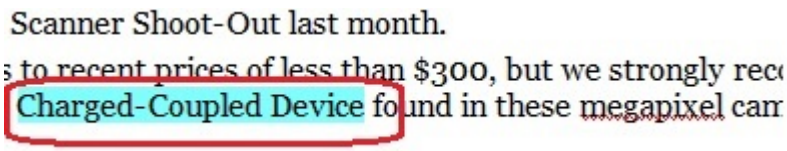
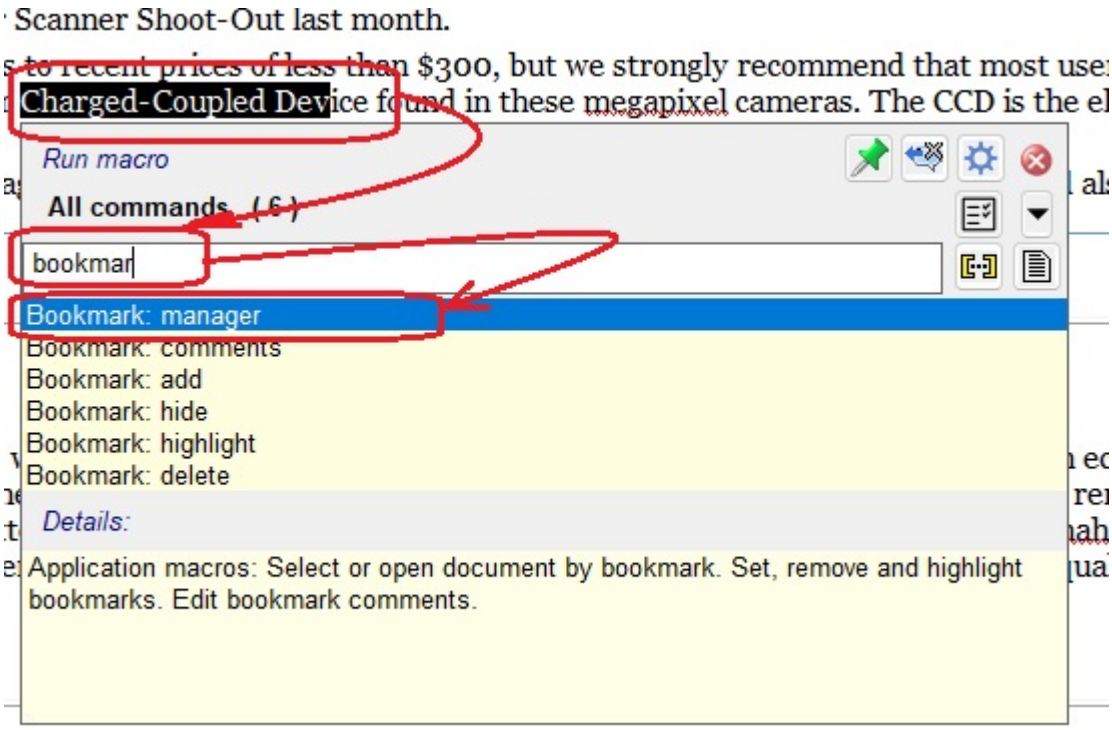


4. Press "Enter"



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 .

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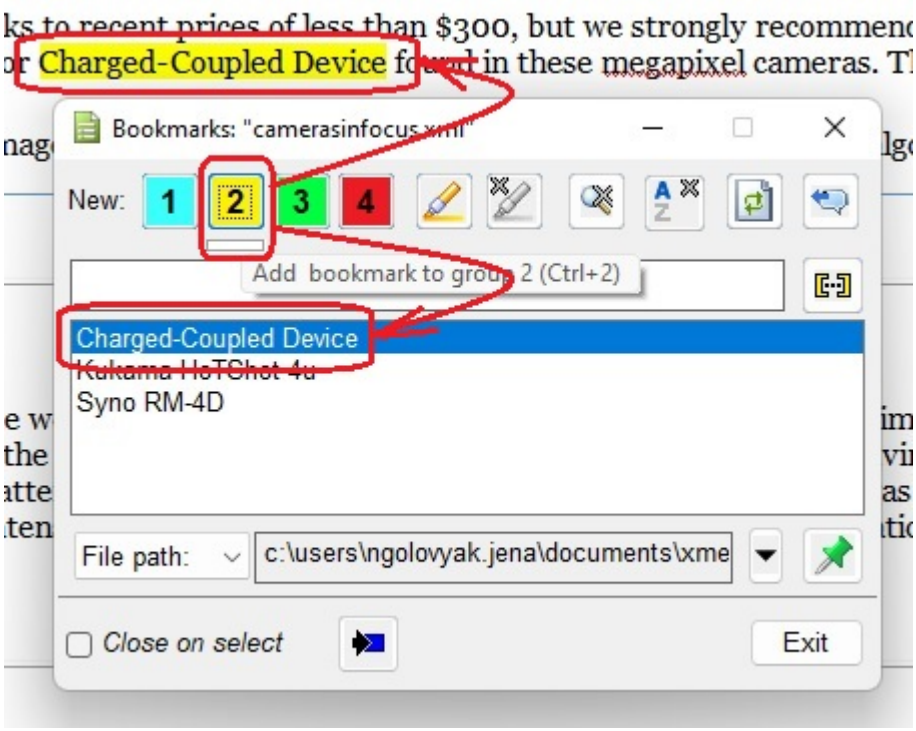


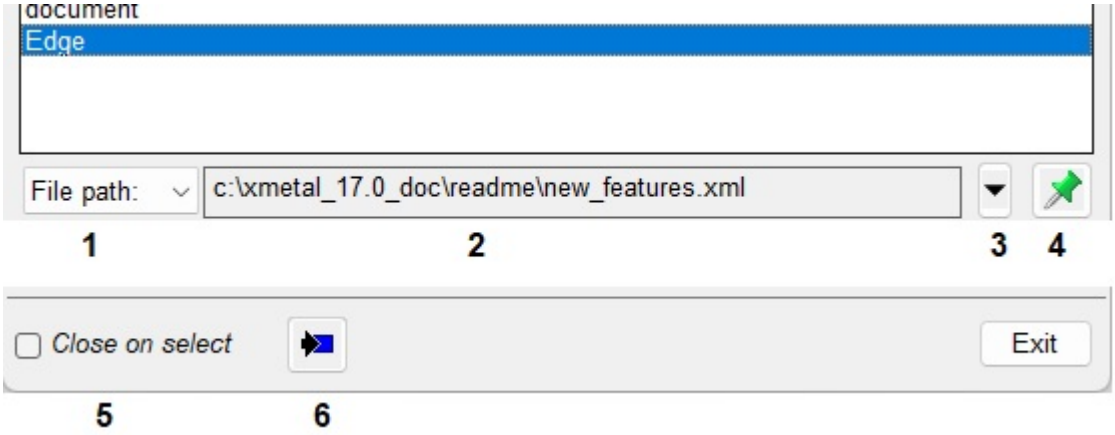
Note: All bookmark manager buttons have tool tips when the dialog is activated.

# 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

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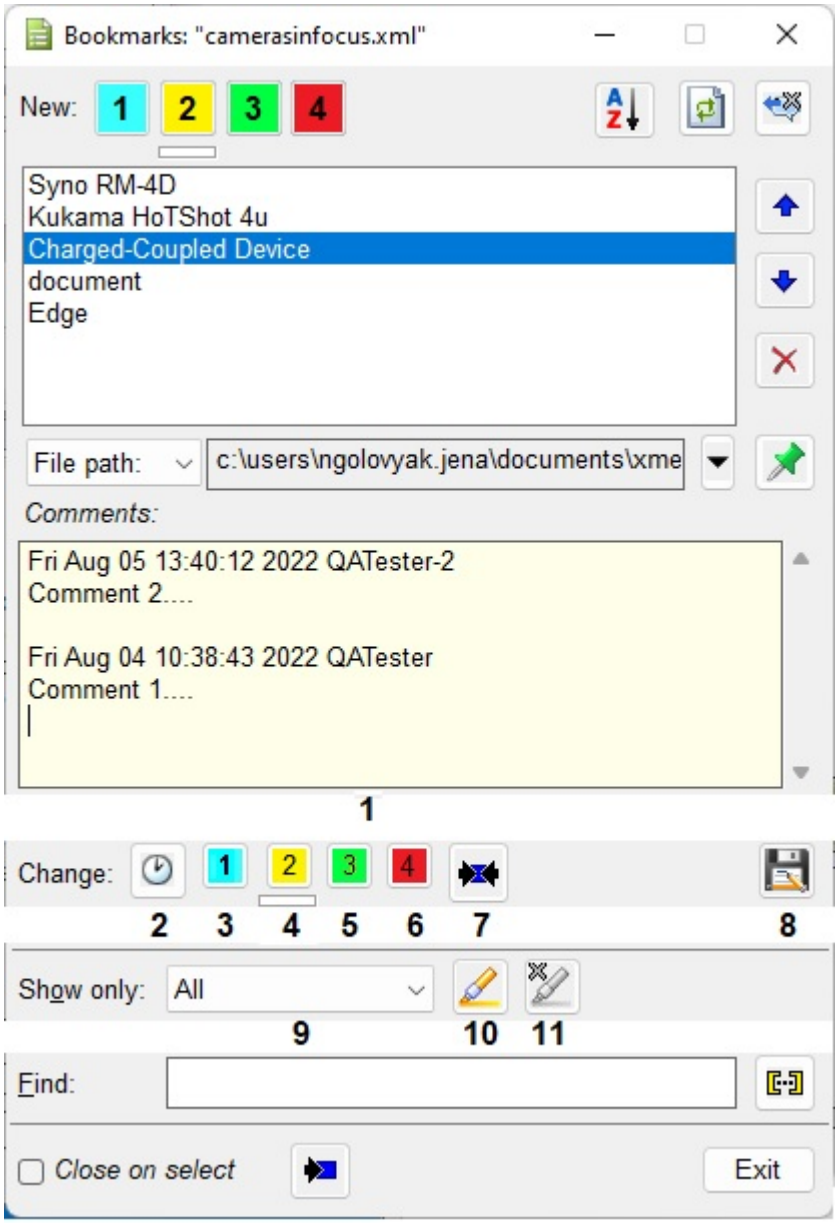

# on image	Description
1	Comments window. Use combination of Ctrl key and "+" "-" full keyboard keys for vertical resizing of comments window.
2	Insert date and user name.
3	Reassign selected to group of bookmarks "1". Cyan is the highlighting color of the group.
4	Reassign selected to group of bookmarks "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

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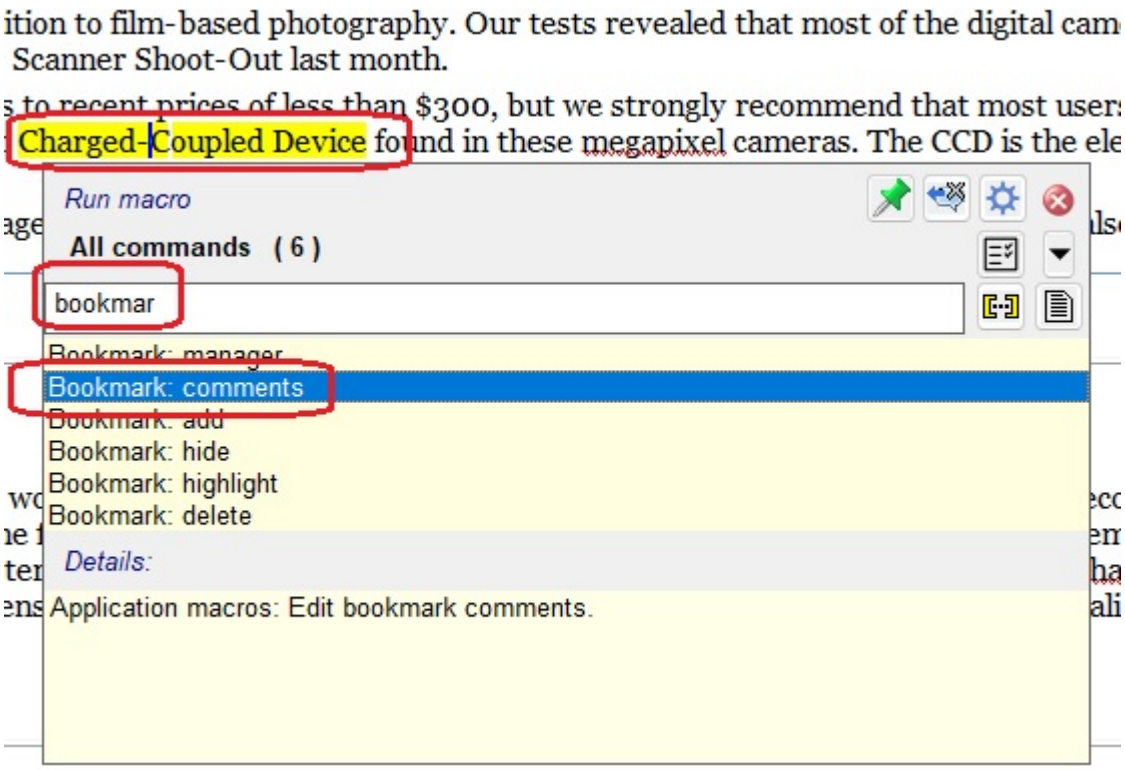
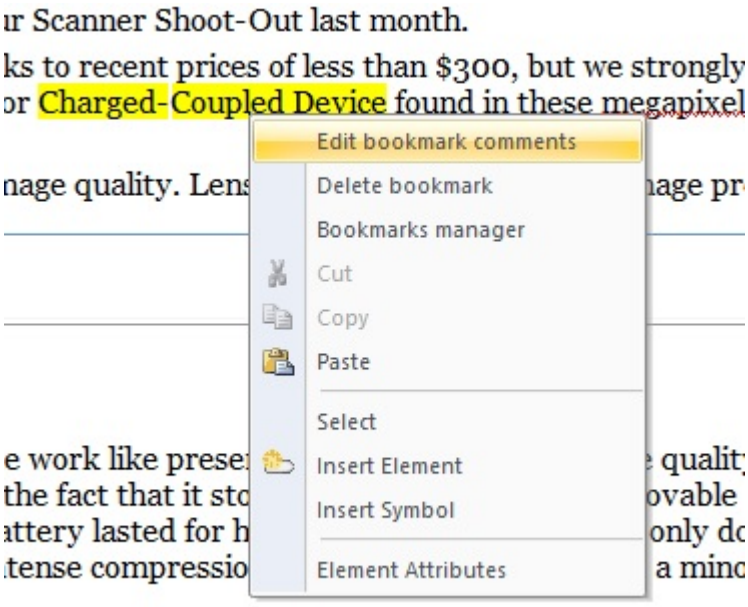


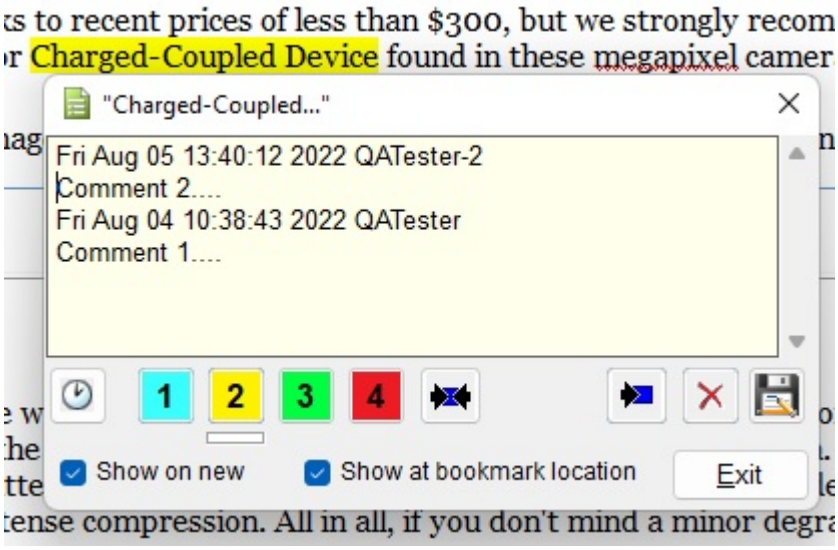
5. Press "Enter" to open the Comments basic UI dialog

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"



The Comments basic UI dialog is:



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.

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Context Menu for Bookmark

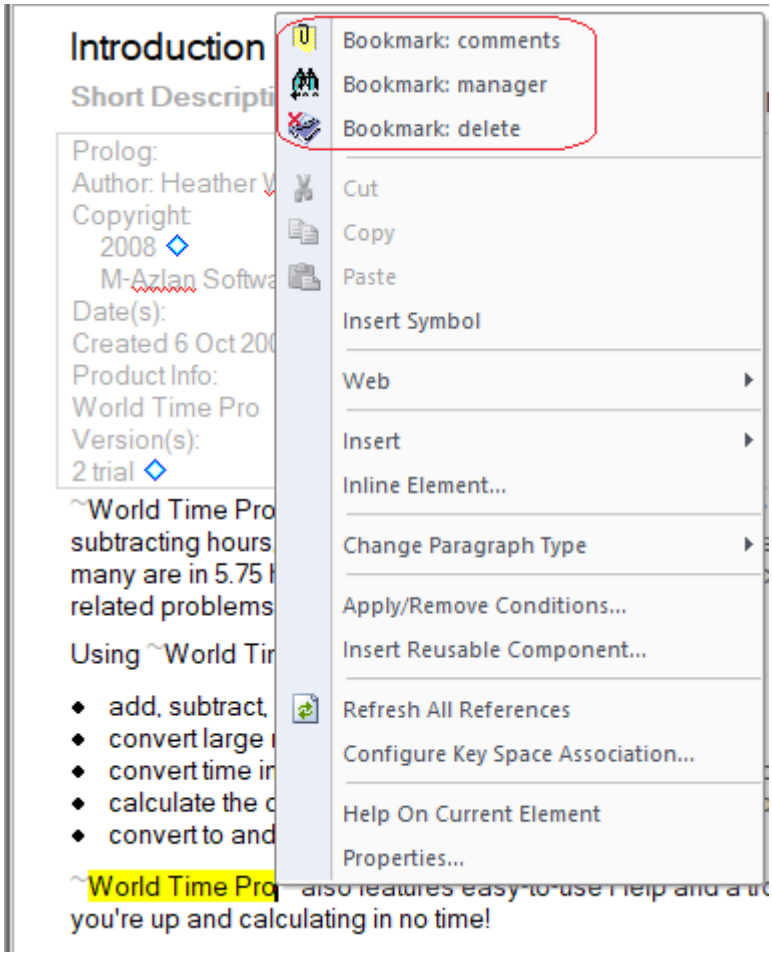
The Bookmark context menu provides easy access to features like creating new bookmarks, opening the comments dialog, managing bookmarks, and deleting bookmarks.

Bookmark Context Menu

When the text with a bookmark is selected:

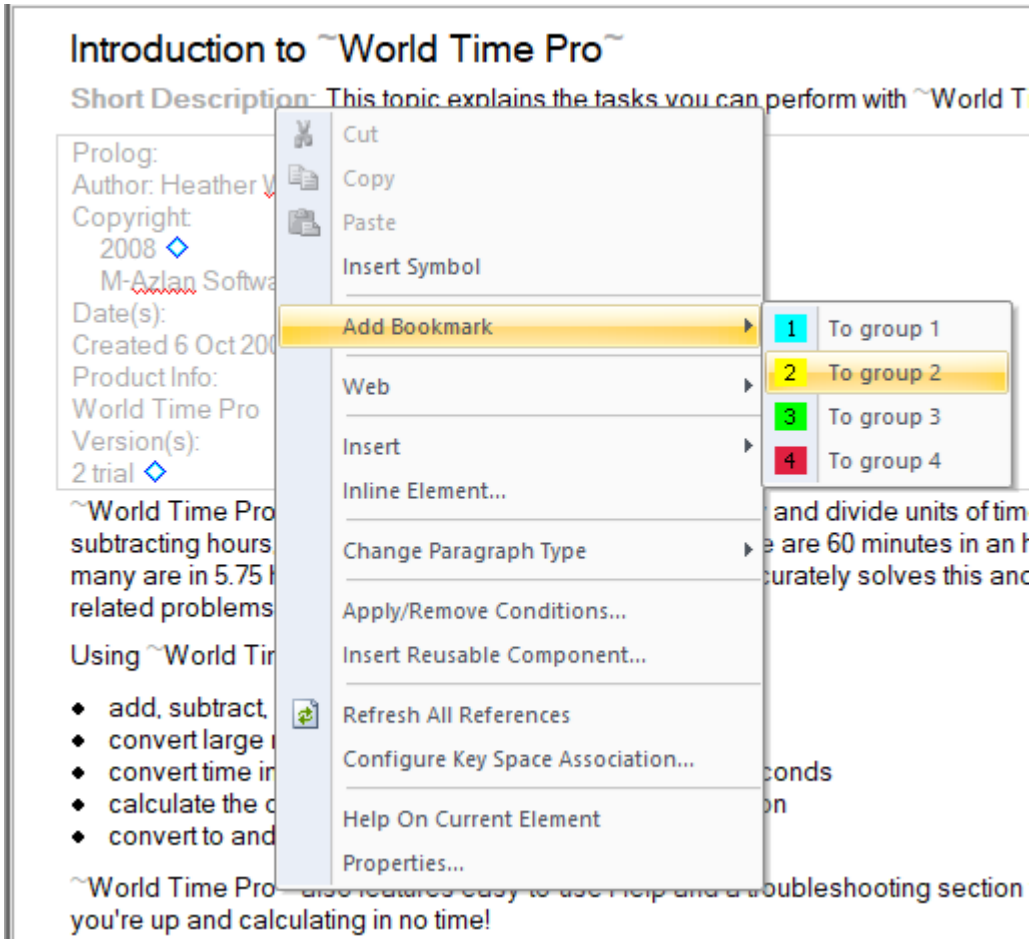
The following bookmark-related options are available:

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.

