XMetaL® 16 Author

User's Guide

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

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.

With support for DITA topics, maps, specializations and the DITA Open Toolkit, XMetaL Author continues its support for this industry standard. Assisted authoring features including enhanced menus, toolbars, dialog boxes, and styling and editing behaviors, let you create and publish DITA content out-of-the-box.

XMetaL also provides the flexibility for integrating with any source control system, database, repository, or content management system.

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 *docs-feedback@xmetal.com*.

Copyright

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.

When you are working in a DITA document, you can view the Help topic for the current element in the DITA Language Reference through **Help** > **Help on Current Element**.

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**. A sample DITA map file is also provided.

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.

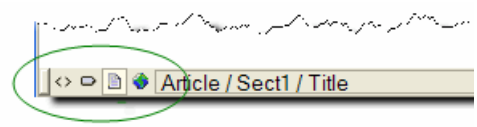
DITA references

The following DITA reference information is available through the **Help** menu:

- **XMetaL Evaluation Guide.** Covers basic information about creating DITA topics and maps as well as background information about structured authoring and the advantages of using DITA.
- **DITA Language Reference.** Describes the purpose of each DITA element and the rules associated with it. Includes usage examples.
- **DITA Architectural Specification.** The OASIS DITA specification. Describes DITA markup, processing, and specialization. Also provides background information on terminology and the DITA DTD/schema.
- **DITA Open Toolkit User Guide.** Describes the Java-based implementation of the OASIS DITA specification, including processing targets such as HTML and PDF.

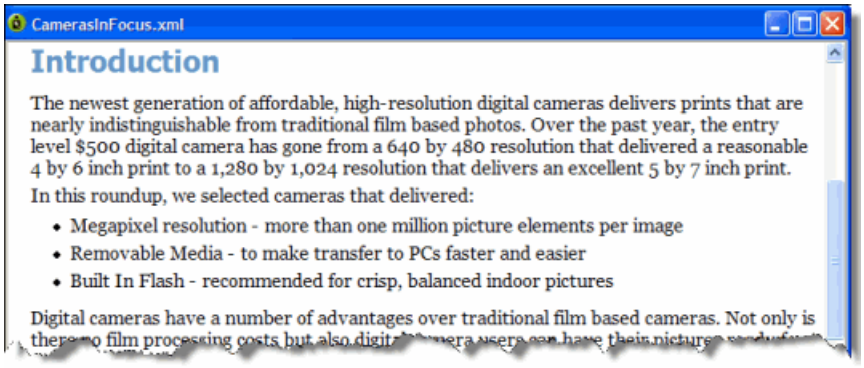
Document views

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



Normal view

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

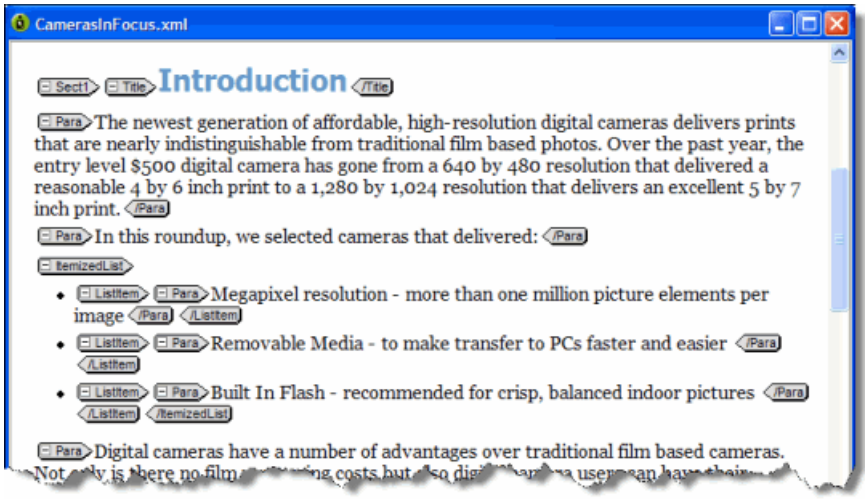


Tags On view

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

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

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



Plain Text view

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

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

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

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

Page Preview

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

Note: The default browser is Microsoft Internet Explorer.