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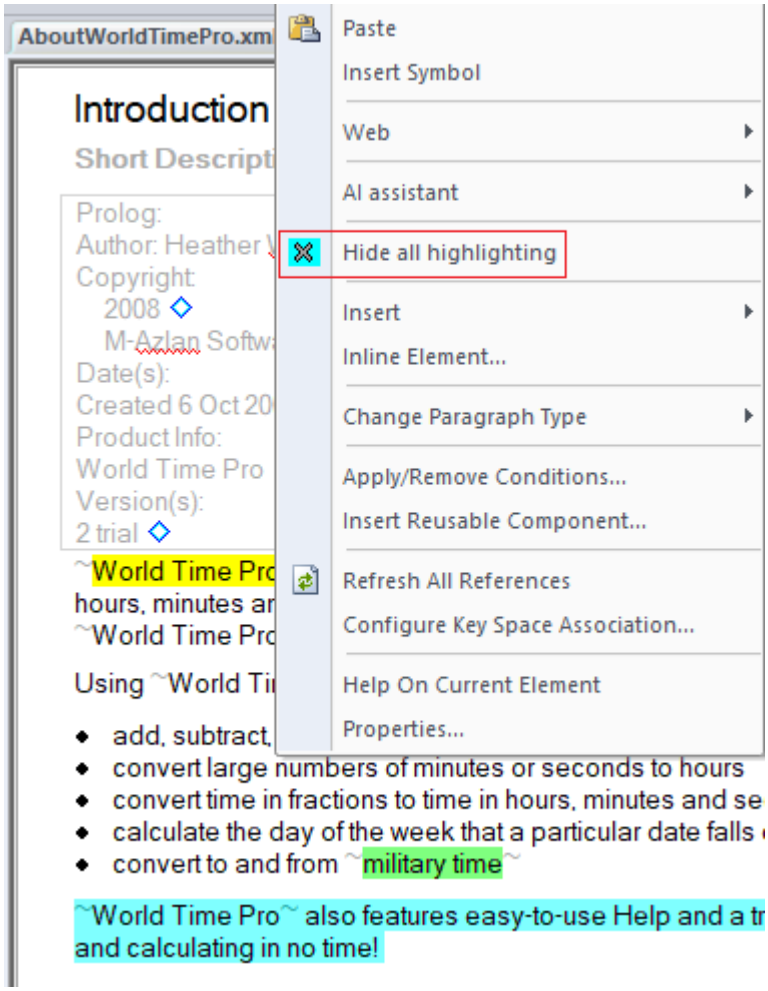

Note: Selecting this context menu item hides highlights from Bookmark as well as from XChatbot, XGrammarly, and the Web. To make hidden bookmarks visible, open the Bookmark manager and click the "Show all Active Document bookmarks" button.

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

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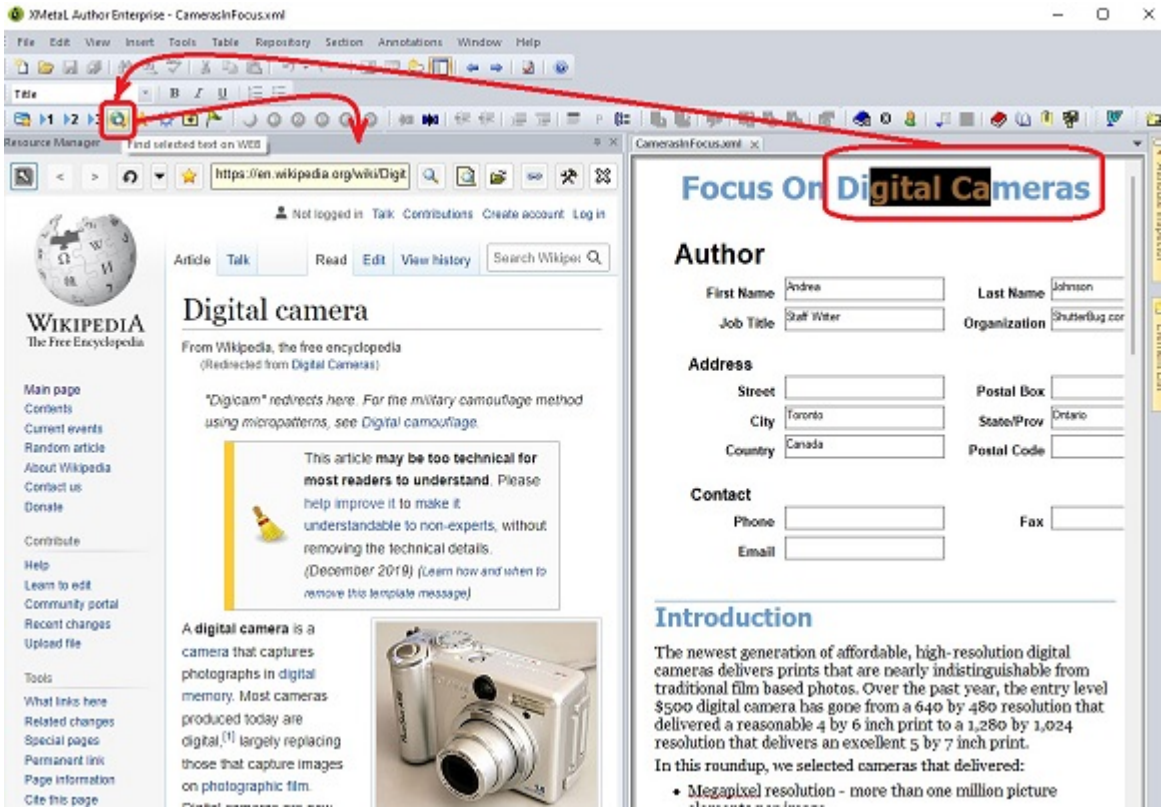
Opening WEB Browser Page in Resource Manager

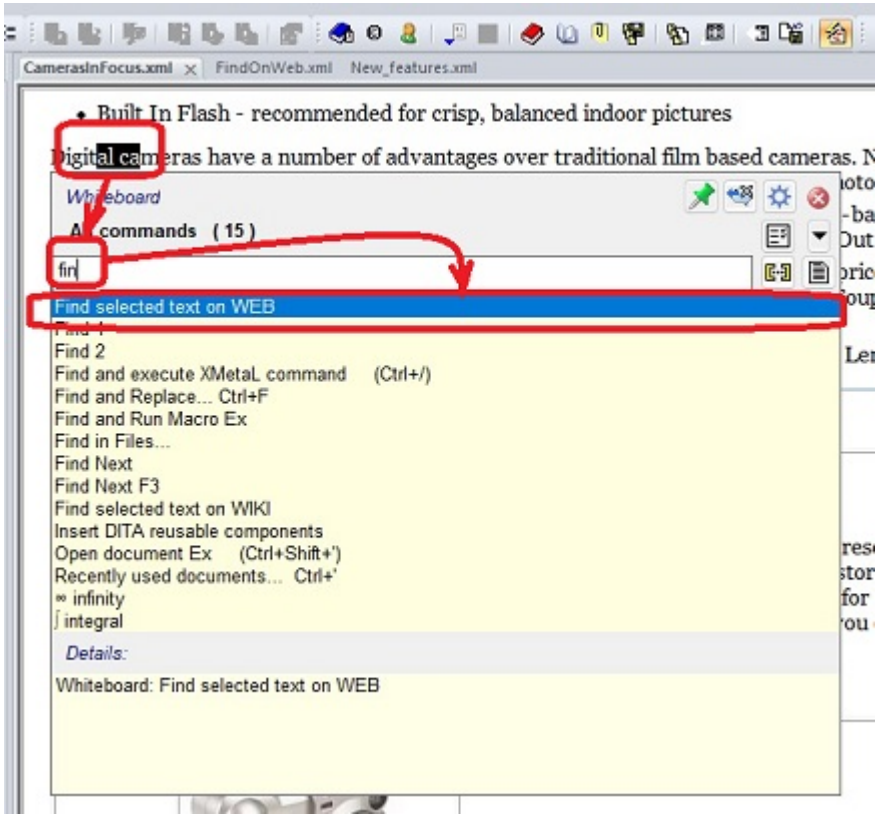
There are multiple methods to utilize the utility. To begin, you can select text within the active document and click the "Find selected text on WEB" button in the whiteboard toolbar, as shown below.



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:

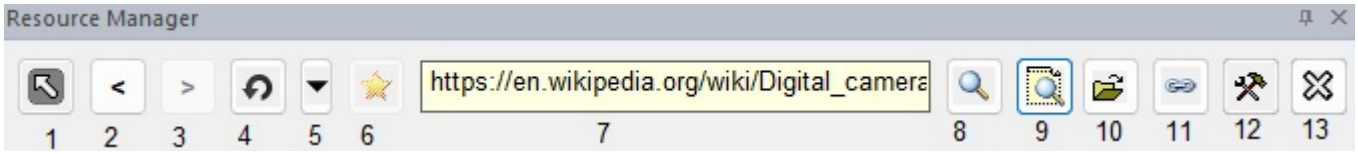
1. Select text in active document
2. Ctrl+?
3. Start typing "find"
4. Select macro and press "Enter"



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

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# on image	Shortcut or key	Description
11		Insert link to Active Document
12		Settings
13		Close Tab

Note:

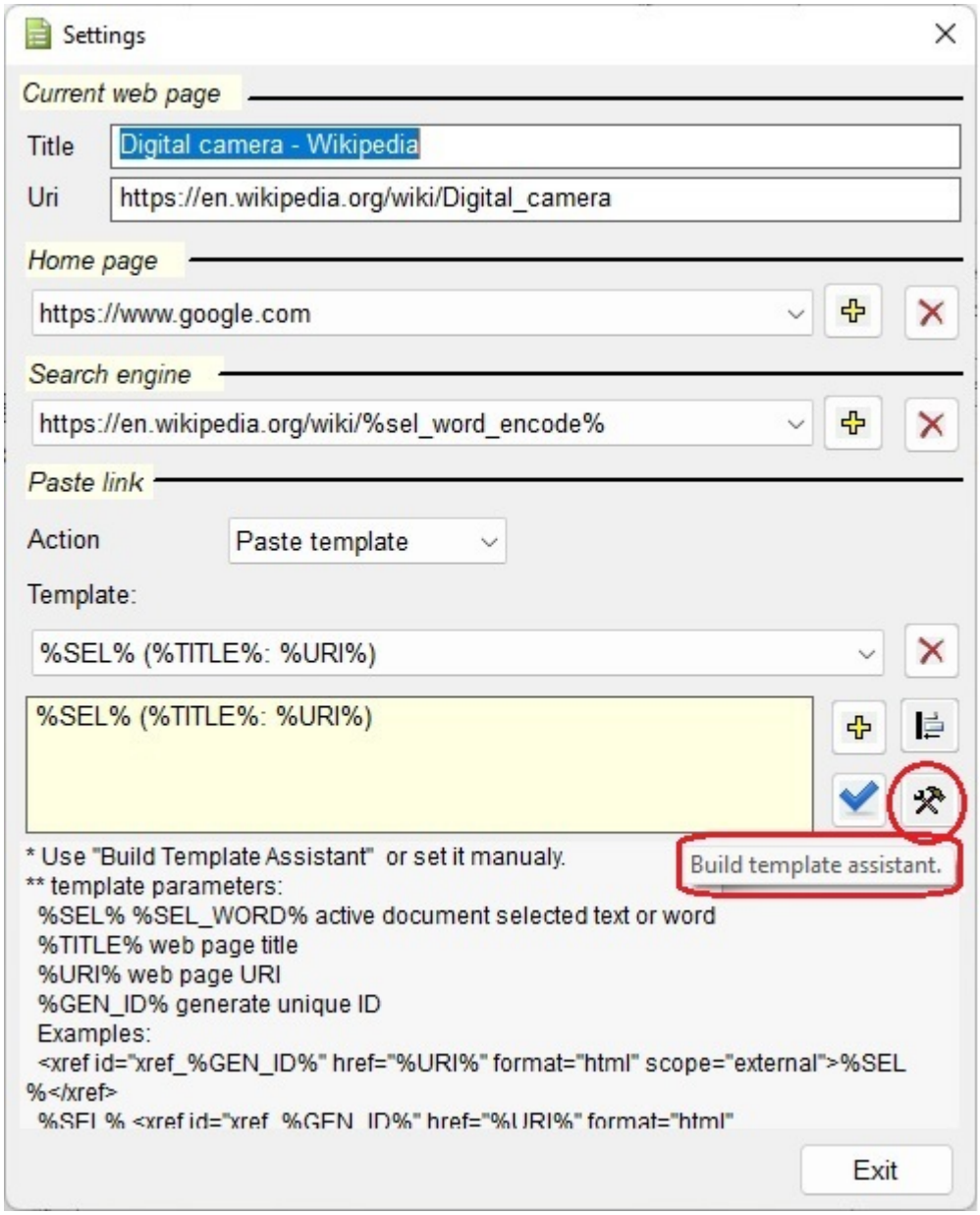
- All buttons show tool tips when the toolbar is activated.
- For maintaining the "Favorites" list , you can use:
  - "Del" key for deleting
  - "Shift+Up Arrow" and "Shift+Down Arrow" keys for changing order
- When clicking on the "Insert link to ActiveDocument" button based on utility settings, one 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:

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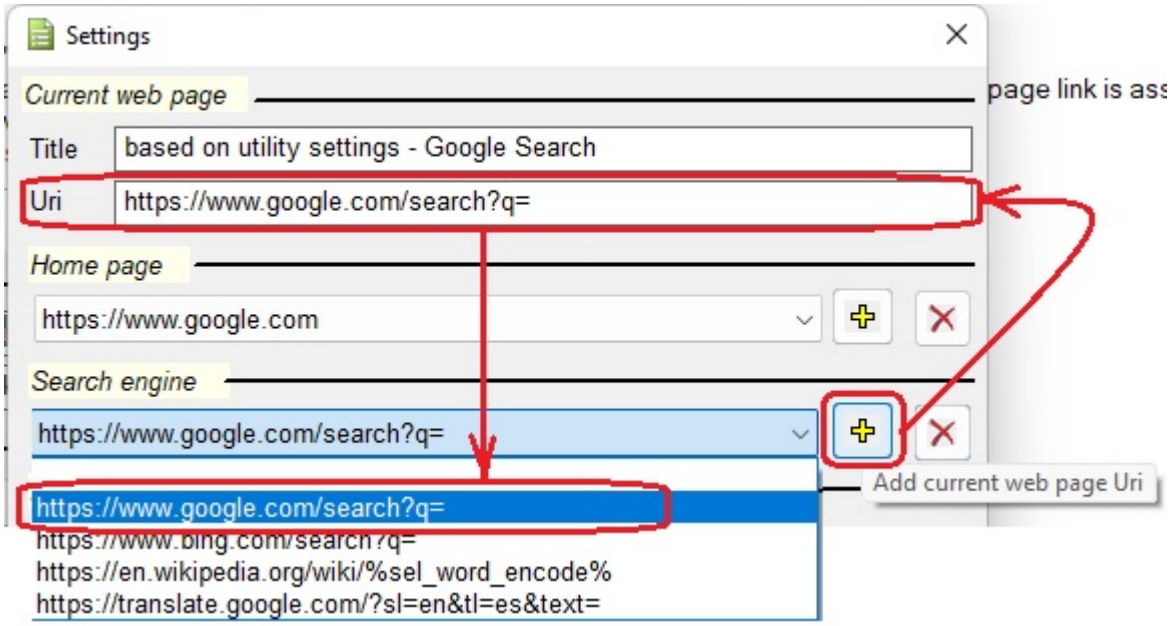


- "Find text on WEB..." operations append Active Document selected text or "Navigation URI or Find text" edit box content to selected link.
- Optional parameter %sel_word_encode% forces text to be encoded before appending to web link. It is useful when document selected text should be sent to web services, 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 selction 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%)

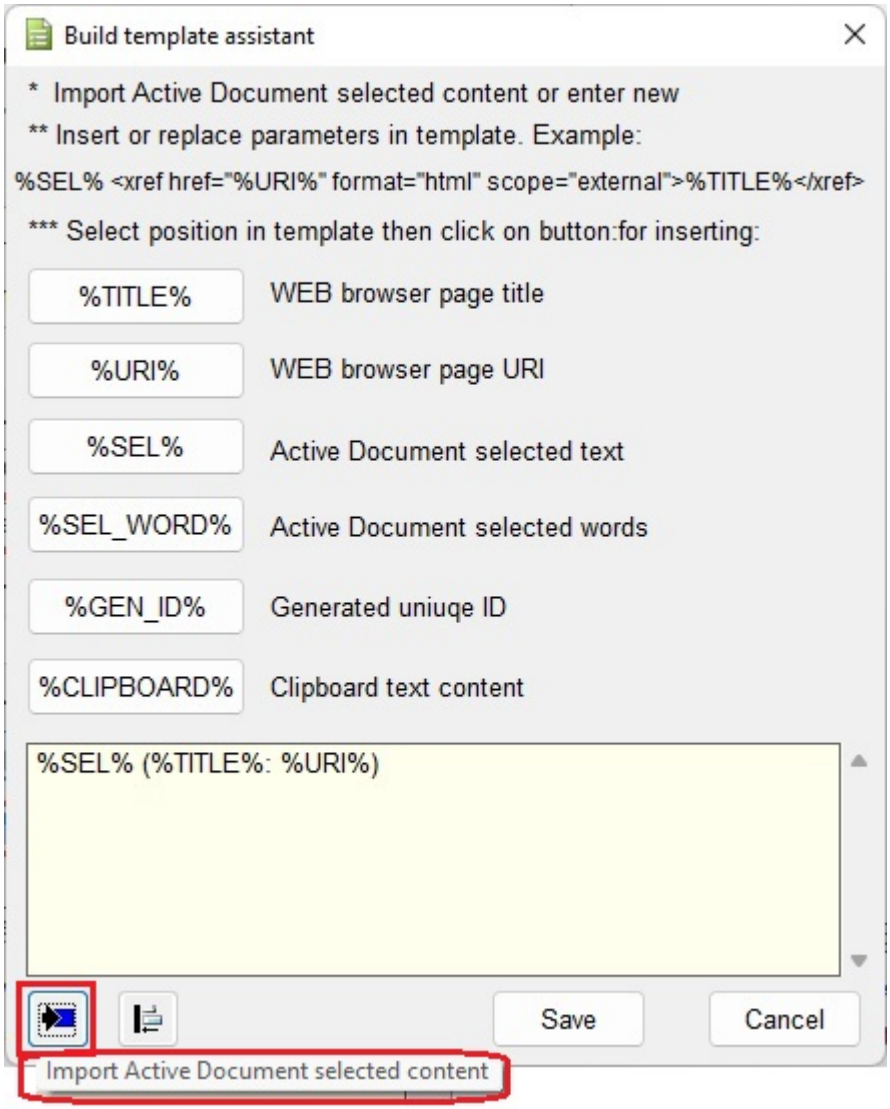
  Note: Selected text from the active webpage can be formatted using the template and then copied into active documents.

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

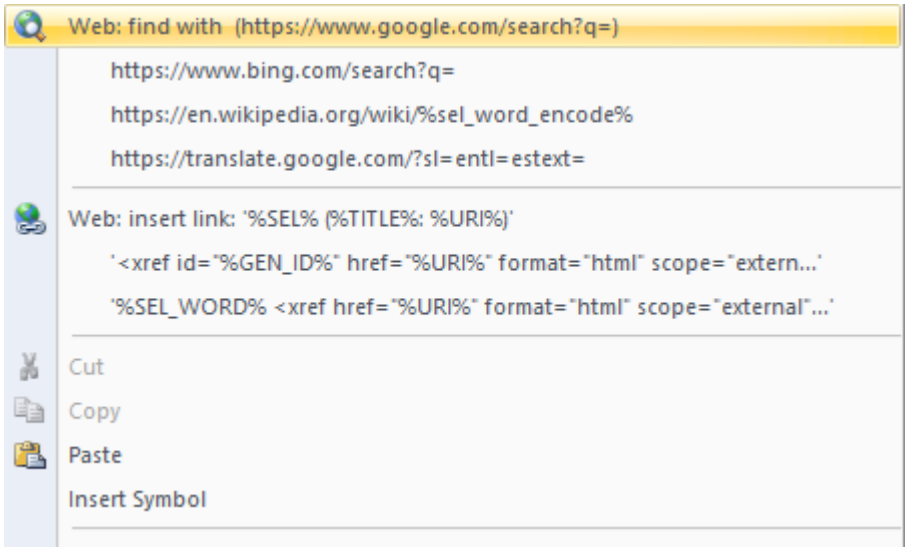
When WEB-Browser tab is open and active in Resource Manager:

Multiple web-related options can be accessed by following the steps.

The search engine option:

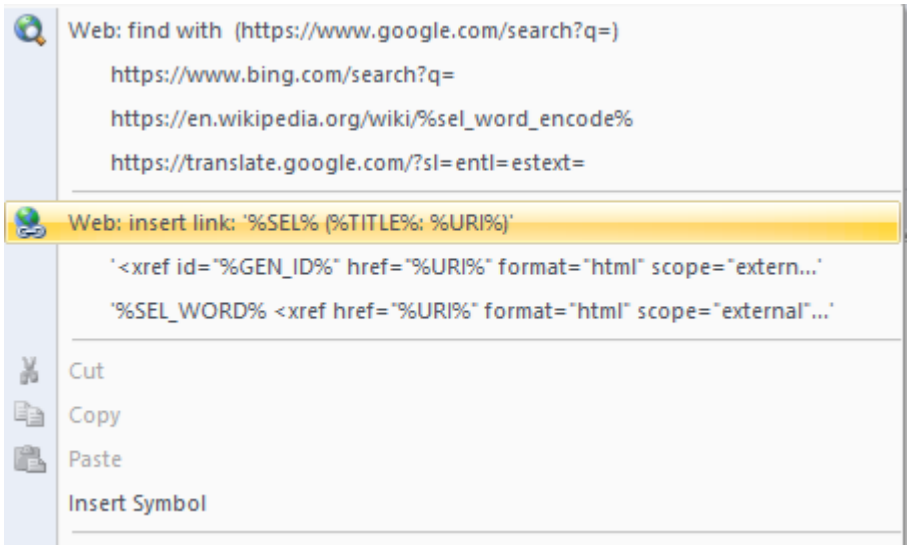
1. Select the text where you want to find the information on the web.

2. Right-click to open the context menu for search engine and choose the desired option.



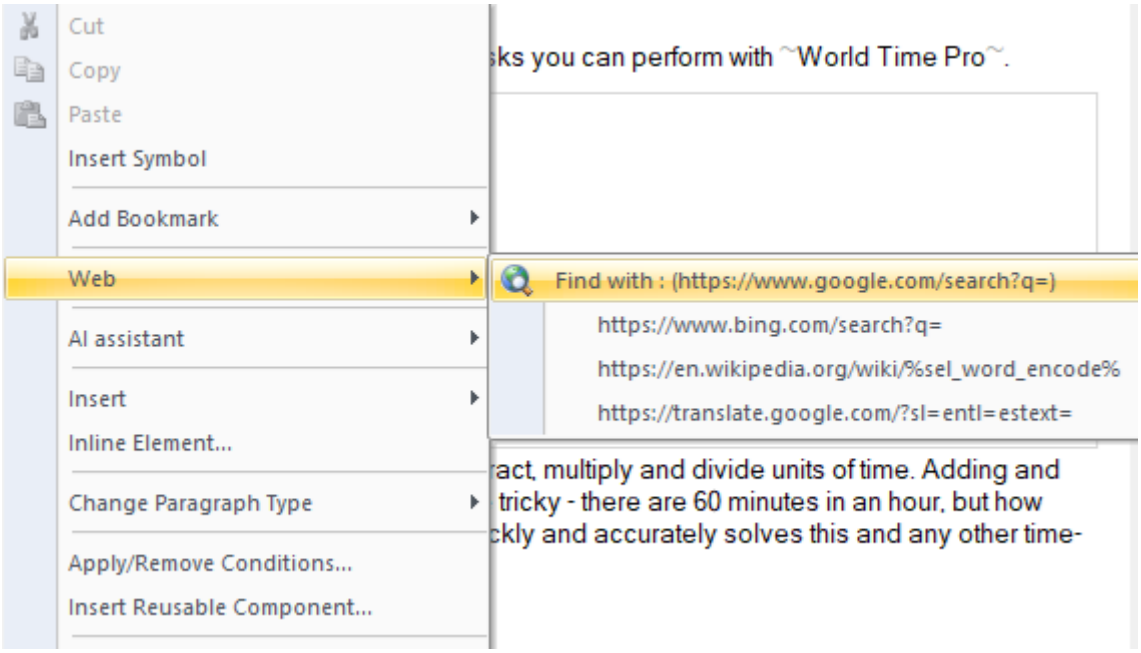
The option for inserting a link into the document:

1. Locate the specific location within the active document where you intend to insert a link.
2. 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.

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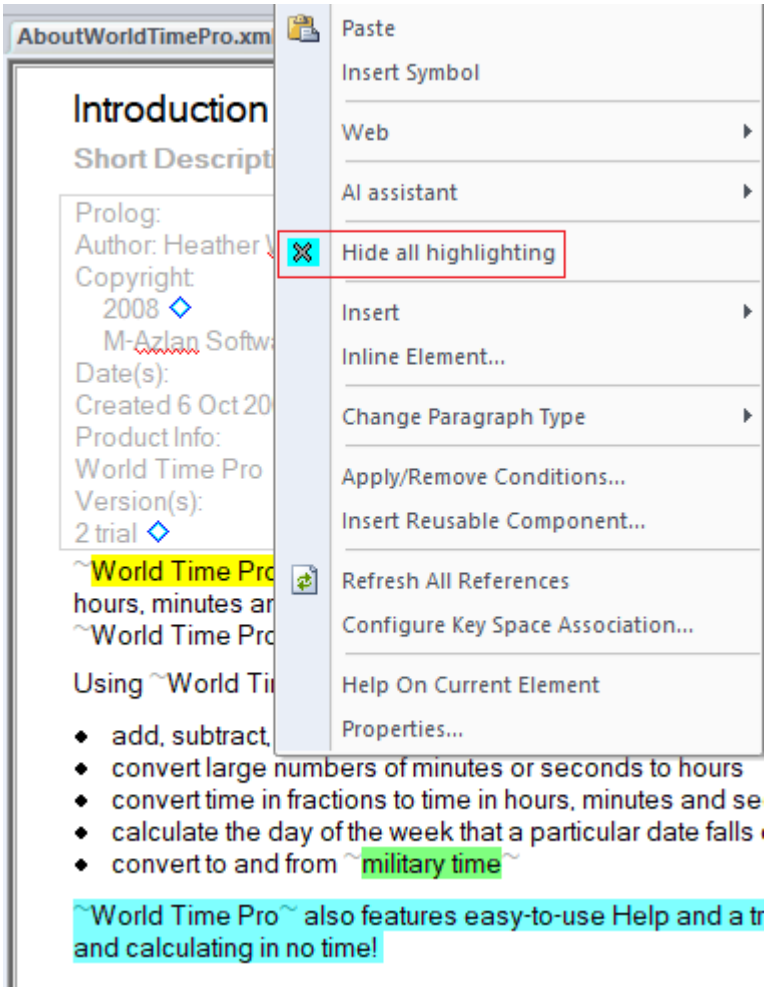

Note: Choosing this context menu item hides all highlights not only following a web search but also after operations involving XChatbot, XGrammarly, and Bookmark. To make hidden bookmarks visible, open the Bookmark manager and click the "Show all Active Document bookmarks" button.

Integration with ChatGPT, Microsoft Copilot, Google Gemini, DeepSeek, and Grok

XMetaL 20.0 introduces a native access option that allows customers to directly access AI websites like ChatGPT, Microsoft Copilot, Google Gemini, DeepSeek, and Grok 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 Microsoft Copilot AI

- Internet connection.

  Microsoft Copilot AI is a web service that enhances the Microsoft Copilot search engine with AI capabilities. A stable internet connection to access the service is required.

  You may need to add the https://copilot.microsoft.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.

Key requirements for using DeepSeek

- Internet connection.

  DeepSeek is a generative-AI chatbot developed by the Chinese company DeepSeek. It is powered by the company’s own in-house large language models, including the open-weight DeepSeek-V and DeepSeek-R series.

  You may need to add the https://chat.deepseek.com domain to the "Allow list" on the system firewall or security settings.

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- DeepSeek account.

  Signing in to DeepSeek saves your conversation history, allowing you to revisit past chats anytime. It unlocks file upload capabilities, letting you process documents, images, and PDFs. Additionally, it syncs your data across devices and maintains context for longer, continuous conversations.

Key requirements for using Grok

- Internet connection.

  Grok is an advanced generative-AI chatbot developed by xAI. It is powered by xAI's own proprietary large language models, designed and trained in-house rather than based on external model families such as LaMDA or PaLM.

  You may need to add the https://grok.com domain to the "Allow list" on the system firewall or security settings.

- Grok account.

  Logging into Grok saves users full chat history across devices, gives you much higher usage limits (and access to Grok 4 with a subscription), and unlocks extras like voice mode and conversation sharing.

Security and JSCI disclaimer of using ChatGPT, Microsoft Copilot, Google Gemini, DeepSeek, and Grok in XMetaL Environment.

ChatGPT, Microsoft Copilot, Google Gemini, DeepSeek, and Grok 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, Microsoft Copilot, Google Gemini, DeepSeek, and Grok web services.

JSCI does not assume liability for actions taken based on ChatGPT, Microsoft Copilot, Google Gemini, DeepSeek, and Grok web services responses.

XMetaL Author XML editor environment provides access to the web services.

ChatGPT, Microsoft Copilot, Google Gemini, DeepSeek, and Grok 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, Microsoft Copilot, Google Gemini, DeepSeek, and Grok web services. JSCI is not responsible for unauthorized access, misuse, or data sharing with ChatGPT, Microsoft Copilot, Google Gemini, DeepSeek, and Grok.

Known issues of integrations with ChatGPT, Microsoft Copilot, Google Gemini, DeepSeek, and Grok 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.

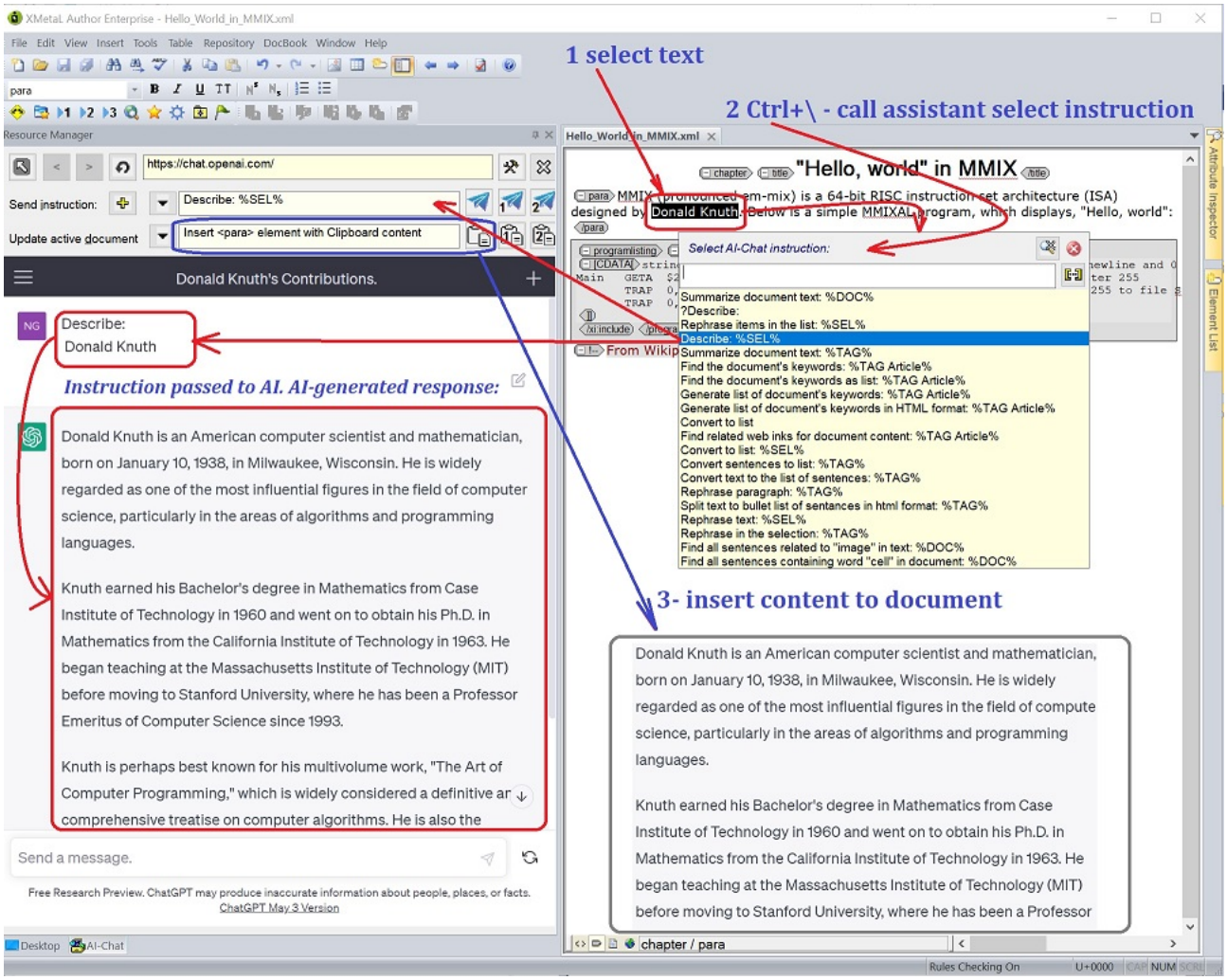
Opening ChatGPT, Microsoft Copilot, Google Gemini, DeepSeek, and Grok in Resource Manager

To use this utility, you can utilize the XMetaL quick navigation tool for invoking the "XChatGPT: open", "MSCopilot: open", "XGoogleGemini: open", "XDeepSeek: open", or "XGrok: open" macro.

1. Ctrl+?
2. Start typing "XChat", "MSCop", "XGoogle", "XDeep", or "XGrok" 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:

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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.

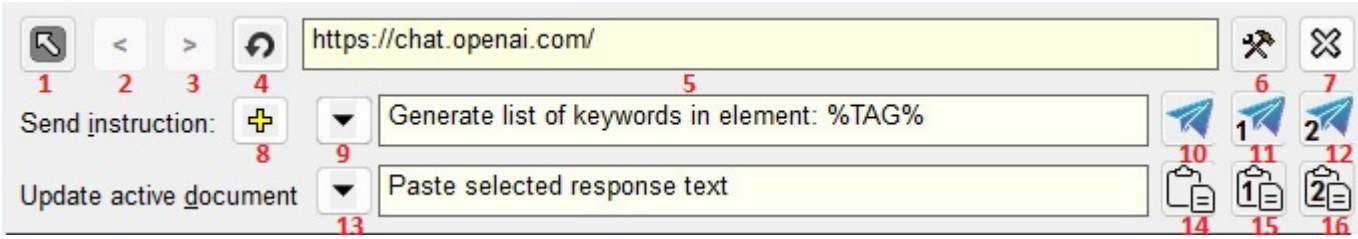
When Grammarly is active, Grammarly analyzes the Chatbot input text box and sometimes influences sending action. In this case, a user should click the "Send message" button at the right of the Chatbot input text box.

Toolbar

The integration's toolbar buttons are displayed on the XChatGPT, MSCopilot, XGoogleGemini, XDeepSeek, and XGrok 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 • 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.

# on image	Shortcut key	Description
10		Run instruction
11		Favorite instruction 1
12		Favorite instruction 2
13	Ctrl+]	Select the active document update command
14		Update document • 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. • 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, Microsoft Copilot, Google Gemini, DeepSeek, and Grok:

- 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+\ key** will open the list of predefined instructions. Another method to access the list of predefined instructions is by selecting the "[Chatbot]: send 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.

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- 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.
- The selected text in the document cannot contain keywords such as "%CALL aiPasteDitaPreprocess(0)%". Attempting to send an instruction with such content will result in an error.

Available options for pasting responses from ChatGPT, Microsoft Copilot, Google Gemini, DeepSeek, and Grok:

- 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 "XChatbot: process 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:

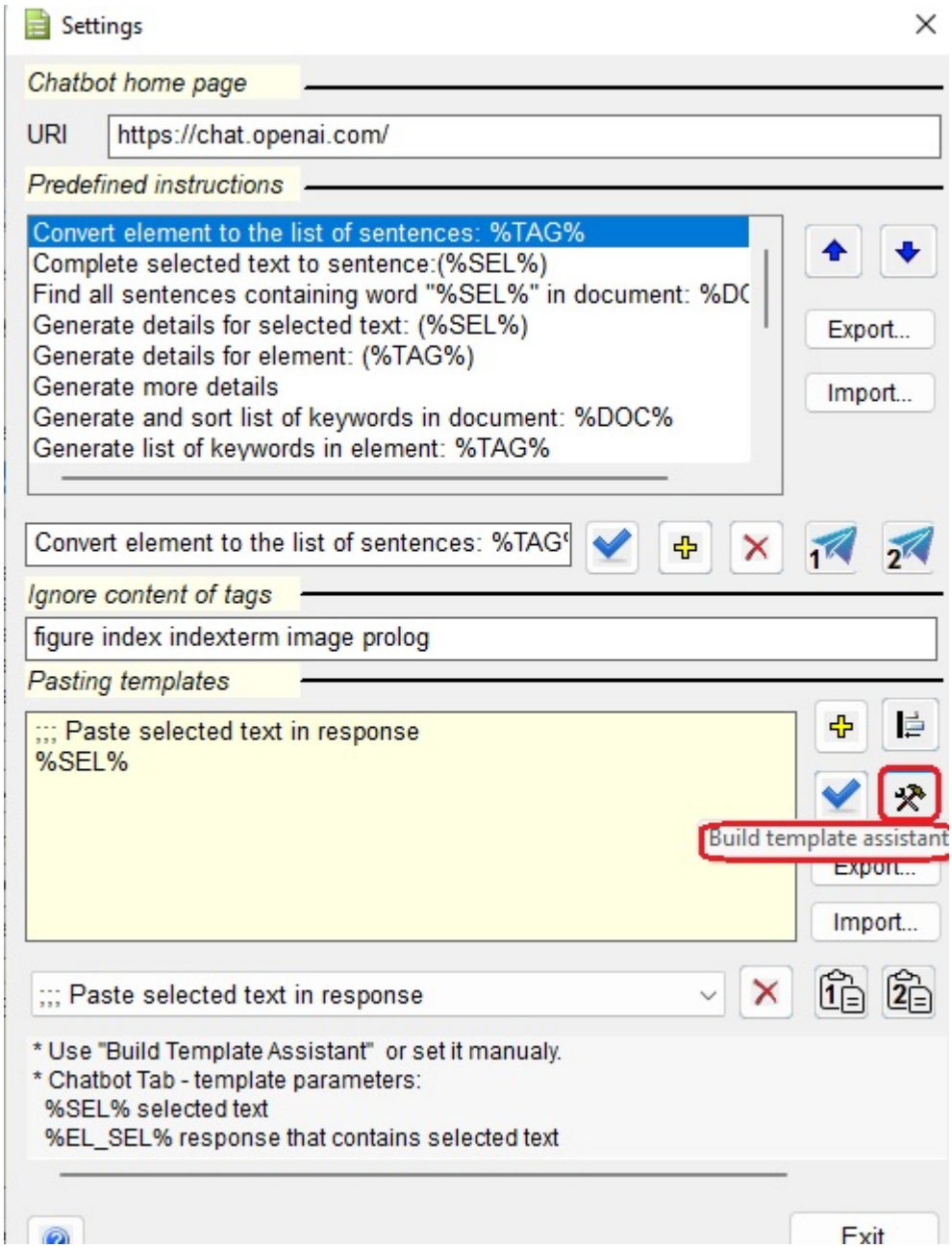
- Move the instruction up or down in the list of predefined instructions.
- Export instructions to or import instructions from the text file.
- Edit the predefined instruction using the edit box.
- Replace, add, or remove the selected instruction from the list of predefined instructions. These changes will be reflected in the "Send instruction:" drop-down list in the XChatGPT/MSCopilot/XGoogleGemini/XDeekSeek/XGrok 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/MSCopilot/XGoogleGemini/XDeekSeek/XGrok.

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/MSCopilot/XGoogleGemini/XDeekSeek/XGrok 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:

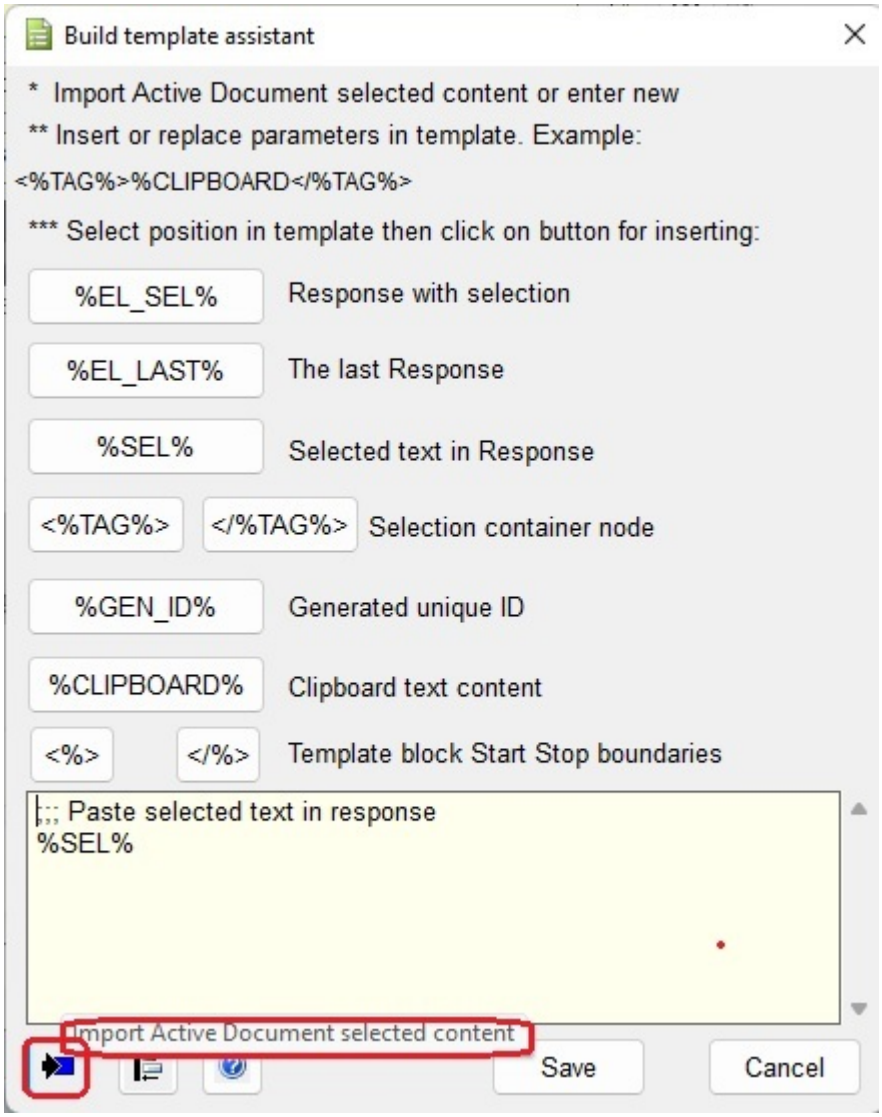
- If the selected text is in the Chatbot response window, sending an instruction with %SEL% will prioritize this text over the selection in the active document or browser window.
- Modifying the instruction or update command assigned to the "favorite instruction 1/2" button or the "favorite update command 1/2" button in the Settings dialog will result in a corresponding change in the instruction or command displayed on the main XChatGPT/MSCopilot/XGoogleGemini/XDeekSeek/XGrok page. However, the button's tooltip on the main XChatGPT/MSCopilot/XGoogleGemini/XDeekSeek/XGrok page will not update unless you restart XChatGPT/MSCopilot/XGoogleGemini/XDeekSeek/XGrok.
- The chatbot response can be inserted into the DITA document with support for **bold**, *italic*, tables, and lists.

  For example, you make a selection in the document and send the instruction **"Write chapter about {use tables, lists, bold, and italic text for formatting} : %SEL%"**. Selecting the update command **"DITA HTML Insert (%CALL aiPasteDitaPreprocess(0)%)"** inserts the elements with the response formatted using tables, lists, bold, and italic text in the DITA document.

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.