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

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

Related Links

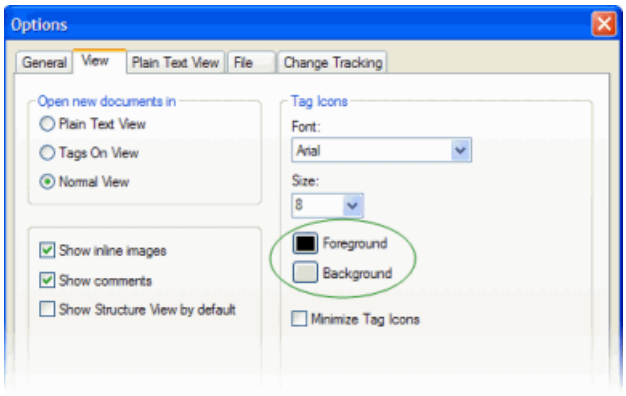
Options on page 31
You can set options through the **Tools** menu.

Inserting CDATA sections on page 105
You can insert CDATA sections using the **Insert** menu.

Authoring structured content on page 81
When you create a document instance of a DTD or Schema in Normal or Tags On view, XMetaL Author ensures that your content is valid by guiding you through the authoring process. You do not need to have a complete understanding of XML to begin authoring structured content.

Specify tag and tag text colors

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



3. Choose a color.

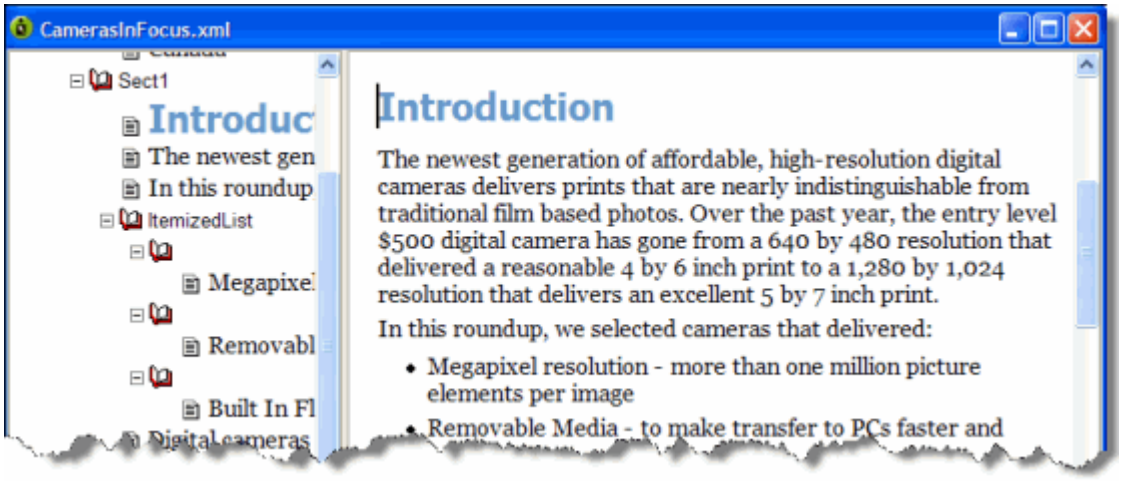
Tip: You can specify custom tag and text colors by creating a custom palette.

Structure View

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

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

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



Related Links

Customizing the user interface on page 24
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 31
You can set options through the **Tools** menu.