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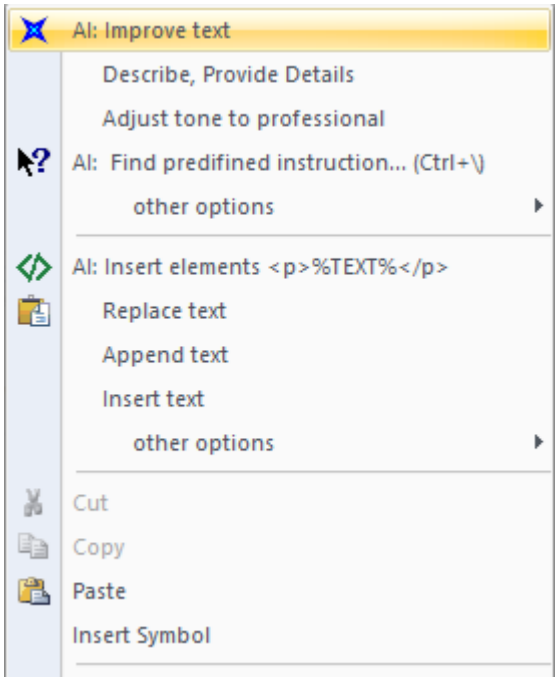
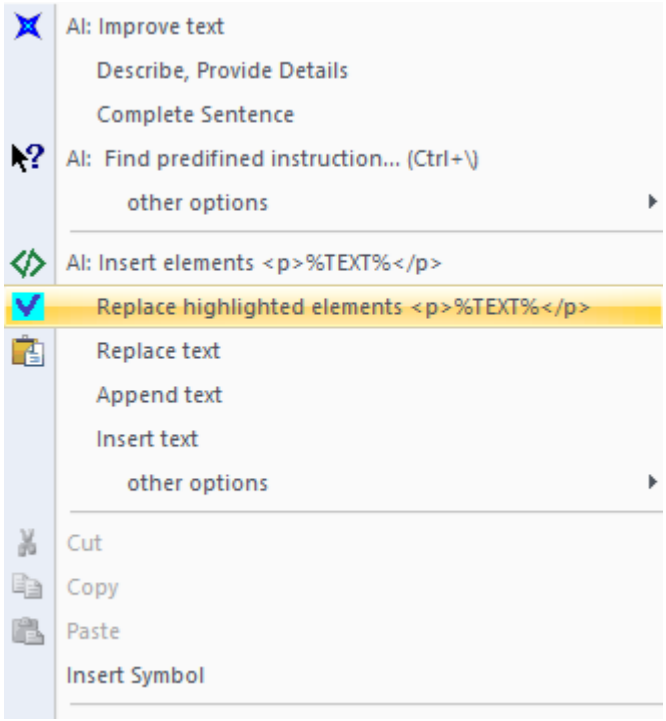
The instruction to send to XChatbot:

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. .



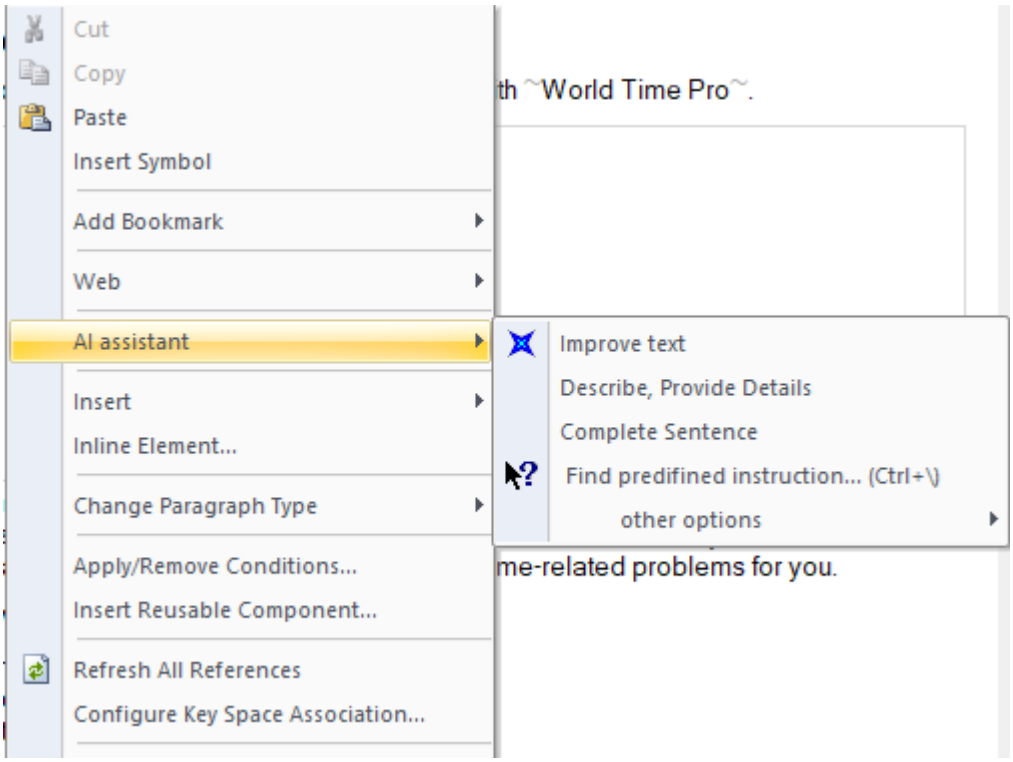
The instruction to update the document:

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.

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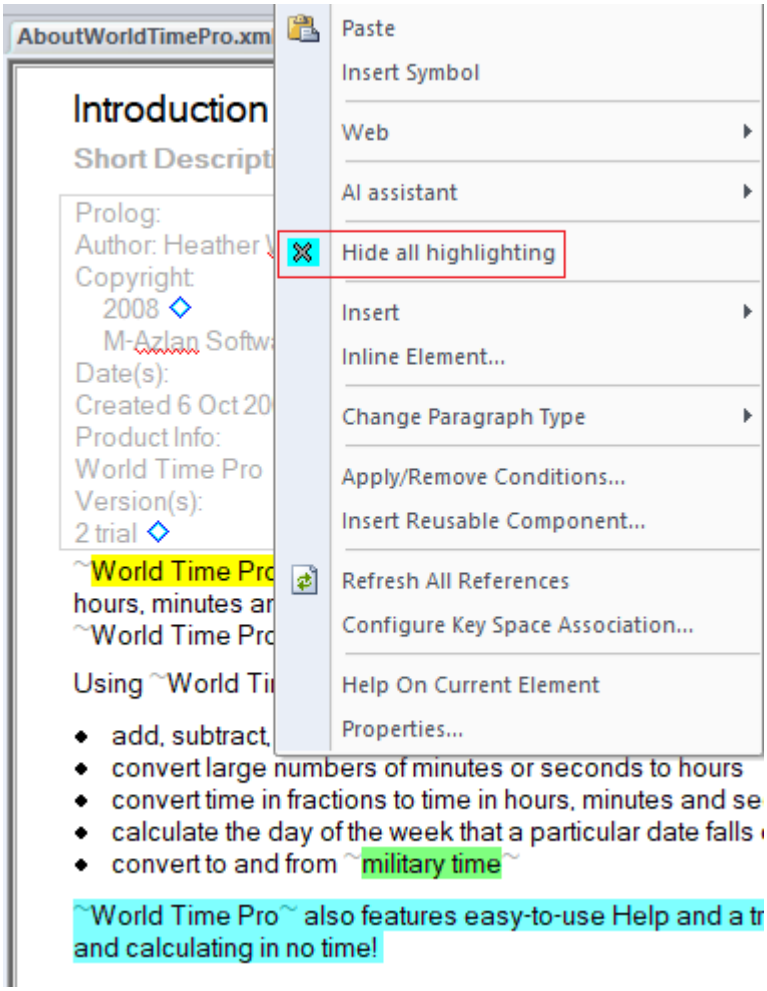

Note: When this context menu item is selected, it hides not only AI-related highlights but also any other highlights from XGrammarly, Web, and Bookmark. To make hidden bookmarks visible, open the Bookmark manager and click the "Show all Active Document bookmarks" button.

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.

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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:

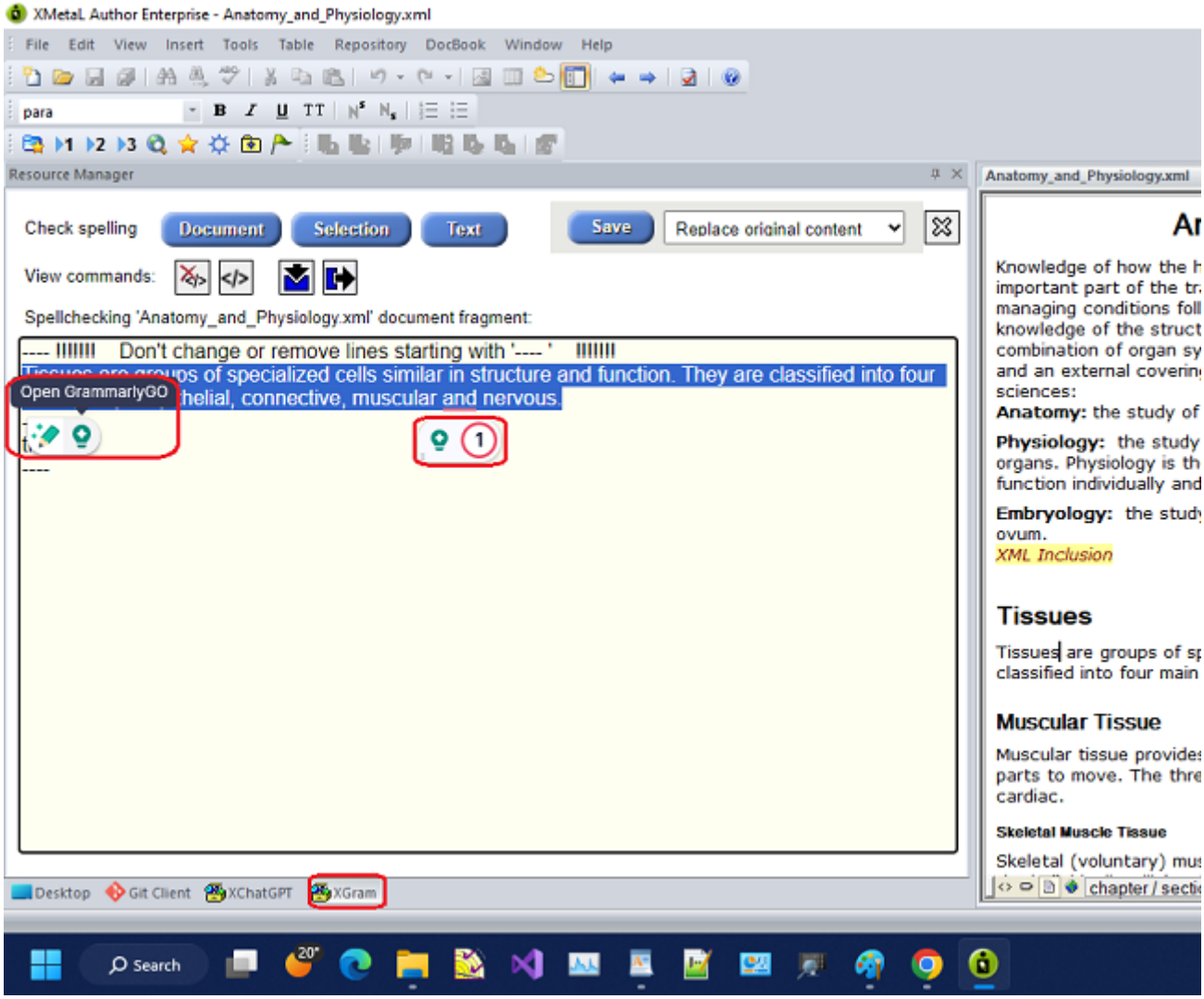
- Close-reopen the Grammarly integration tab in XMetaL.
- Log off from the Grammarly account then log in again.
- In some cases, the Grammarly Desktop application should be shut down and then restarted again. Some of symptoms that require this action are
  - Grammarly doesn't replace spell checker content 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.

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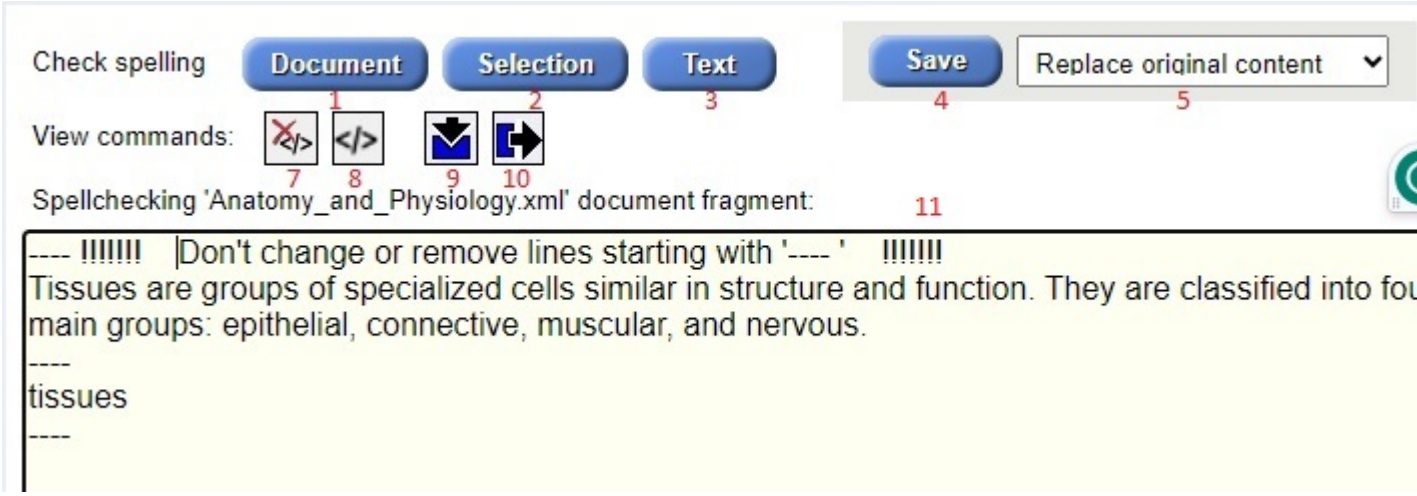


# on image	Description
1	Check spelling, grammar, and clarity of active document content
2	Check spelling, grammar, and clarity of active document selected content
3	Enter new text
4	Copy spell-checked content to the active document
5	Option for Save changes
6	Close Tab
7	Hide XML tags in the spell-checker 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.

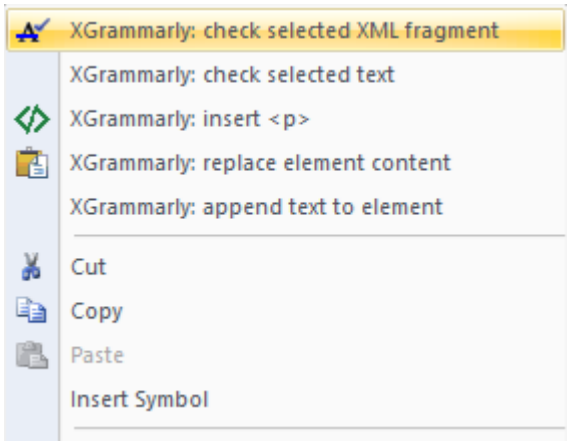
XGrammarly Context Menu

When XGram tab is open and active in Resource Manager:

Multiple XGrammarly-related options are available:

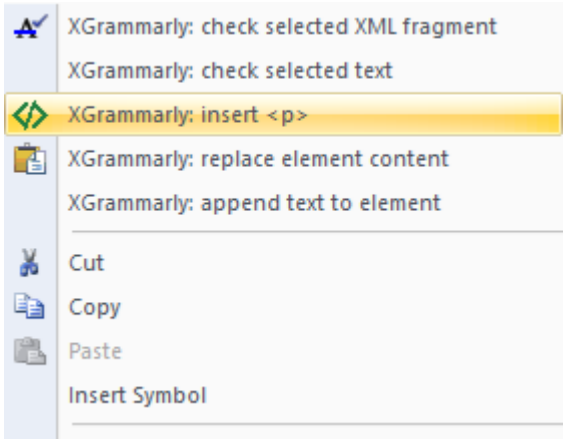
The checking option:

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.

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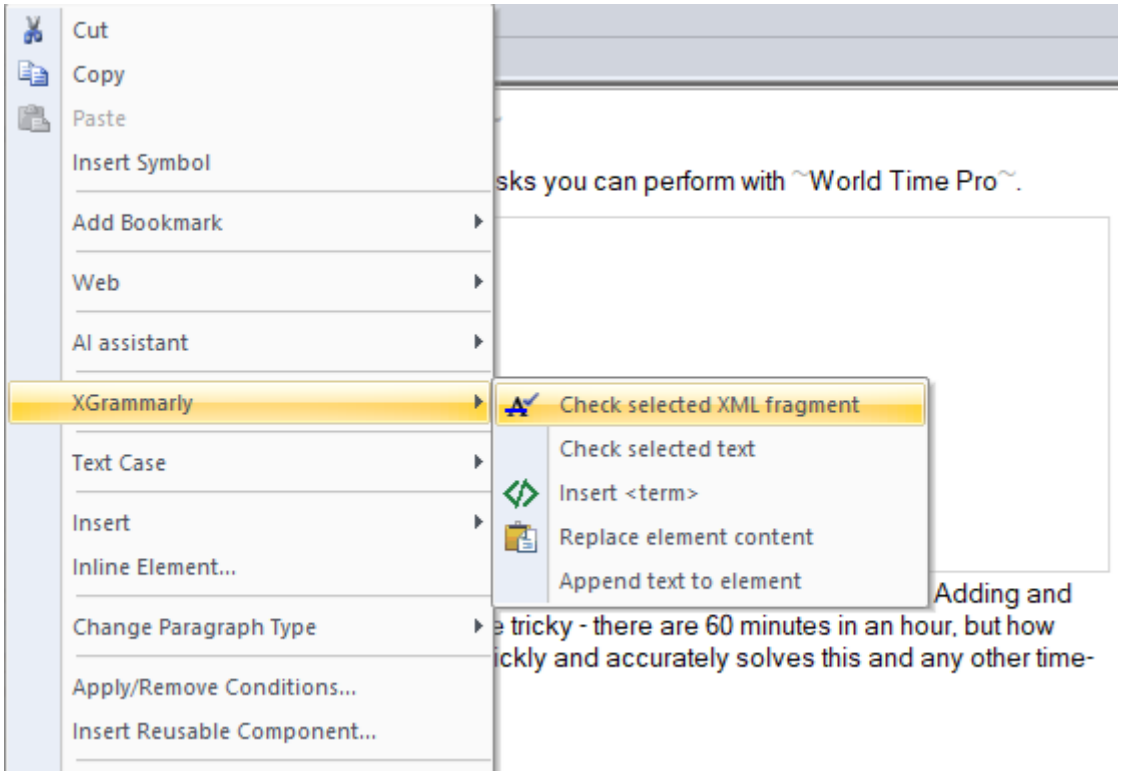
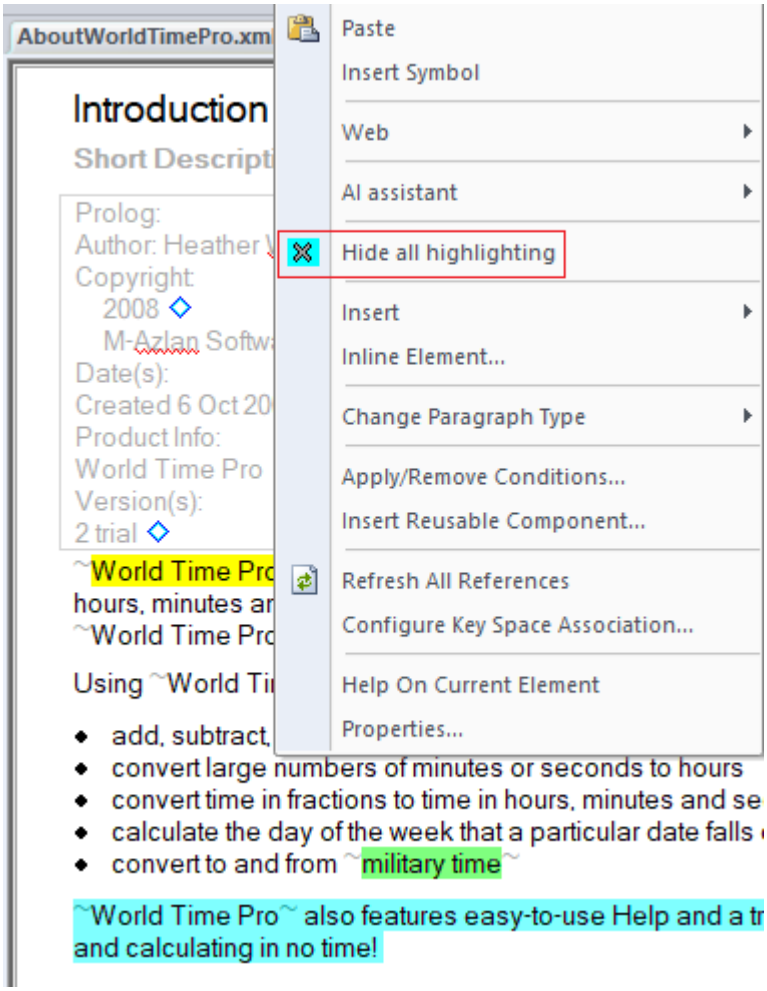


Hide all highlights:

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.

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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.