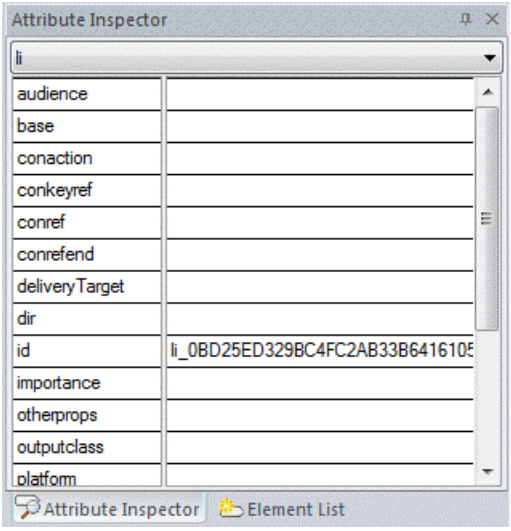
Panes

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.

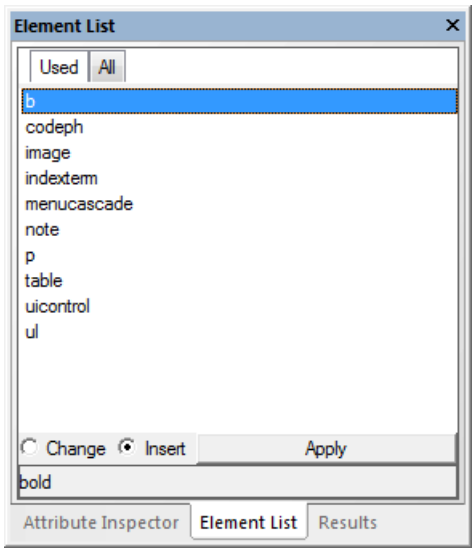
The following panes are available:

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

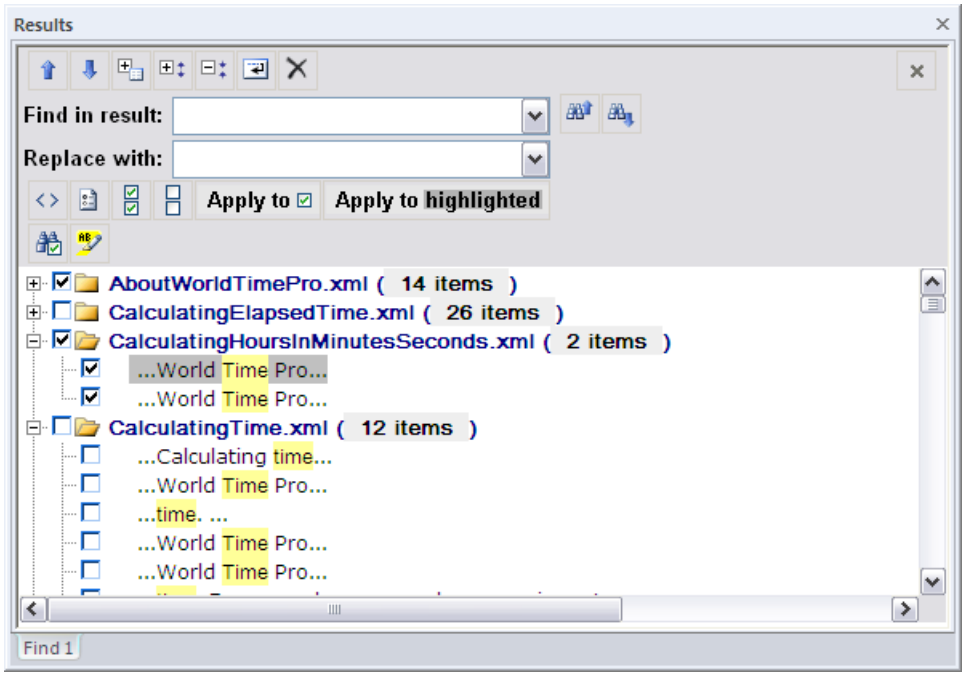


To do this	Follow these steps
Sort attributes alphabetically	1. Hover the mouse over the Attribute Inspector pane. 2. Right-click to display the action menu. 3. Select **Sort Attributes**.
Sort attributes by displaying required attributes at the top of the list NOTE: Secondary sorting is alphabetically	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 86

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 88

You can set attribute values through the Attribute Inspector or through the Edit Properties dialog.