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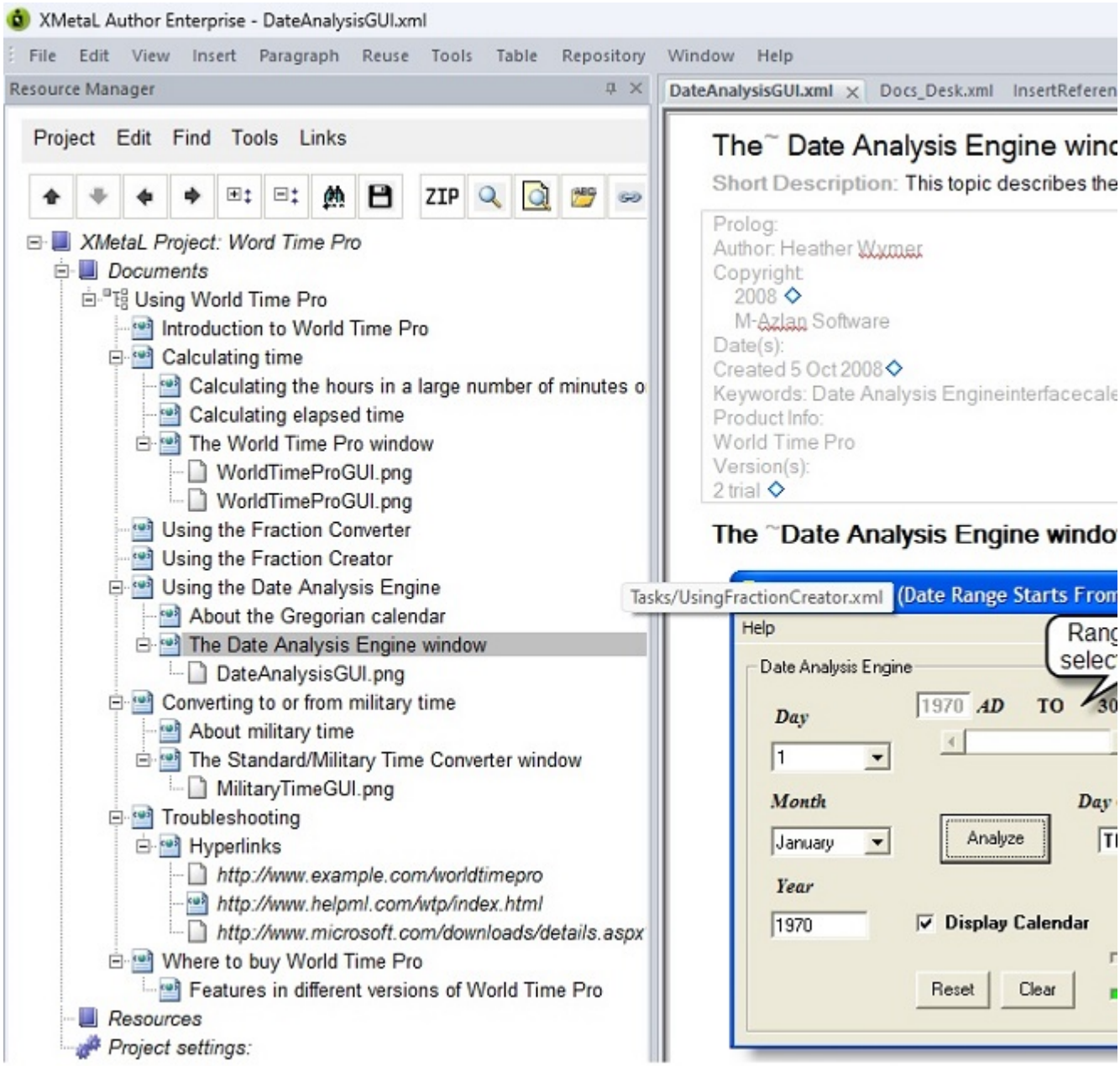

XMetaL Project main menus

The XMetaL Project offers various features accessible through the following main menus:

Table 41: 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**

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To do this	Follow these steps
Exit the project	Click the Project menu and then select **Exit**

Table 42: 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: • 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: • 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 43: 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 44: 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 45: 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 keywrods 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: • 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:

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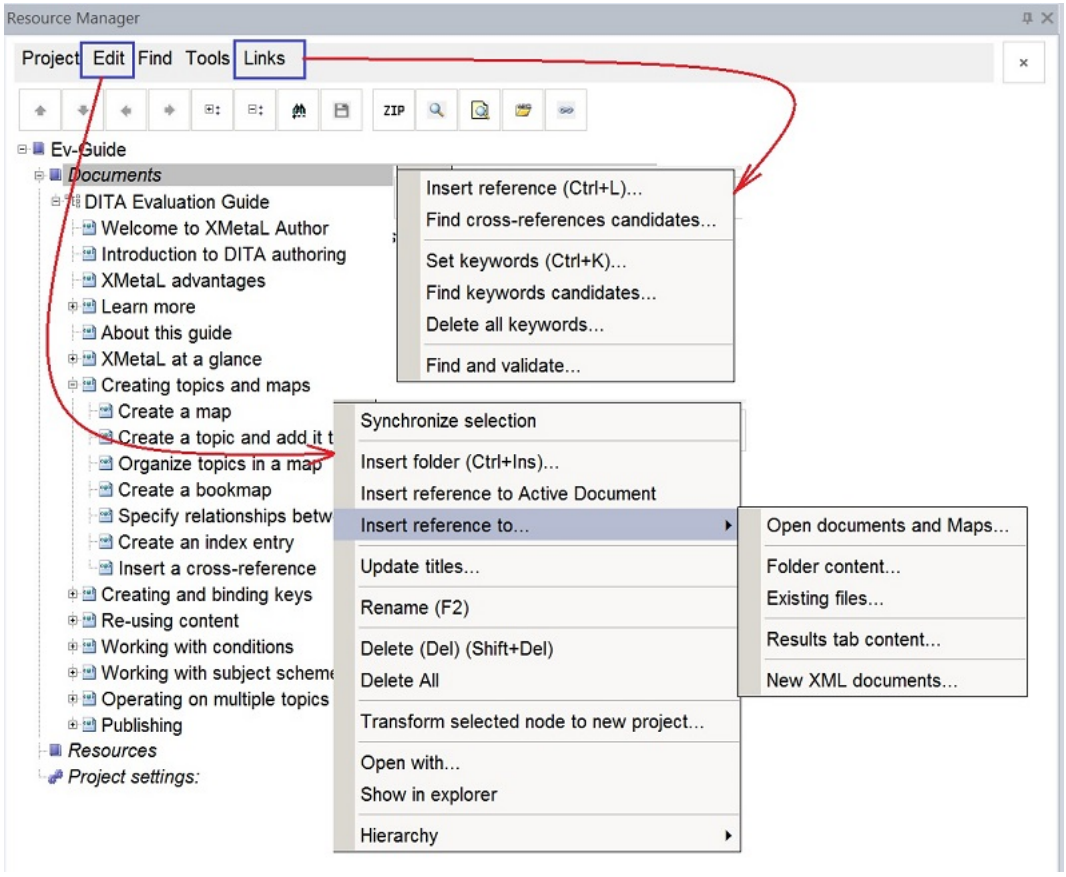
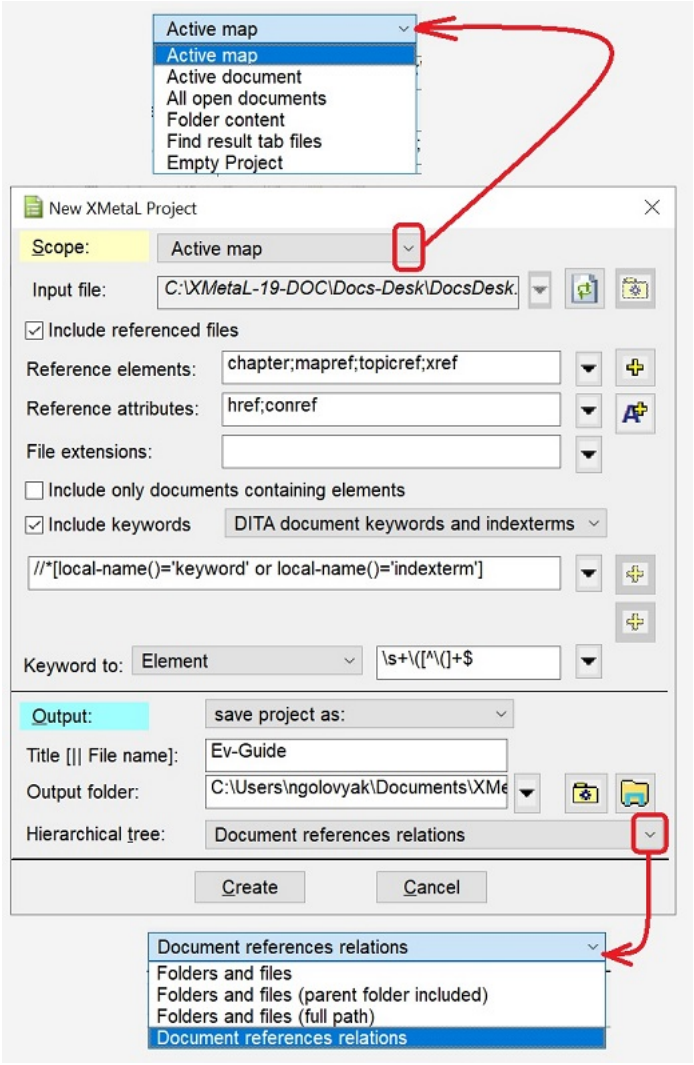


Creating new XMetaL Project

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 196 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

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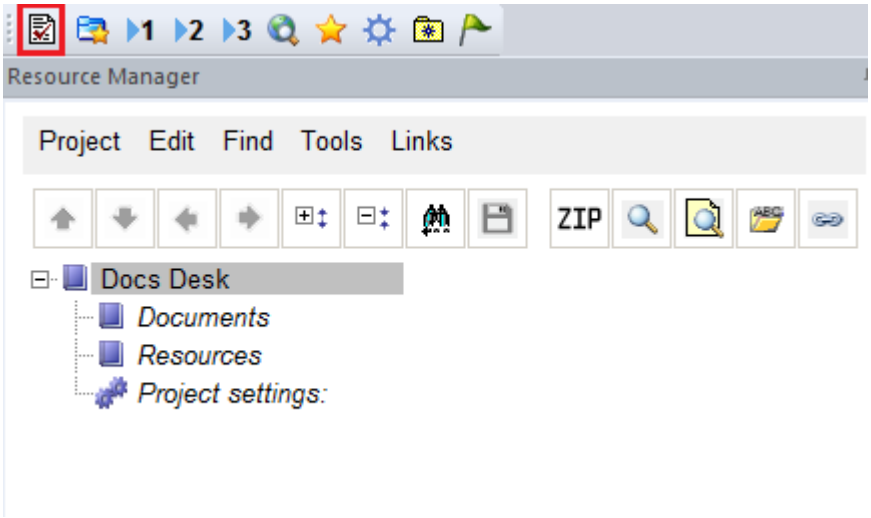
Clicking the "Open Docs Desk" button in the Whiteboard toolbar will open the XMProject.xwb project document within the Resource Manager.



Edit

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**.

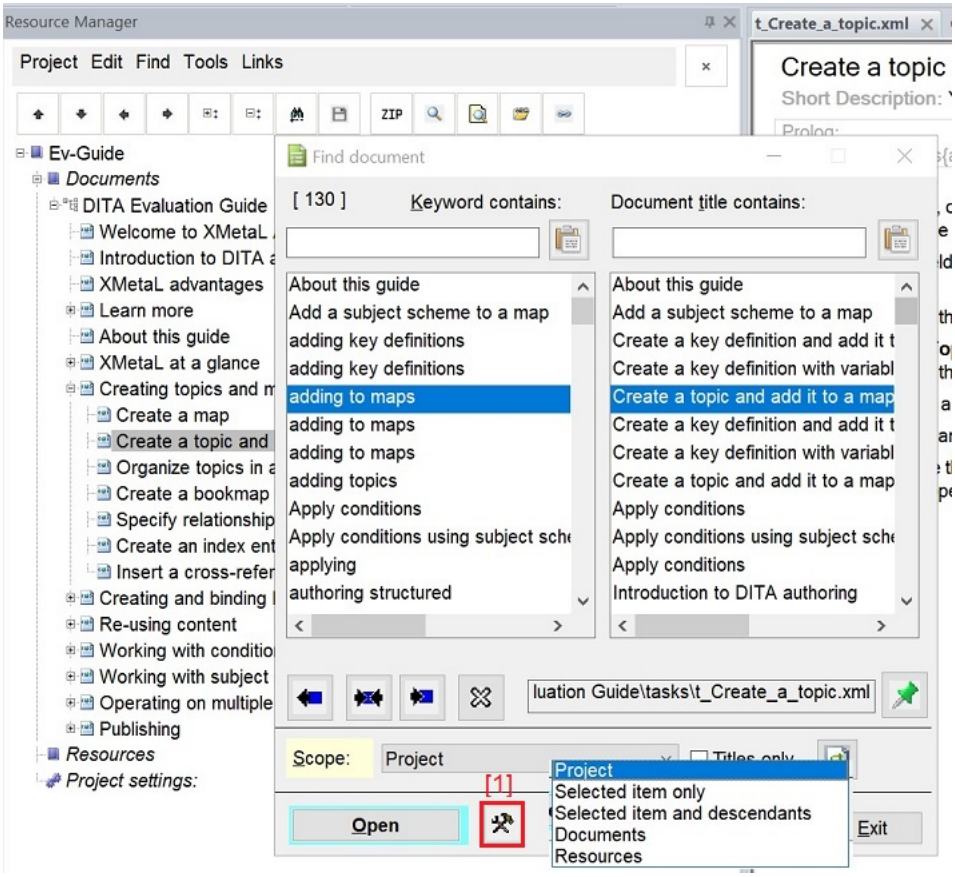


Figure 1: Find Document: User Interface

To set "Quick find keyword parameters", click the **Set quick find keyword parameters** button **[1]** in **Find document** dialog box:

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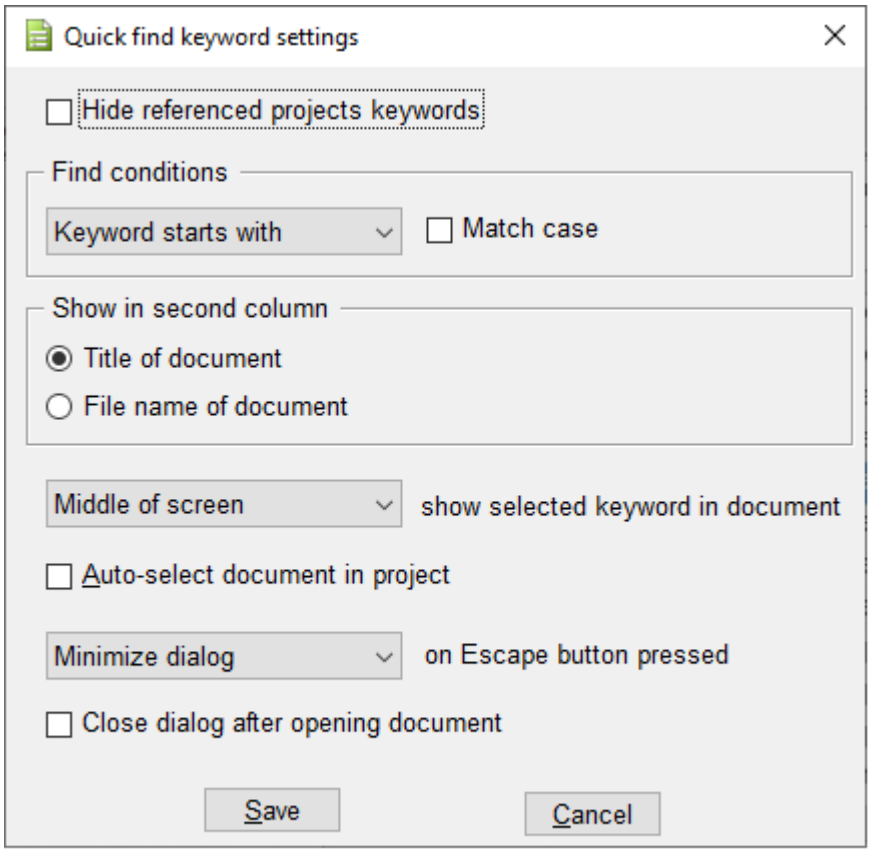

Find Content

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.

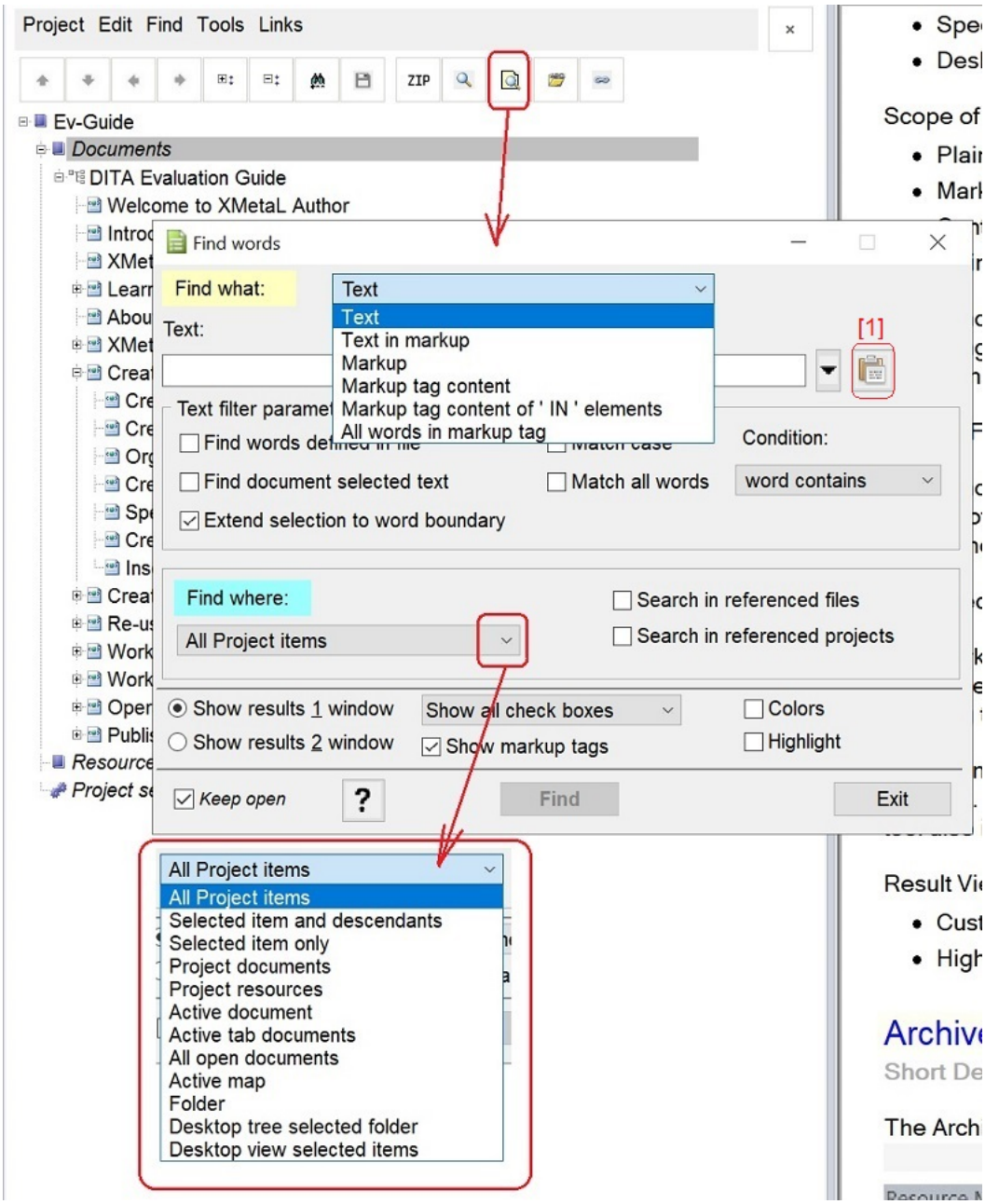

Figure 2: Find Content UI : Main

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.

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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.

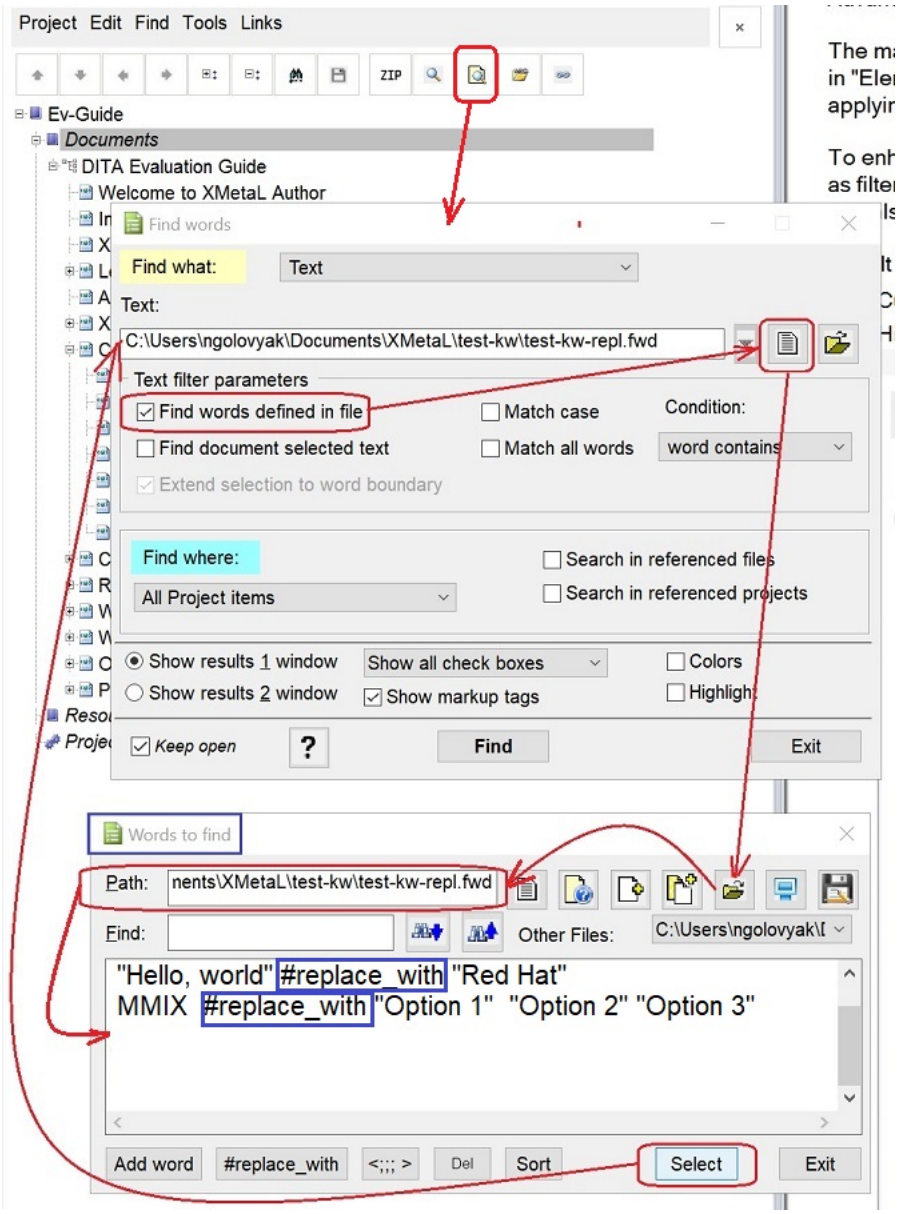

Figure 3: Find Content UI: Keywords in file

Results Find tab:

This replacement list is displayed as a series of buttons in the result set, where button labels show replacement's option.