Results pane on page 73
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 26
You can organize frequently used objects as assets through the Resource Manager. Assets can be single files, such as images, text, or markup blocks. You can drag and drop assets into your document.

Map Editor on page 119
The Map Editor lets you perform map-specific functions and edit element and map editor properties. The Map Editor is included in the Resource Manager.

Toolbars

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

Table 1: Standard toolbar

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

Button	Name	Description
	Previous Document	Makes the previous document in the list of open documents the active document
	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

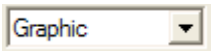
Button	Name	Description
	Style Element	Lists the elements that can be inserted at the cursor location
	Bold	Applies or inserts an element designated as bold
	Italics	Applies or inserts an element designated as italic
	Underscore	Applies or inserts an element designated as underscore
	Overline	Applies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

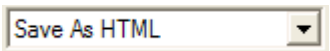
Button	Name	Description
	Insert Table	Opens the Insert Table dialog
	Edit Table Properties	Opens the Table Properties dialog
	Insert Row Above	Adds an empty row above the current row
	Insert Row Below	Adds an empty row below the current row
	Delete Row	Deletes the current row

Button	Name	Description
	Insert Column Left	Adds an empty column to the left of the current column
	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

Button	Name	Description
	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: Repository toolbar

Button	Name	Description
	New from Repository Template	Displays repository contents
	Open from Repository	Displays repository contents
	Explore Repository	Displays a search dialog
	Check In Document	Displays repository contents
	Check Out Document	Displays repository contents
	Undo Checkout	Reverts to previously saved version of the document
	Document Properties	Displays information about the current document

Table 8: 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

Button	Name	Description
	Insert Element Window	Opens (closes) the Element List
	Resource Manager	Opens (closes) the Resource Manager
	Full screen	Opens (closes) full-screen mode

Table 9: 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 26** dialog
	*Customizable*	This button can be customized in the ***Set customizable buttons in Whiteboard toolbar*** **on page 26** dialog
	*Customizable*	This button can be customized in the ***Set customizable buttons in Whiteboard toolbar*** **on page 26** dialog
	*Customizable*	This button can be customized in the ***Set customizable buttons in Whiteboard toolbar*** **on page 26** 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 42

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 104

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 24

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

Display mode

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

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

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

Licensing

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

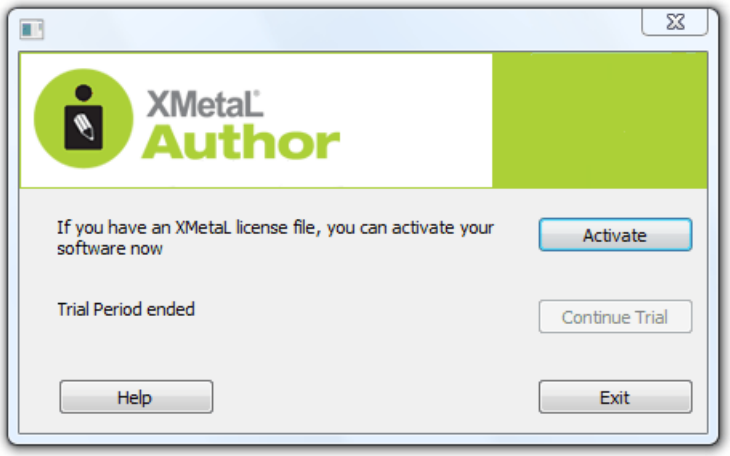
You can view/edit your licensing information by clicking **Help** > **Licensing**. The following fields will be displayed:

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

Activating XMetaL Author

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

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



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

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

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

Removing XMetaL Author License

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

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

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

Access Key

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

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

Customizing the user interface

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

Related Links

Specify tag and tag text colors on page 11

Spell checker options on page 56

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 64

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 66

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

XMetaL customizations on page 84

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*.

Options on page 31

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

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 84

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.

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 84
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 91
You can insert images into your documents if your XMetaL customization recognizes elements in your DTD or Schema as image elements, or if you are using DITA.

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.

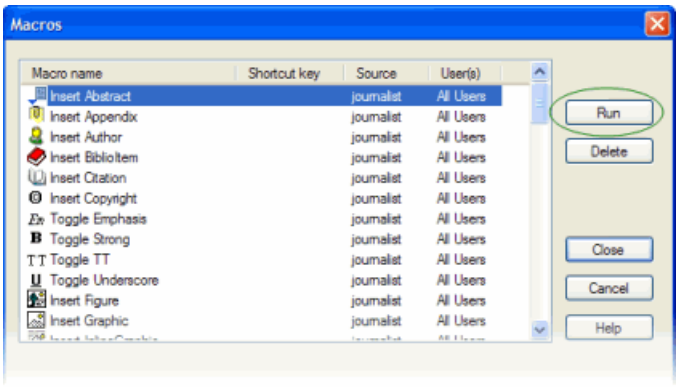
To do this	Follow these steps
Run a macro	Click **Tools** > **Macros**. Then select a macro and click **Run**.

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.



Related Links

XMetaL customizations on page 84

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

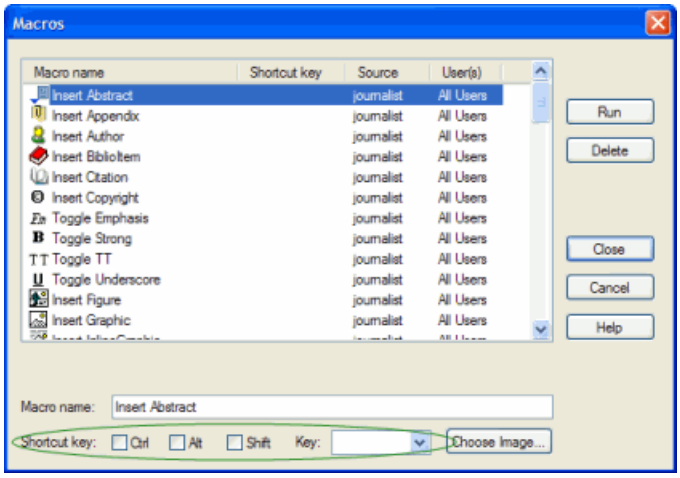
Note: Recording is limited to keyboard actions only.

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.

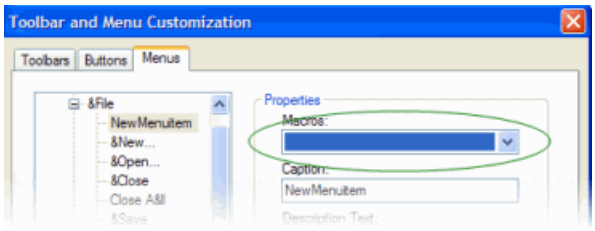


Associate a macro with a toolbar button

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.



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 10: 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 typing' option is recommended when bi-directional text is enabled.
Check for new version	Checks for new version of XMetaL during program launch.
Only check for updates	Only checks for update for the installed version, but not for newer major version.

Table 11: 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 12: 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 13: File options

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

Table 14: 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 15: 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
Animate "auto-hide" docking panes	Turns animations on when these panes are unpinned

Table 16: 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 56

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 66

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

XMetaL customizations on page 84

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*.

DITA options on page 167

You can control DITA behaviors using the settings in the DITA Options dialog box. Options can be set for all specializations or on a per-specialization basis.