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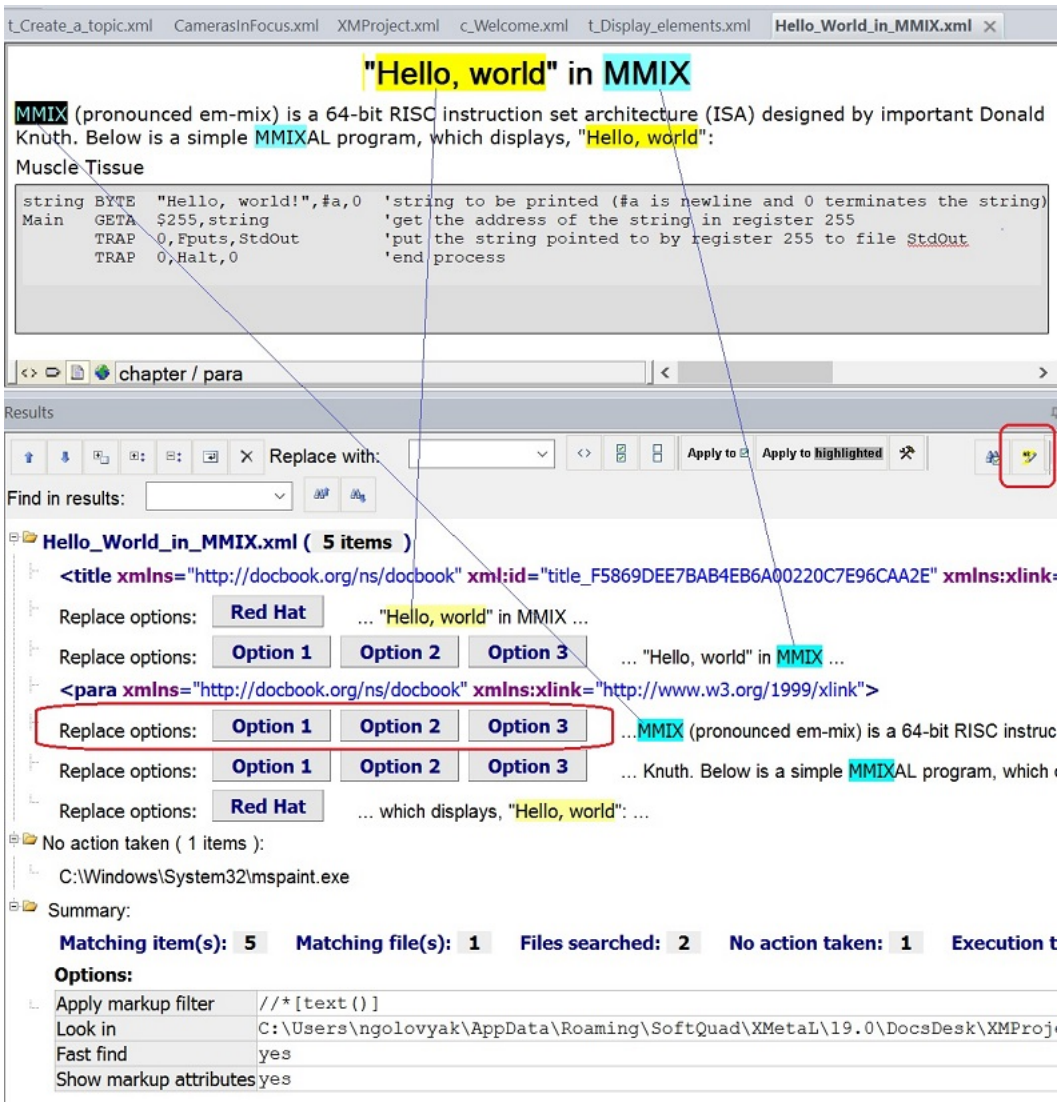

Figure 4: Find Content UI: Keywords in file - Results window with replace options

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.

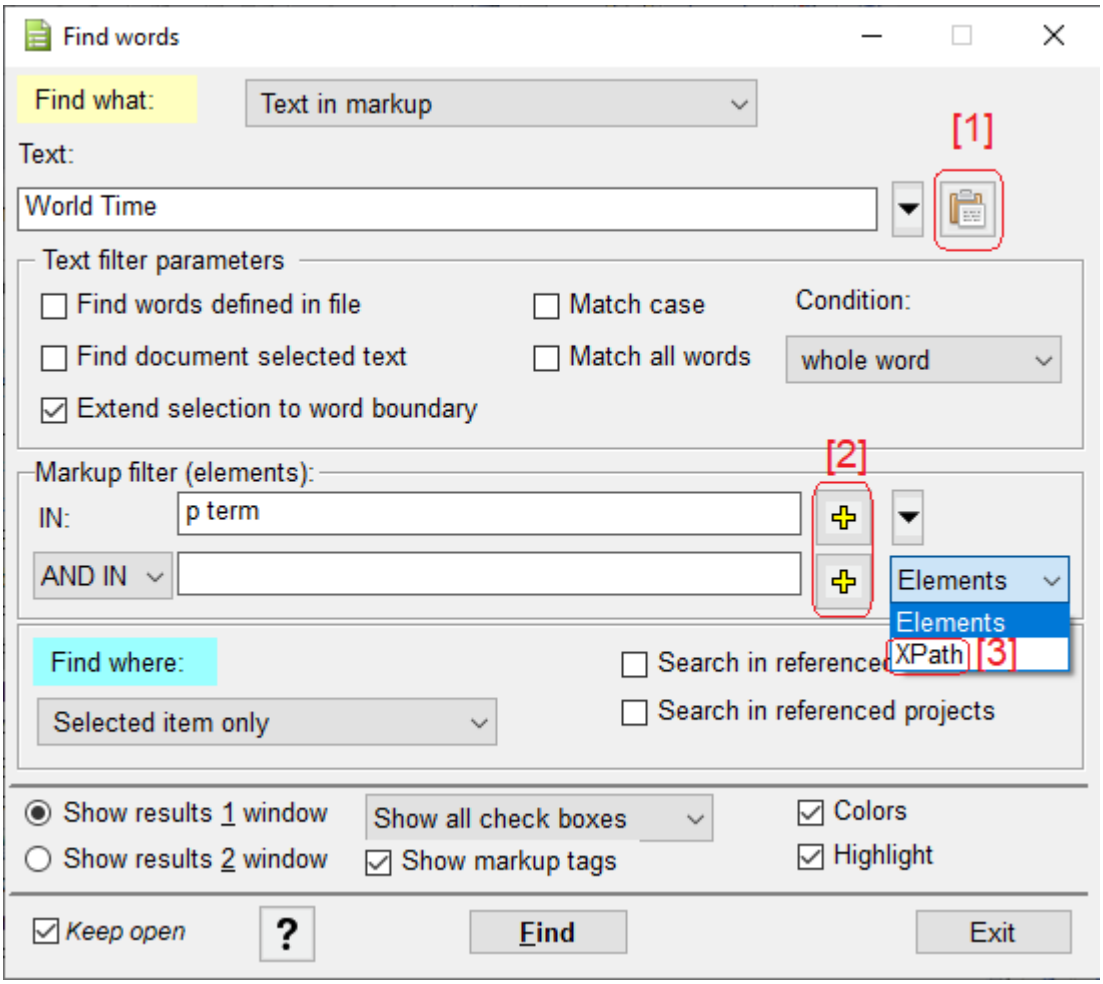

Figure 5: Find Content UI: Advanced markup filtering

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.

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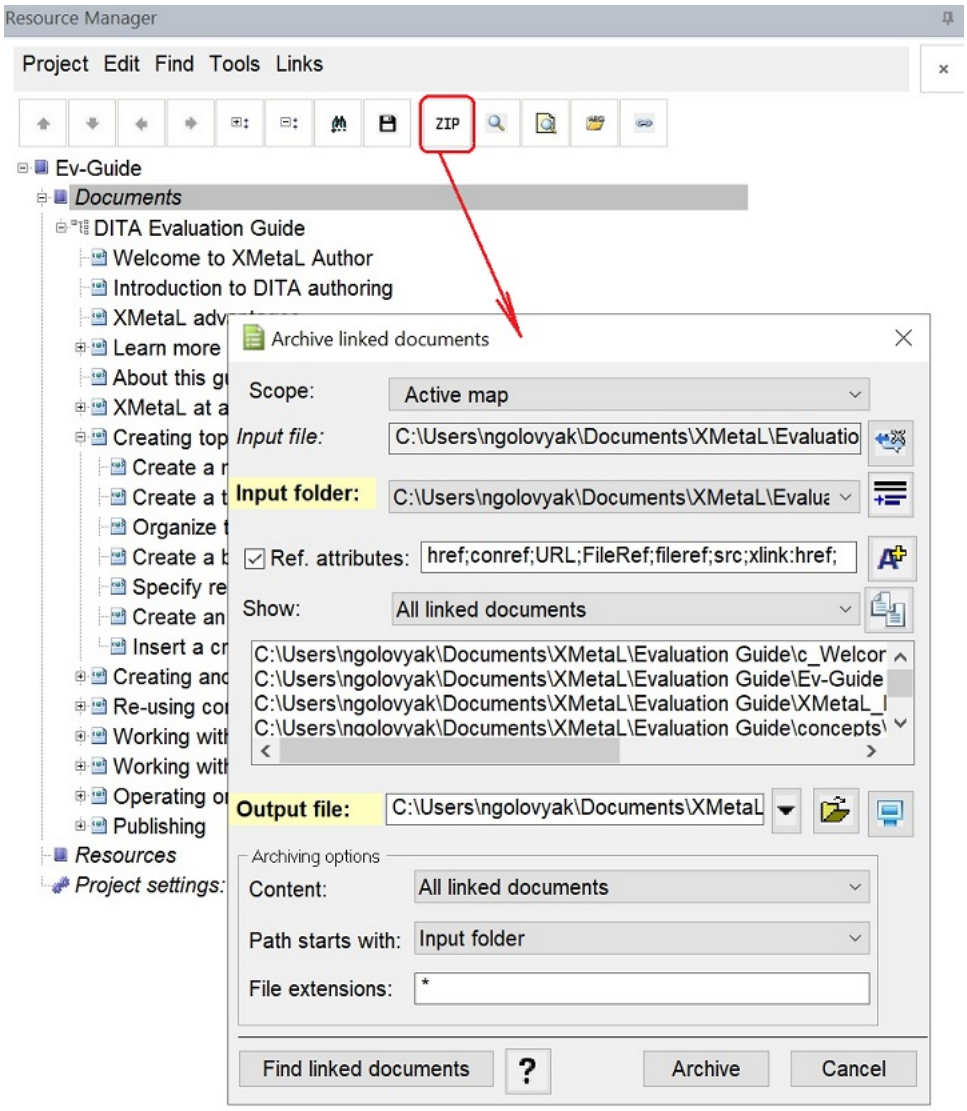

Figure 6: Archive UI

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.

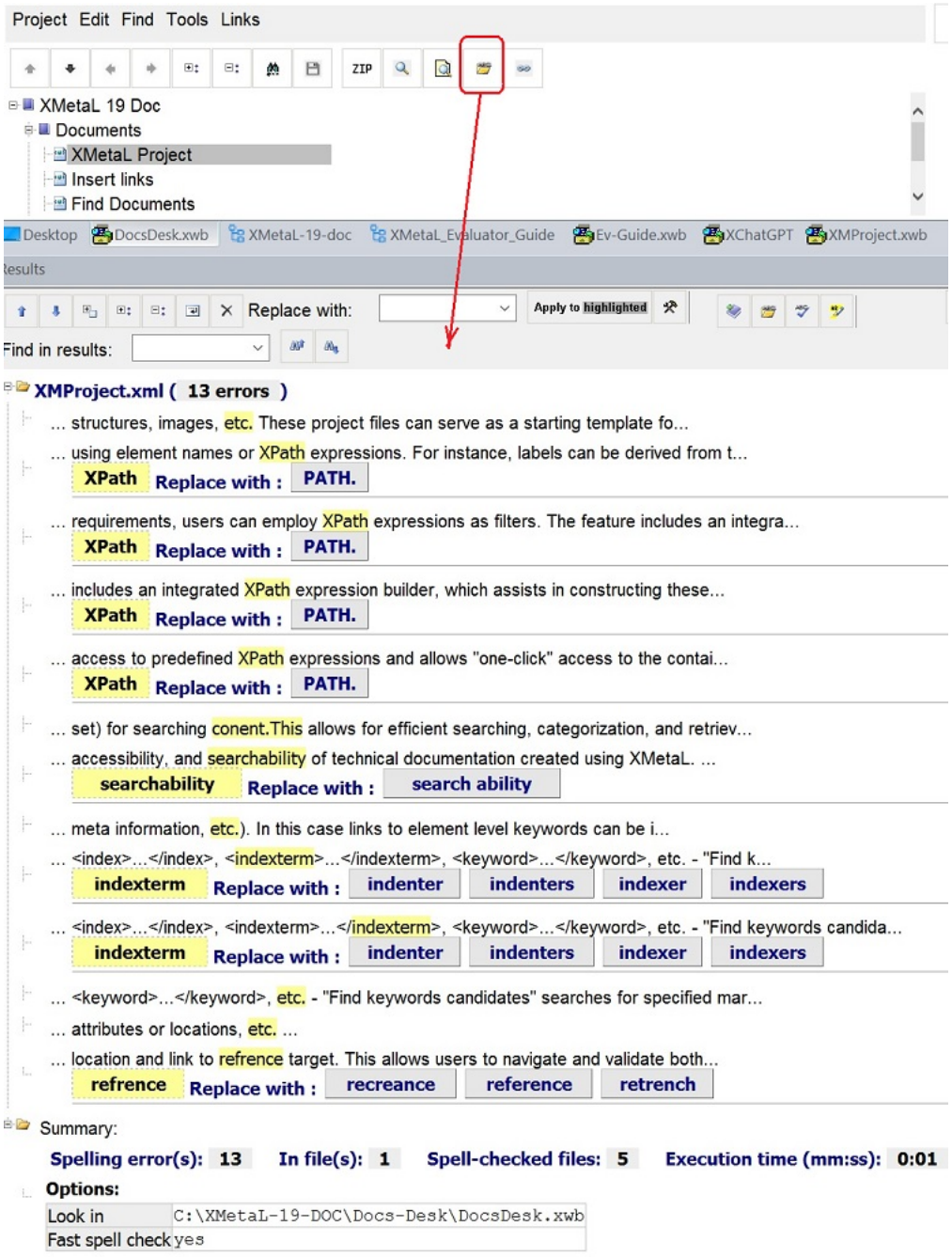

Figure 7: Spell check results tab

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.

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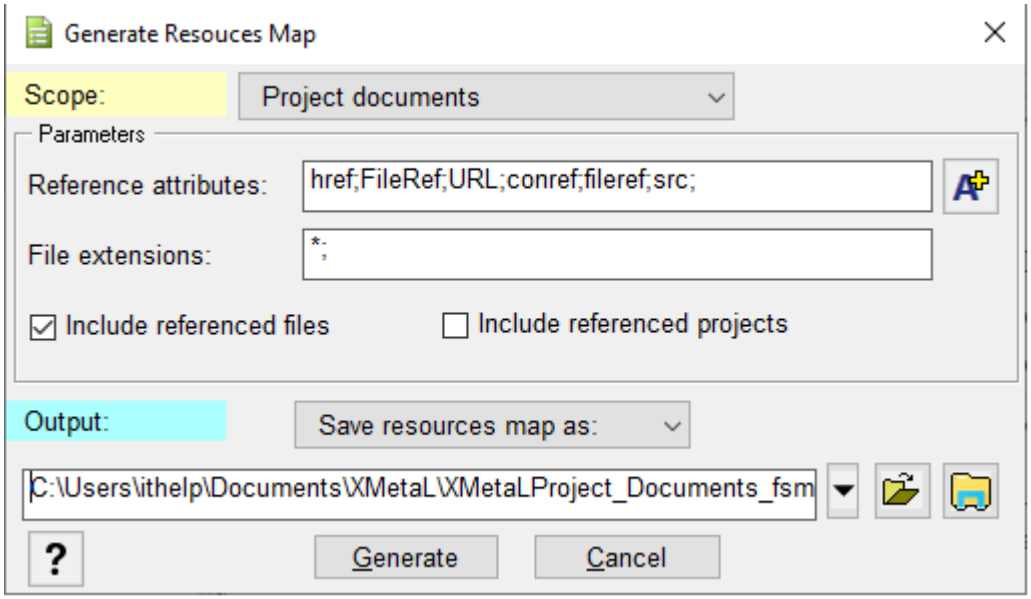
Generate Resources Map

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.

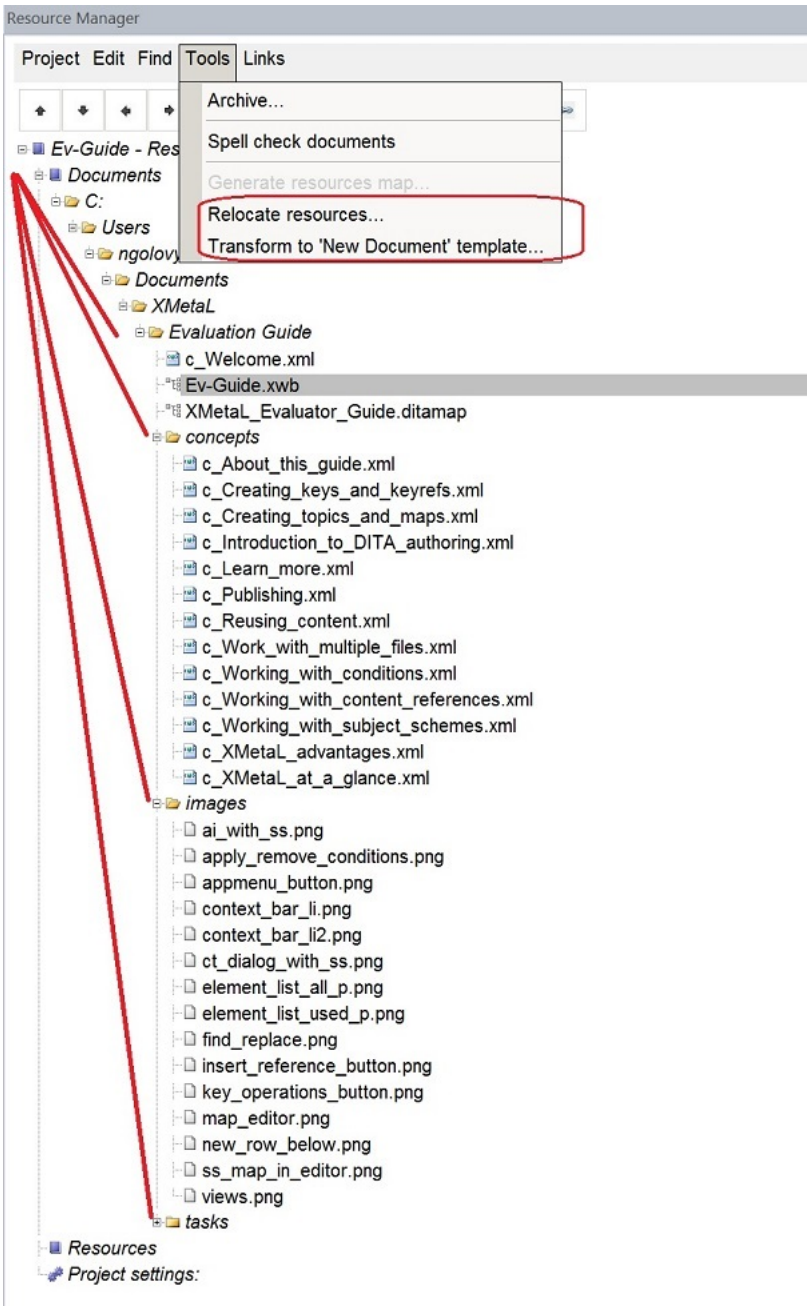


Figure 8: Resources Map

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 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.

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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.

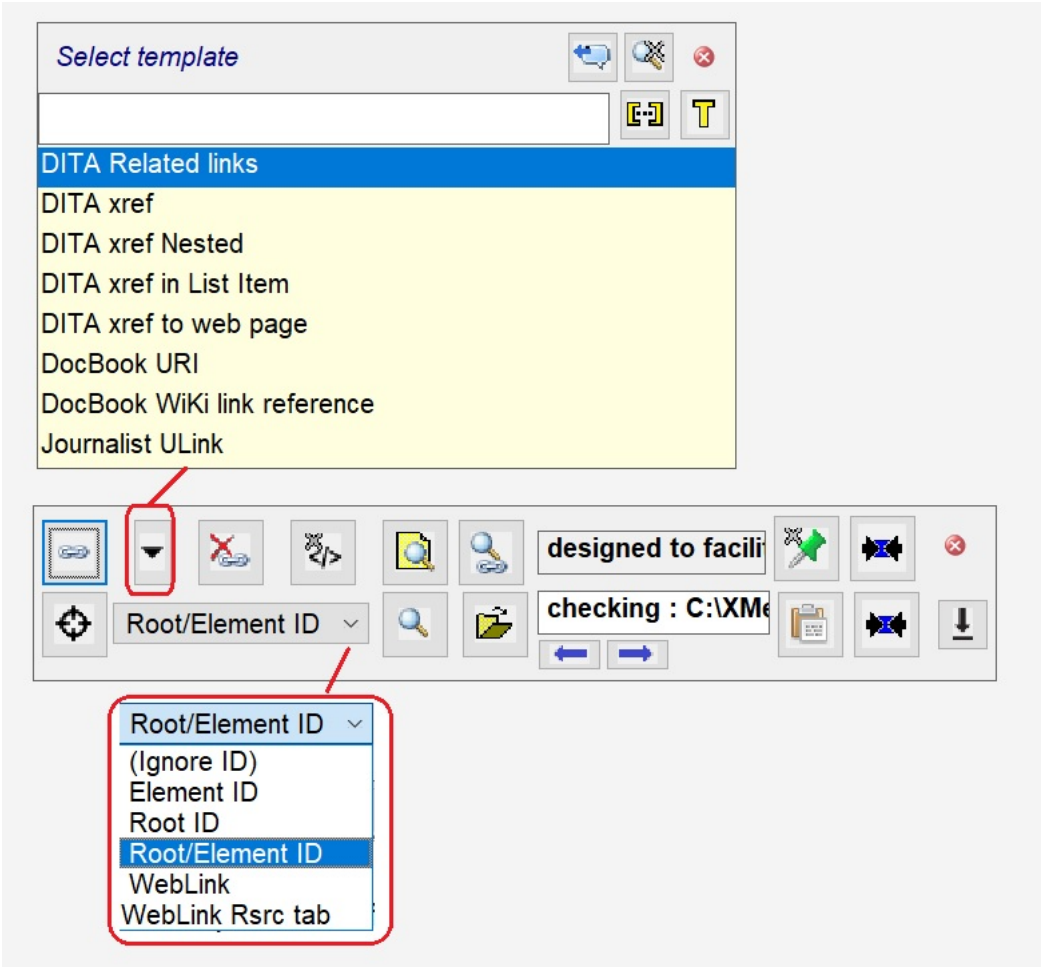
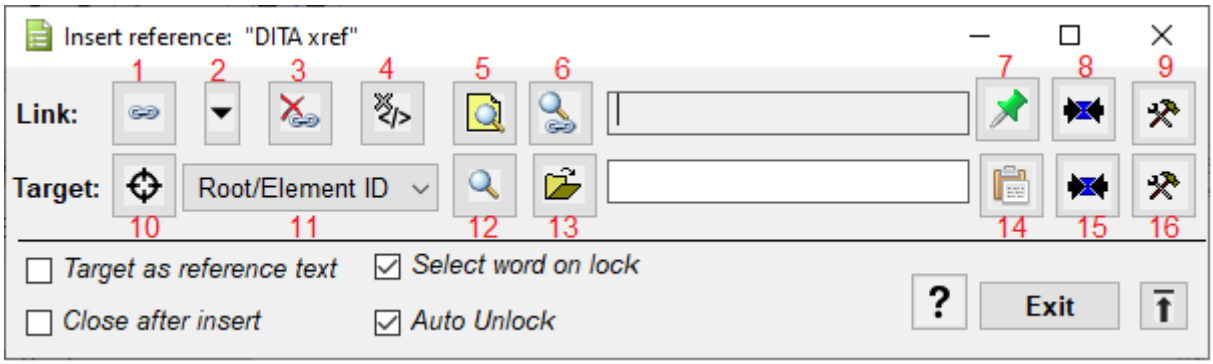


Figure 9: Insert reference: default UI



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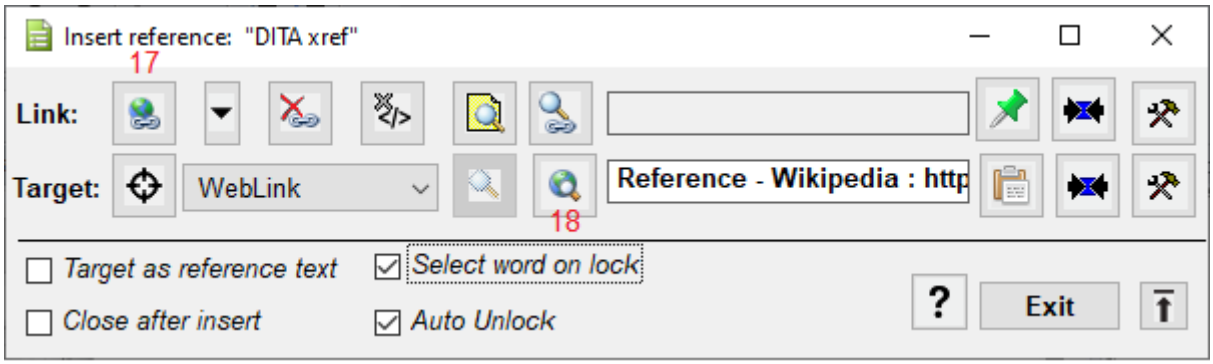

# on image	Description
1	Insert reference
2	Select reference template
3	Remove reference tag
4	Remove surrounding tag
5	Find content
6	Find cross-references candidates
7	Lock link location to Active Document selection
8	Select reference location
9	Settings for "Insert reference" action
10	Set target 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.