Managing documents

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

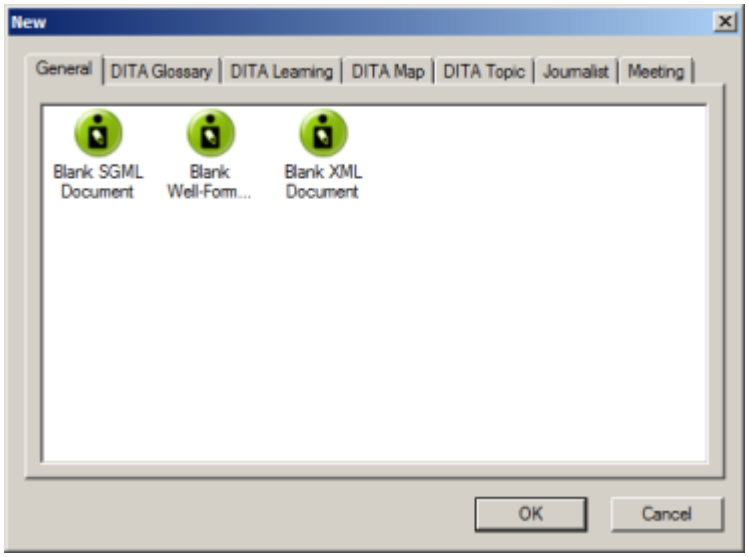
Creating documents

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

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

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

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



Related Links

Options on page 31
You can set options through the **Tools** menu.

XMetaL customizations on page 84
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Templates

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

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

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

Related Links

XMetaL customizations on page 84
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Create a template

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

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

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

Related Links

Working with elements on page 86
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**.

Create a specialization template on page 166
Once you have configured and re-started XMetaL, you can create a template so that authors can create new documents using your specialization.

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 21
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 104
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 84

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.

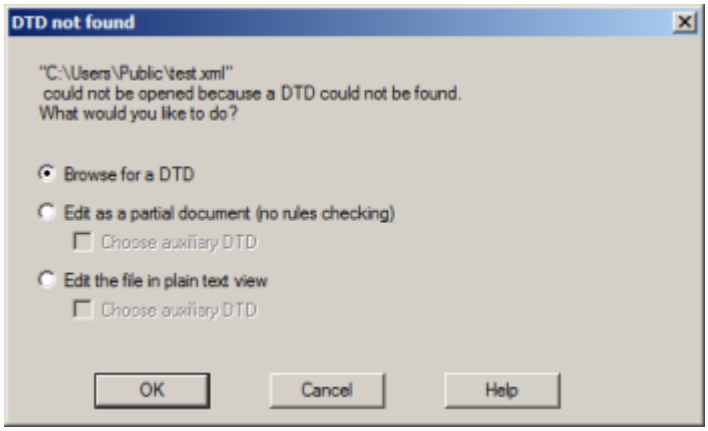
XMetaL may not be able to locate the DTD for any of the following reasons:

- Your document contains no document type declaration.
- There are no entries in the catalog or map files 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 or map file. (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 81

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 84

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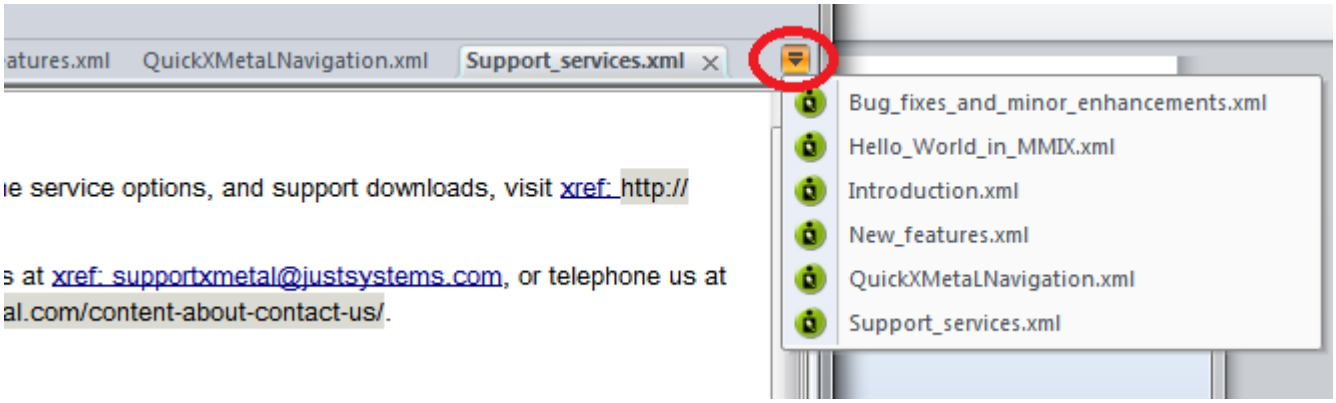
Managing open documents