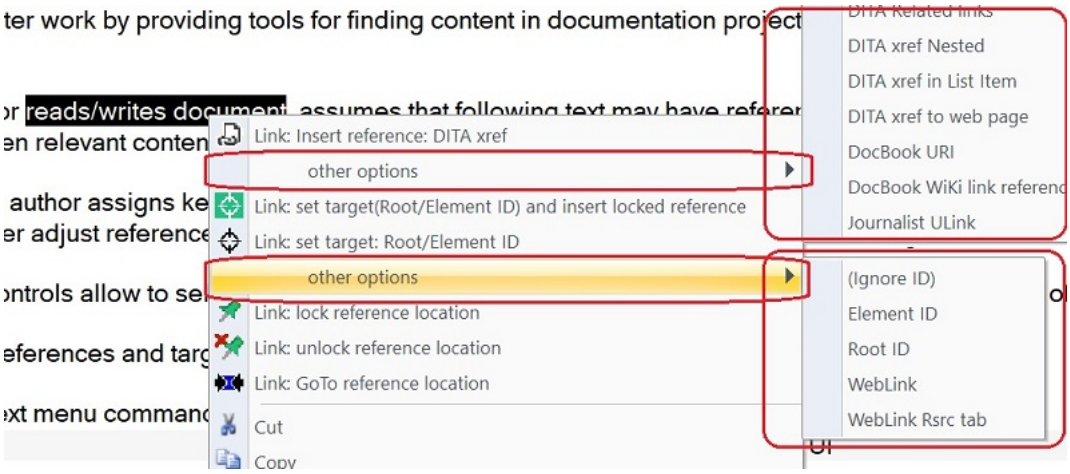

Figure 10: Insert reference: context menu

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.

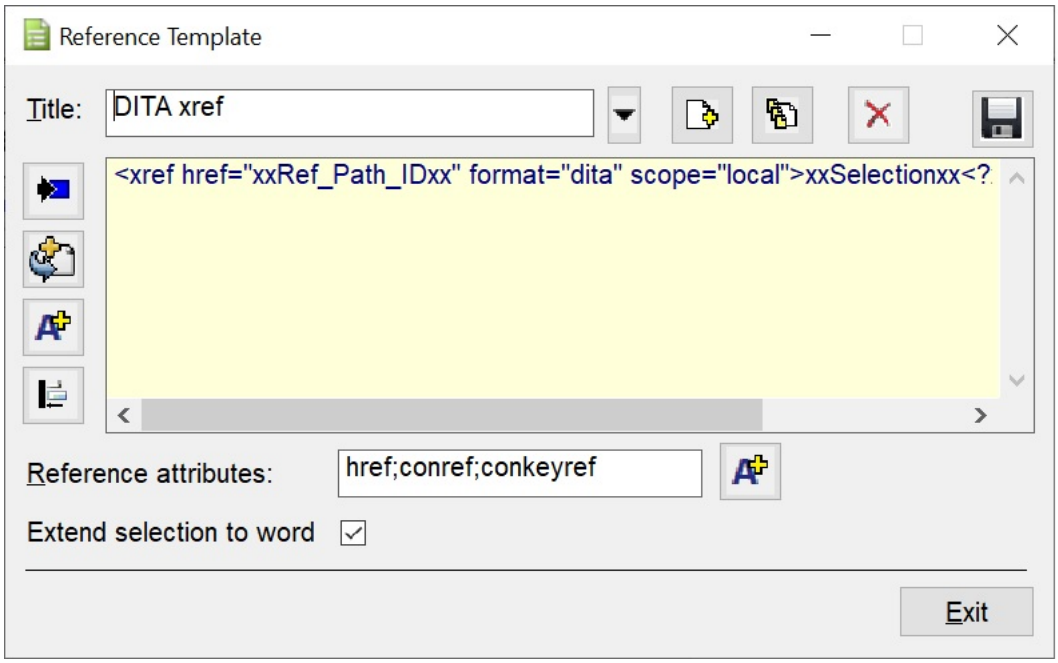

Figure 11: Insert reference: reference template

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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.

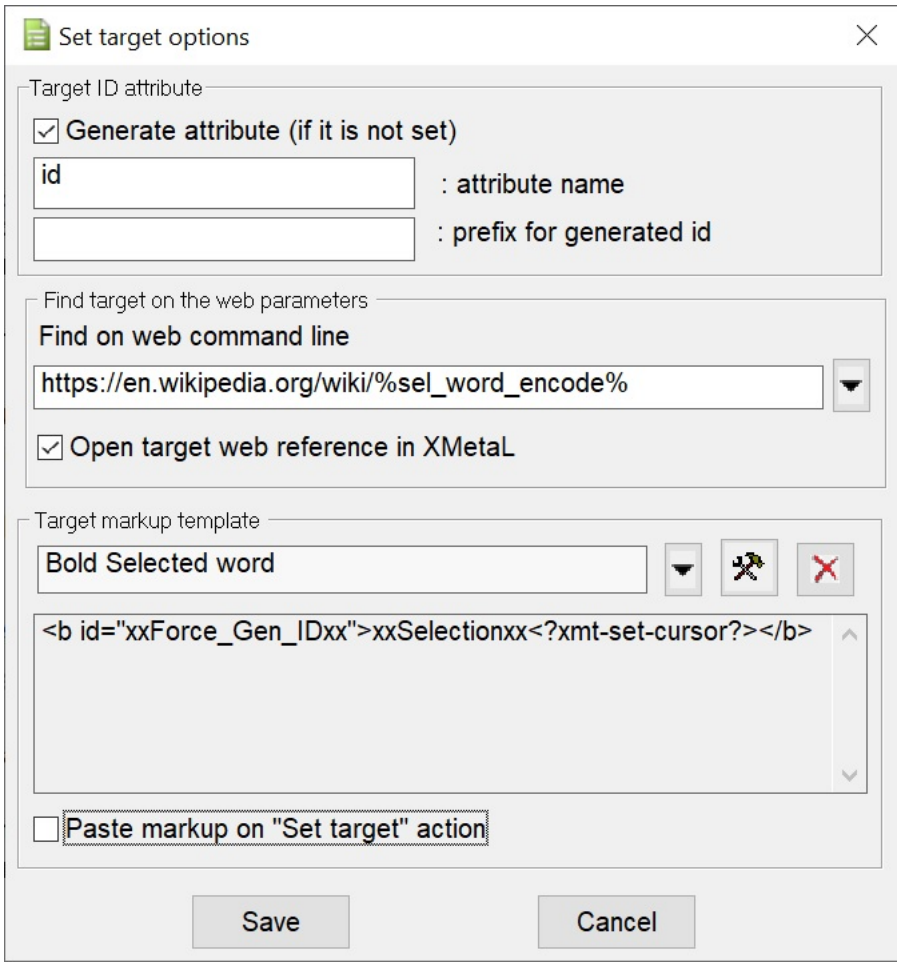

Figure 12: Insert reference: target settings

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.

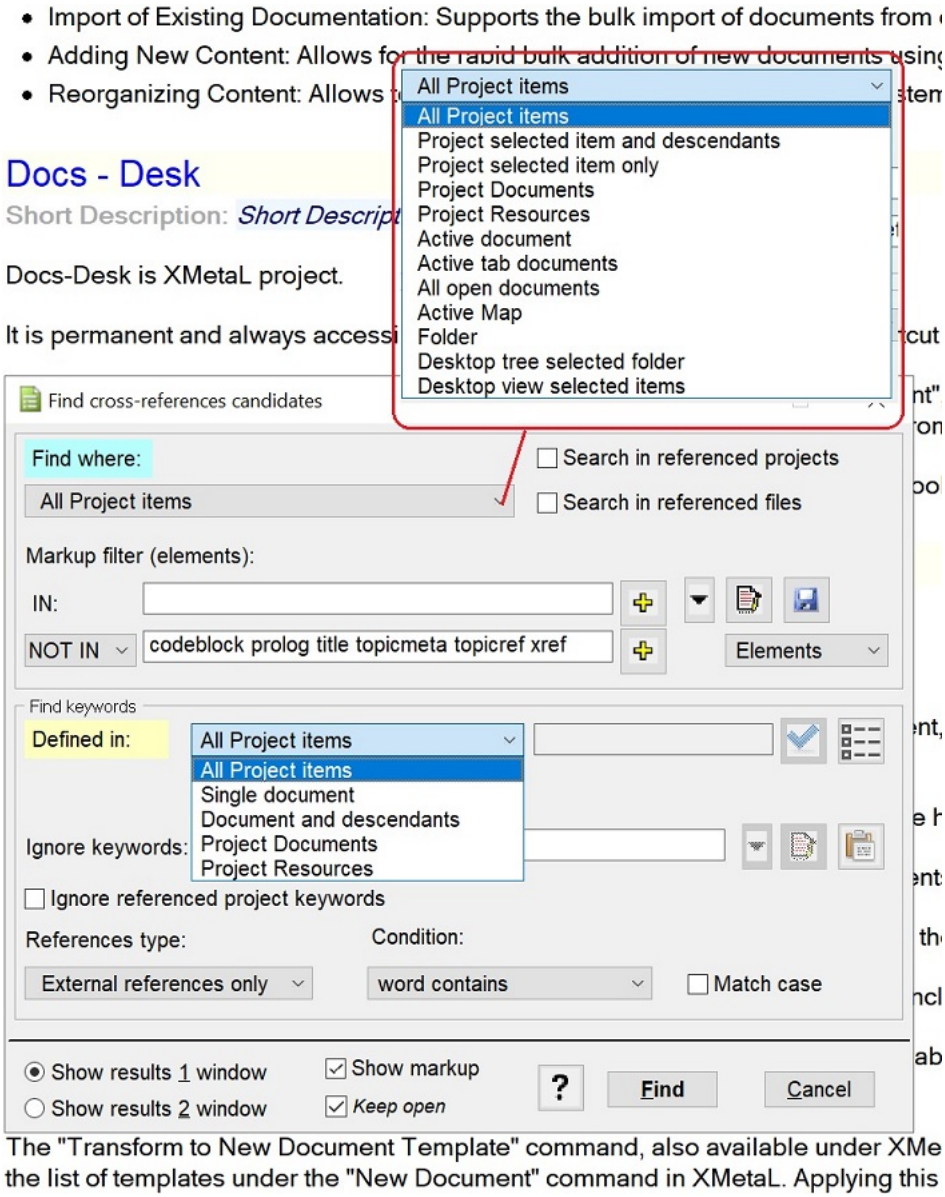

Figure 13: Find cross-references candidates: Find UI

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

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- 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.

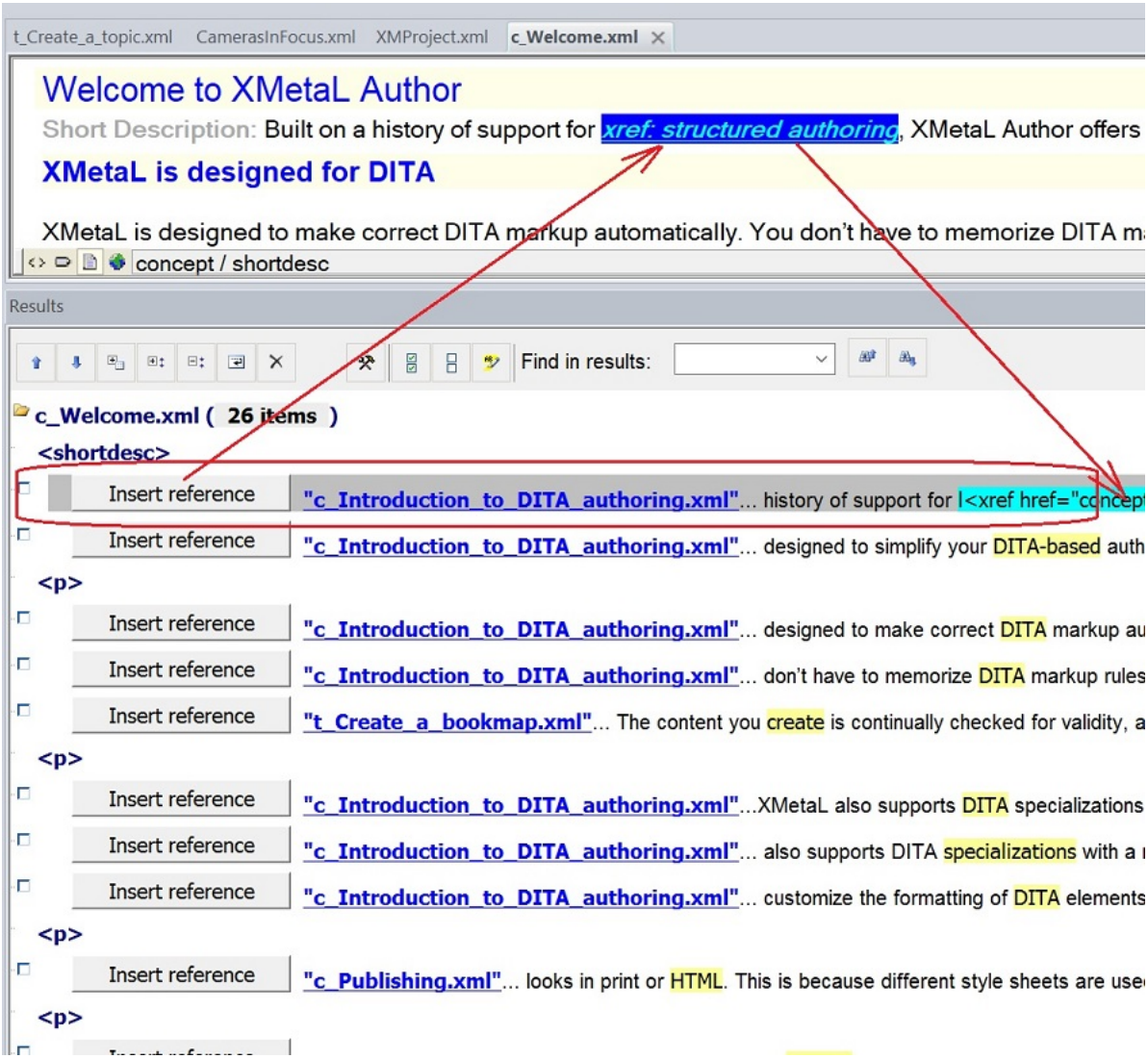

Figure 14: Find cross-references candidates: Set reference UI

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.

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- 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.

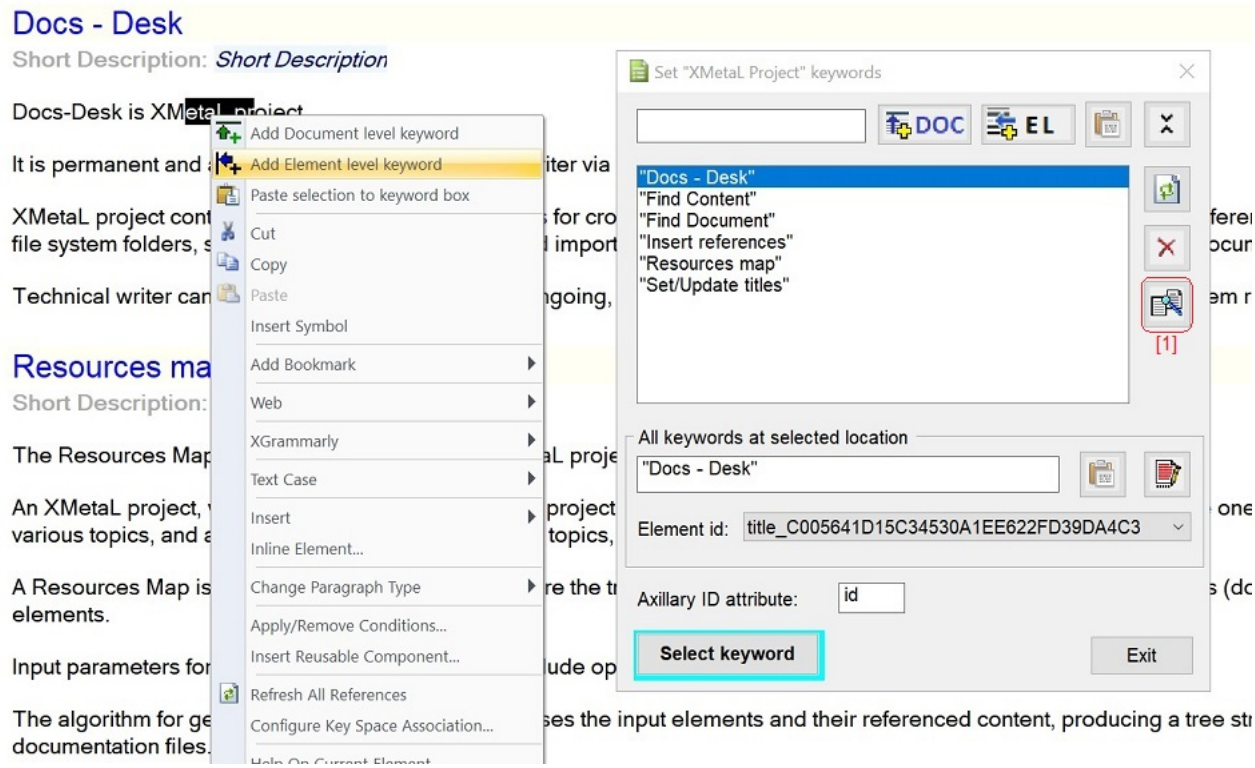

Figure 15: Set keywords full user interface and context menu example

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**,

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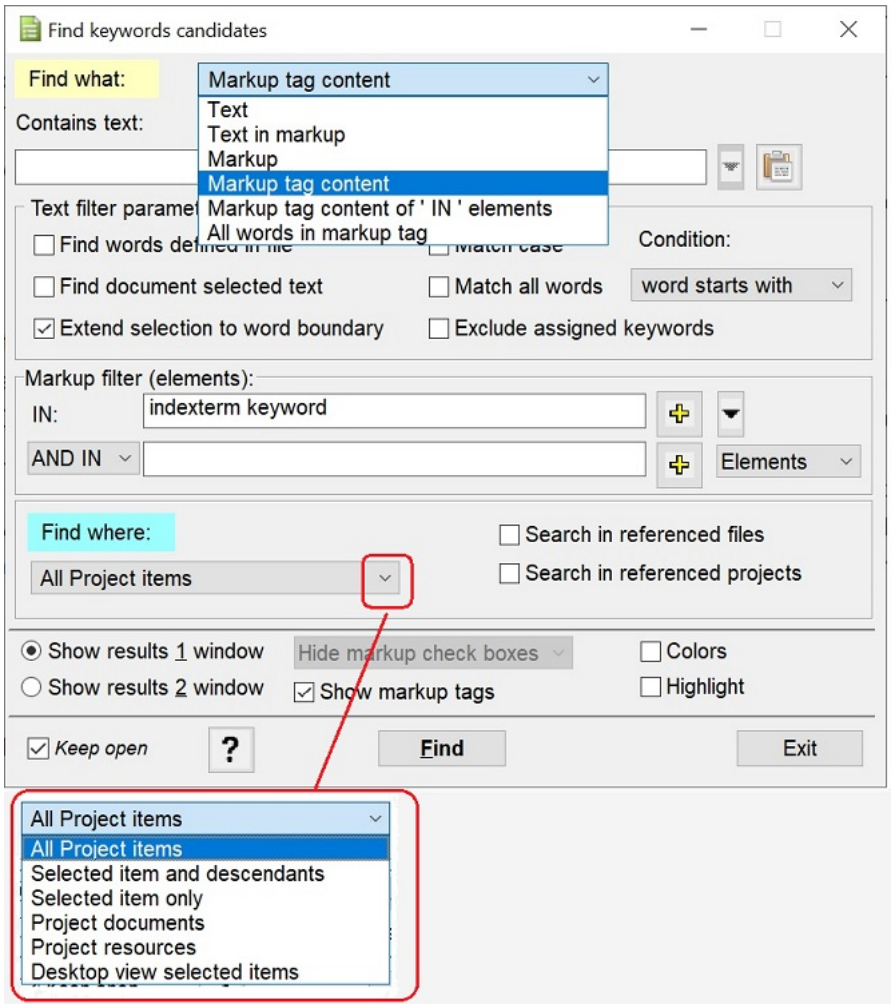

Figure 16: Find keywords candidates: UI

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.