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

Moving between open documents

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

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



Moving worksheet tabs

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

Scrolling through worksheet tabs

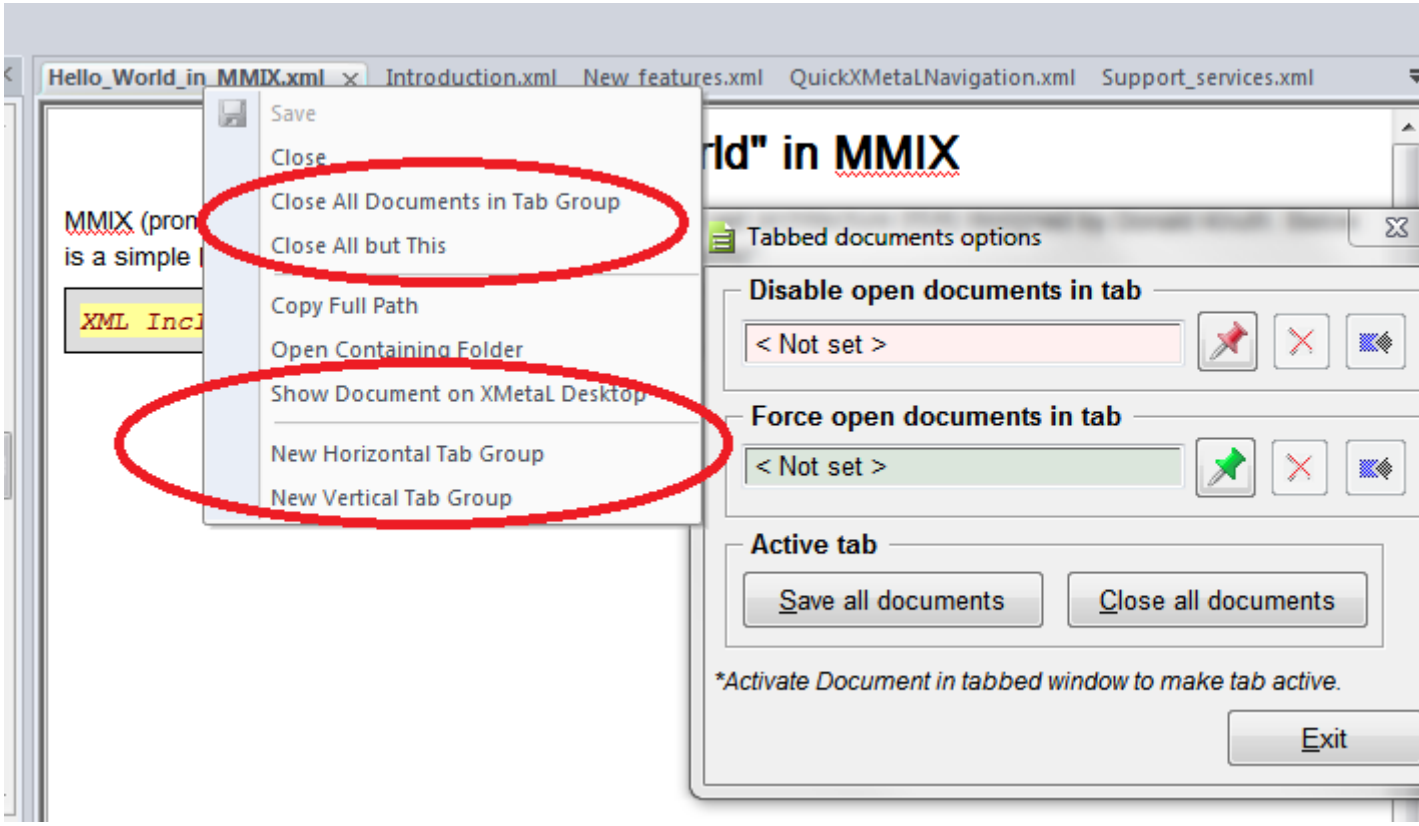
If more window tabs are open than can be displayed in the editing pane, you can use the arrows at the top-right of the editing pane to scroll through the windows.