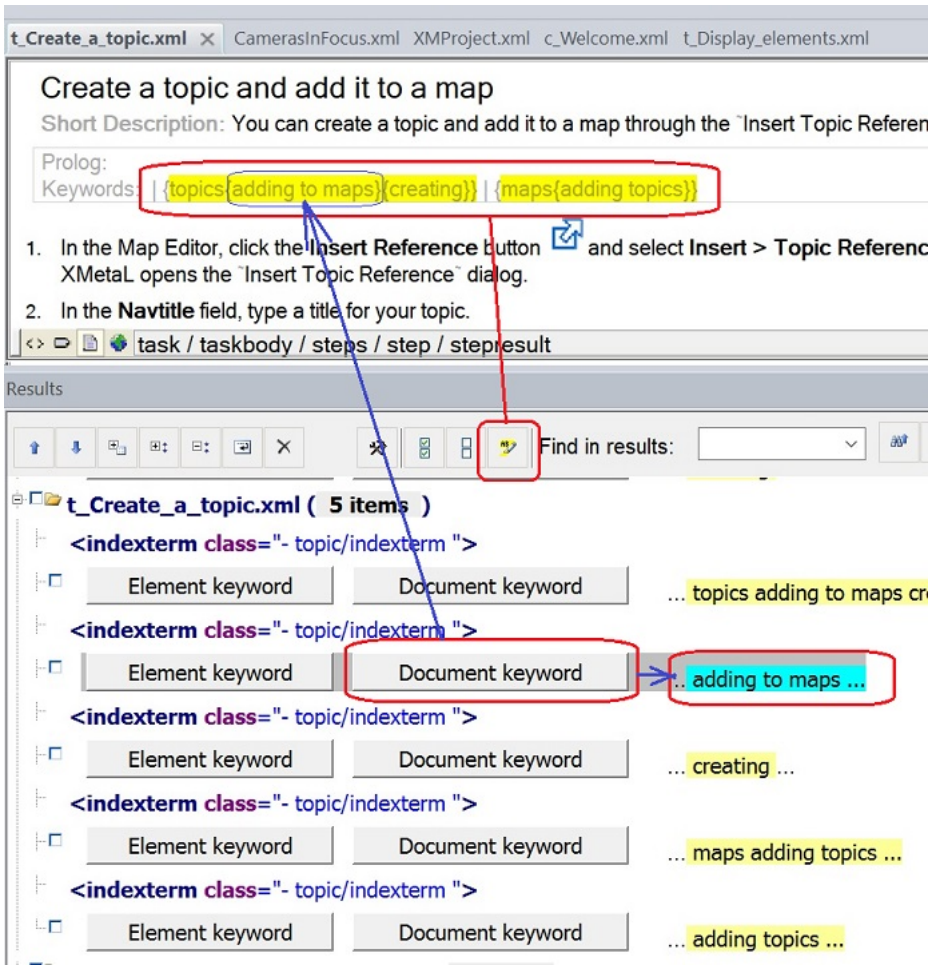

Figure 17: Find keywords candidates: Set keyword from results tab

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**.

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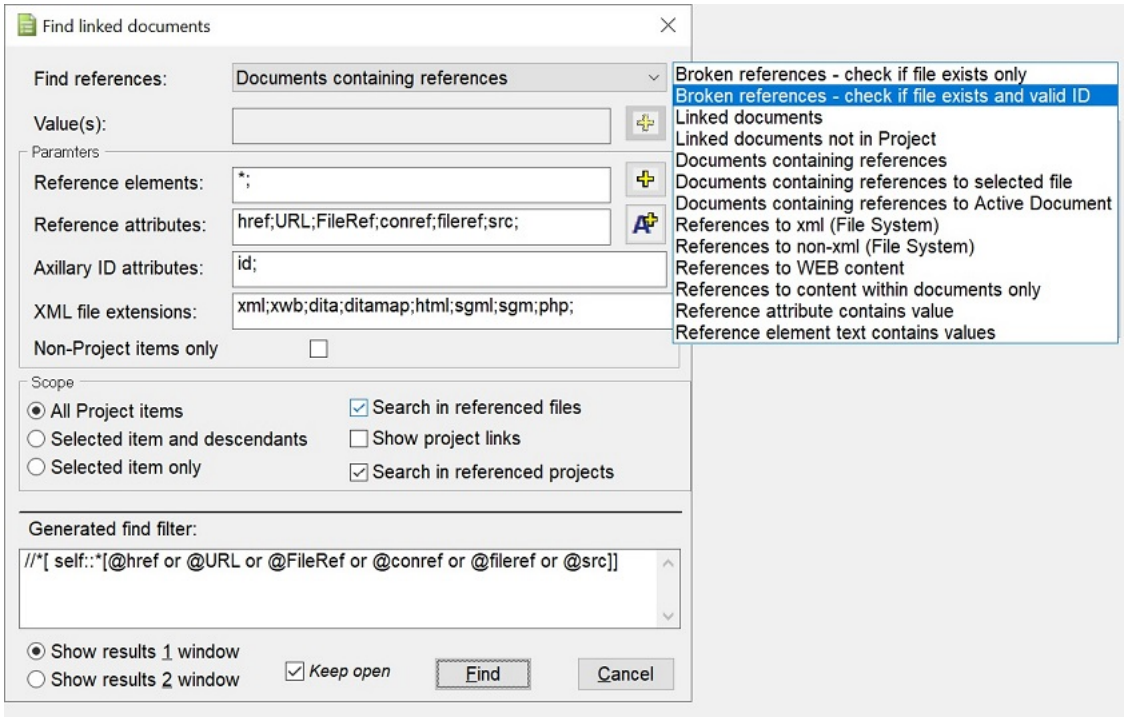

Figure 18: Find and validate links: user interface

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.

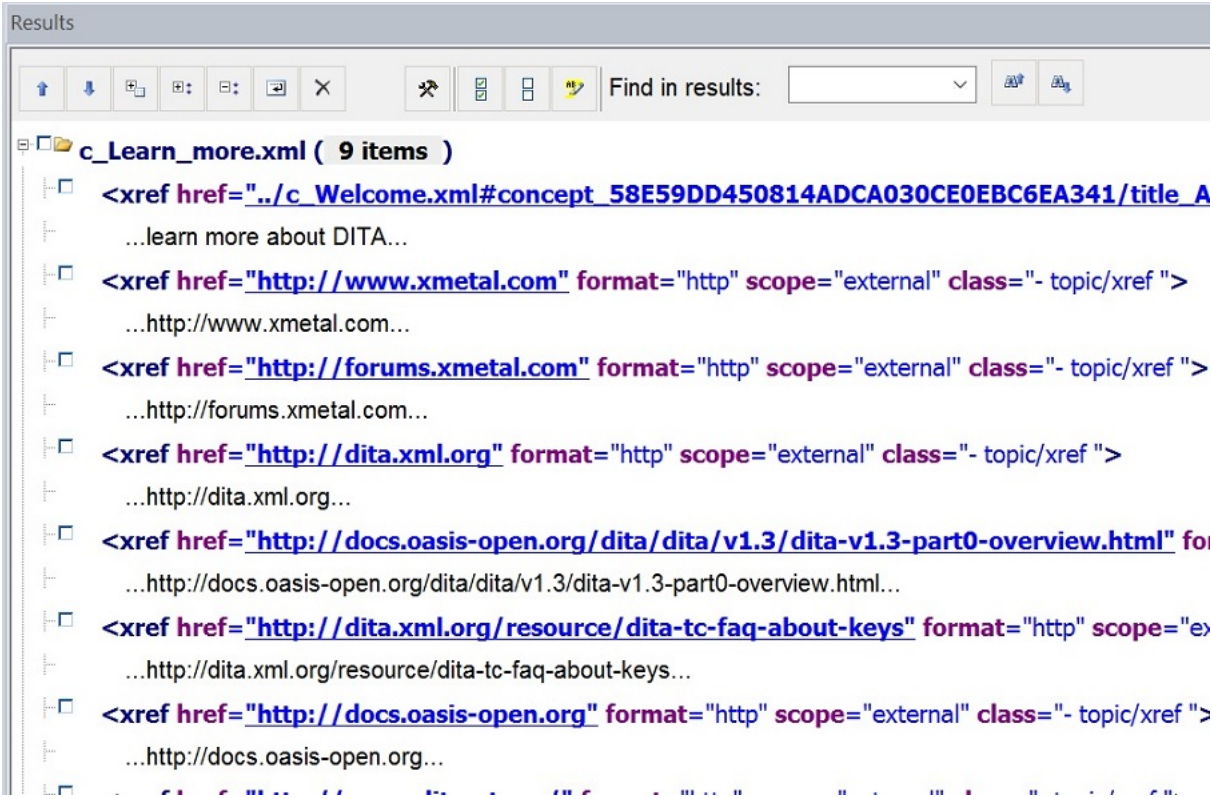

Figure 19: Find and validate links: results tab

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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 46: 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 47: 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

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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 48: 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 49: 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

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

Table 50: List formatting

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

Table 51: 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 52: 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 53: Working with selections in a document

Action	Shortcut
One character to the right	Shift + Right arrow
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 54: 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 55: 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)

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Table 56: 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
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 57: 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

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*

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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

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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.

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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.

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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> <img src="colliepic"/>
</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;
```

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Related Links

Internal subset on page 236

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/*.

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- 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.

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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.

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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*

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Index

.bmp files 112
.css files 58, 106
.ctm files 58, 106
.emf files 112
.eps files 112
.gif files 112
.ico files 112
.ini files 55
.jpg files 112
.mcr files 51, 106
.mdb files 127
.pcx files 112
.png files 112
.rld files 58
.rls files 58
.rlx files 58
.svg files 112
.tbr files 23, 106
.tga files 112
.tif files 112
.wmf files 112
.xls files 127

3rd party viewer 233

A

accelerator keys 228
accepting tracked changes 91
access keys 228
adapter configuration file 72
assets
    adding objects to an asset folder 50
    asset templates 50
    creating 50
    creating a new folder 50
    My Assets folder 50
Attribute Inspector 13, 110
    sort 13
attributes 237
    case-sensitivity 237
    creating in well-formed documents 68
    default values 237
    finding 77, 92
    removing 77, 92
    searching for 77, 92
    setting values 110
    special characters in 110
    types 237
autonumbering 37

B

background spell checking 83
    automatically correcting spelling 84
background spell checking *(continued)*
    manually correcting spelling 84
    turning on 84
Blank XML Document template 58
blue diamond (to denote empty elements) 107
bookmark manager 155
bookmarks 155
bookmarks and comments 155
browse for DTD 61
browsers
    adding, for Page Preview 9
    associating with buttons on Preview toolbar 9
    removing, for Page Preview 9

C

CALS tables 113, 114
caption, in HTML table 115
cascading style sheet editor 26
cascading style sheets 58, 106
    :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 237, 238
case, names 234
catalog files 236
CDATA sections 124, 240
changes
    accepting tracked 91
    rejecting tracked 91
    tracking 91
character data sections 240
character entities 238
characters
    non-ASCII 123
    special 123
checking markup 103
checking spelling 78, 79, 80, 83, 84
    automatically correcting 84
    manually correcting 84
closing
    documents 60
    multiple documents 60
comments 240
    displaying 125
    inserting 125
configuration file 55

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content
    authoring 103
copy full path 62
copy table cells 117
copying text 74
counters
    counter-increment 37
    counter-reset 37
    initializing 37
    multi-level 37
    styles 37
create
    assets 50
    macro 51
    menu 24
    templates 59
    toolbar 24
cross-file 93, 94, 96, 97
    operation 92
CSS
    supported properties 38
current element 107
custom palette, for tag and text colors 11
customization file 58, 106
customizations 106
customizing the user interface 23
customizing XMetaL Author 51, 55
cutting text 74

D

database import 127
    choosing databases 127
    choosing fields 128
    formatting table and element output 130
    table joins 129
    updating tables 127
databases 127
declaration subset 236
default view, setting 55
definition lists 110
deleting text 74
diamond (to denote empty elements) 107
display properties
    supported CSS selectors and elements 38
docked panes 13
docking indicator 13
DOCTYPE 235
    internal subset 236
Document Ex 151
document instance 235
document status bar 9
document type declaration 235
document type name 235
document views 9
documents
    closing 60
    creating 103
    linked 70
    moving between 62
    opening outside XMetaL 62
    saving 65
download referenced components 72
dragging-and-dropping text 74
DTDs 235
    internal 236
duplicate IDs 96

E

edit
    element properties 110
edit as partial document 61
editing
    accepting tracked changes 91
    rejecting tracked changes 91
    source 9
    text 74
    tracking changes 91
editing documents without a DTD 67
editing options 61
Element List 13, 107
element properties 110
elements
    block 107
    case-sensitivity 237
    changing 107
    creating in well-formed documents 67
    current 107
    empty 107, 237
    finding 77, 92
    inserting 107
    joining 107
    read-only 107
    removing tags 107
    replacing 77
    selecting 74
    splitting 107
    wrapping and unwrapping 107
empty elements 107, 237
enlarging the document pane 20
entities 122, 238
    case-sensitivity 238
    external 122, 238
    for images and multimedia files 122, 238
    for special characters and symbols 238
    for text files 122, 238
    for XML or SGML files 122, 238
    graphic 122, 238
    naming conventions 122
    opening external 122
    opening external entities 60
    parameter 238
    text 122, 238
entity references 238
    finding 78
    replacing 78
    replacing text 75
    replacing with text 78
error checking 80
external entities 122, 238

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F

file naming recommendations 65
files
  closing 60
  creating a blank XML or SGML document 58
  creating a blank, well-formed XML document 58
  creating from a template 58
  creating new 58
  DTDs 235
  opening 60
  opening outside XMetaL 62
  printing 71
  saving 65
  Schemas 235
fill cell attributes 118
find
  across files 94
  in files 94
Find and Replace 75
find in files 92
find markup
  across files 93
find selected text on WEB 167
find text on WEB 167
finding
  attribute values 77, 92
  elements 77, 92
  entity references 78
  text 75, 92
  text in an element 75
  using pattern matching 76
finding a word on Google 143
finding a word on Wiki 143
floating panes 13
followed-by element 106
Formatting toolbar 16
full-screen mode 20

G

generated text
  counters 37
graphic entities 122, 238
graphics 112

H

HTML tables 113, 114

I

identifier
  external 236
  public 236
  system 236
images 112
  BMP files 112
  EMF files 112
  EPS files 112
  formats supported 112
images *(continued)*
  GIF files 112
  hiding 55
  ICO files 112
  inline 55
  inserting 112
  JPG files 112
  PCX files 112
  PNG files 112
  showing 55
  SVG files 112
  TGA files 112
  TIF files 112
  WMF files 112
importing
  databases 127
  Excel spreadsheets 127
inline images, showing 55
insert
  definition list 110
  elements 107
  list 110
  XInclude 241
inserting
  CDATA sections 124
  comments 125
  marked sections 124
  processing instructions 126
inserting elements 107
interface
  document views 9
  introduction 9
  pane buttons 13
  panes 13
internal DTD 236
internal subset 236
ISO 8859-1 character set 65

J

Journalist customization 9, 106

K

keyboard shortcut, creating in menus 24
keyboard shortcuts 228
keyboard shortcuts (for lists) 110

L

language settings for spell checker and thesaurus 88
languages 85, 86, 88
  setting a default 88
Latin-1 character set 65
licensing 21
linked documents
  archiving 70
list items, inserting 110
lists 110
  bulleted 110
  converting paragraphs to 110

lists *(continued)*
converting to paragraphs 110
converting types 110
definition 110
inserting 110
nested lists 110
numbered 110
sorting 111
local content 110

M

macro files 106
macros 51
associate with a menu item 53
associate with toolbar button 53
create keyboard shortcut for 53
design guidelines 52
files 51
inserting a tab in a table 120
locations 51
managing 51
recording 52
restrictions 52
running 51
Macros toolbar 16
main word lists 85
adding 85
removing 85
marked sections 240
in SGML 124
inserting 124
order of precedence in SGML 124
marking revisions 91
markup
display options 55
source editing 9
menus, custom 23
merging tables 119
Microsoft Access databases, importing 127
Microsoft Excel spreadsheets
importing 127
pasting as tables 120
Microsoft Internet Information Server (IIS) 62
mnemonic 228
moving between documents 62
multiple documents 20
multiple panes 13
multiple-file operations 97
multiple-user settings 23, 51, 55, 106
My Assets folder 50

N

names, case-sensitivity in XML 234
nested lists 110
new document 58
non-ASCII characters 123
Normal view 9

O

online Help 9
Open 60
opening
documents 60
external entities 60
files in WebDAV-enabled folders 62
templates 58
opening document folders
outside XMetaL 62
opening documents
outside XMetaL 62
options
auto-saving 55
backup 55
default extension 55
default template 55
end-of-line 55
File 55
font 55
General 55
most recently used (MRU) list 55
show/hide inline images 55
syntax coloring 55
tab 55
tooltips 55
View 55
word wrap 55
outline view 12

P

Page Preview 9
panes
Attribute Inspector 13, 110
behavior 13
buttons 13
docked 13
Element List 13, 107
floating 13
options 13
Resource Manager 13, 50
Results 13
rules for docking and floating 13
parameter entities 238
pasting text 74
pattern matching 76
personal settings 23, 51, 55, 106
pin 13
Plain Text view 9
Preview toolbar 9, 16
printing 71
headers and footers 71
processing instructions 234, 240
inserting 126
prompt text 107, 126
properties
editing 110
public identifier 236
PUBLIC keyword 236

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Q

quick attribute inspector 69
quick navigation 143
quick navigation tool 143

R

raw code editing 9
read-only elements 107
rejecting tracked changes 91
replacing
    elements 77
    entity references 78
    entity references with text 78
    text 75
    text with entity reference 75
    using pattern matching 76
repository 72
repository adapter 72
repository configuration file 72
repository file
    creating 72
    opening 72
repository integration layer 72
Resource Manager 13, 50
Results 13
results pane 97
    actions 99
    buttons 99
Reviewing toolbar 16
revision marking 91
revisions
    accepting marked 91
    rejecting marked 91
    tracking 91
rules checking 103
Rules file 58
rules for pinning and un-pinning 13
running
    macros 51

S

sample files 9
saving
    documents 65
    multiple documents 65
    options 55
    validating before 65
Schemas 235
Schematron
    options 104
    validating 104
screen tips 55
SDATA entities 234
Search options 75
search patterns 76
searching 75
    for attribute values 77, 92
    for elements 77, 92
    for entity references 78
searching *(continued)*
    for text 75
    using pattern matching 76
    within an element 75
separator line
    in menus 24
    in toolbars 24
services
    multiple-file operations 97
settings
    multiple users 23, 51, 55, 106
    personal 23, 51, 55, 106
SGML 234
    comments 240
    empty elements 107, 237
    entities 122
    processing instructions 240
    references 234
    source editing 9
    valid markup 235
shortcut keys 228
showing inline images 55
Smart Insert 103
source editing 9
special characters 123
Special Characters and Symbols toolbar 16
spell check 94
spell checker 79
    languages 85
    options 80, 85, 86, 87
    word lists 79, 85, 86, 87
splitting cells into columns 115
splitting cells into rows 115
splitting table groups 119
splitting tables 119
SQL 127
Standard toolbar 16
Structure View 12, 58
style properties 36
style sheets 58, 106
styles
    supported properties 38
symbol characters 123
symbols 55, 123
system identifier 236
SYSTEM keyword 236

T

tab group
    horizontal 62
    vertical 62
tabbed interface 20
Table Advanced toolbar 16
table caption (HTML table) 115
table cells
    contracting spanning 116
    copying a selection of 116
    entering tab character 120
    height (HTML) 121
    merging 116
    pasting a selection of 116

table cells *(continued)*
splitting 116
width 121
table grid lines 113
Table Properties 121
Table toolbar 16
tables 113
auto-suggest 115
CALS 114
change body row to header row 114
proportional column widths 121
captions 115
cell properties 121
column properties 121
column/cell width 121
contracting cells 116
copy cells 117
deleting cells 117
deleting columns 117
deleting rows 117
editing 115
fill series 118
from database 127
header rows 114
HTML 114
inserting 115
inserting caption (HTML table 115
inserting cells 115
inserting columns 115
inserting rows 115
merging 119
merging cells 116
moving rows and columns 115
navigating in 113, 228
pasting from other applications 120
properties 121
properties for a selection of cells 121
row properties 121
row/cell height (HTML) 121
sorting 120
sorting rows 120
splitting 119
splitting cells 115, 116
splitting table groups 119
XML model 130
tag and text color, specifying 11
tag-valid markup 103
Tags On view 9
templates 58, 59
text
finding 75
finding in an element 75
replacing 75
replacing entity references 78
replacing with entity 75
text case
changing 101
Text Case Assistant 101
text entities 122, 238
thesaurus 89, 90
data file 90
languages 90
thesaurus *(continued)*
options 90
third-party viewer 233
toolbar files 106
toolbars 16
toolbars and menus 23
files 23
locations 23
toolbars, custom 23
tooltips 55
tracking changes 91
treat-as-image 233

U

un-pin 13
Unicode 65
unpin 13
unwrapping elements 107
US-ASCII encoding 65
user word lists 84, 86
adding 86
default 86
entries 86, 87
UTF-8, UTF-16 encodings 65

V

valid markup 235
Validate Document 103
validate references 96
validating markup 103
Validation Log 103
view results 97
views 9
views, setting a default 55

W

WebDAV 62
file caching 62
opening files 62
well-formed documents 67
adding new attributes 68
adding new elements 67
well-formed markup 235
whiteboard 143, 167
windows 13
word count 96
word lists 79
main 85
user 84, 86, 87
worksheet tab
moving 62
scrolling 62
wrapping elements 107

X

XInclude attribute 241

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XIncludes
    inserting 241
XMetaL configuration file 55
XMetaL Connector 72
XMetaL Customization Guide 8
XMetaL customizations 58, 106
XMetaL Developer 8
XMetaL Programmer's Guide 8
xmetal.ini 55
XML 234
    comments 240
    declaration 65, 234
    empty elements 107, 237
XML *(continued)*
    entities 122, 238
    processing instructions 240
    references 234
    separation of content and format 234
    source editing 9
    specification 234
    version 234
    well-formed markup 235
XML table model 130
XPath
    expression 94