Working with tab groups

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

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

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



Viewing documents and document folders outside XMetaL

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

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

Saving documents

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

Save one or all documents from the main menu:

To do this	Click this
Save a document	**File** > **Save**
Save a document under a different name or in a different location	**File** > **Save As** In the **Save As** dialog, users can find and filter content. File navigation options are available in the **Save As** dialog to enable file navigation options such as: • **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**.

File naming recommendations

If you are publishing your documents using the DITA Open Toolkit, you are advised to restrict your filenames to the following characters:

- a-z
- A-Z
- 0-9
- - (hyphen)
- _ (underscore)

Related Links

Options on page 31
You can set options through the **Tools** menu.

Special characters and symbols on page 104
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 81
When you create a document instance of a DTD or Schema in Normal or Tags On view, XMetaL Author ensures that your content is valid by guiding you through the authoring process. You do not need to have a complete understanding of XML to begin authoring structured content.

Character encoding

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

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

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

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

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

Table 17: 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

Encoding Type	Strings
	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 104

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

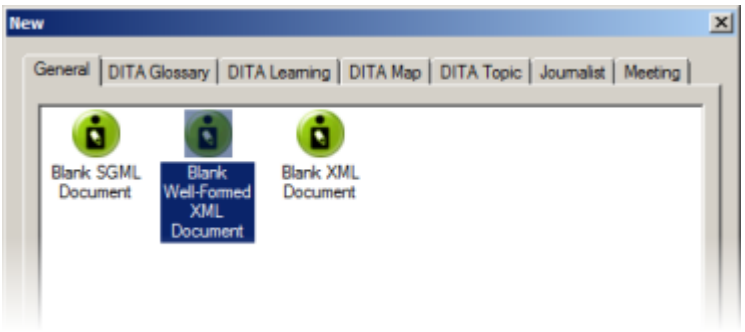
Creating well-formed XML documents

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

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

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

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

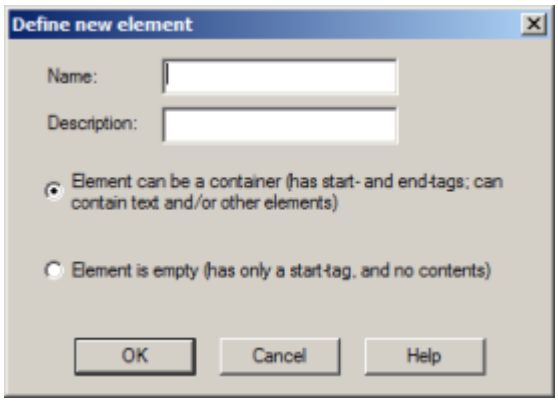


Defining an element

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

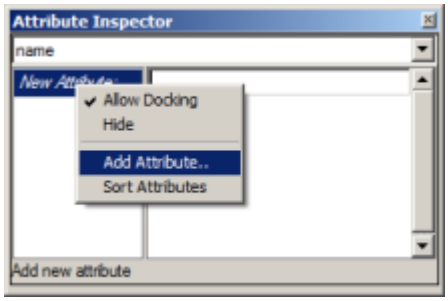
   The description will appear at the bottom of the Element List when the element is selected.
4. Choose an option:

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



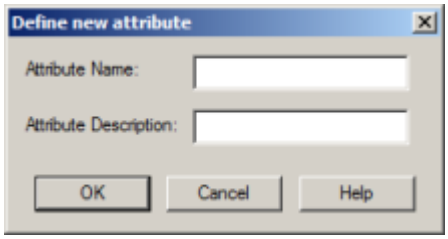
Defining an attribute

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



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

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



Inline attribute editor

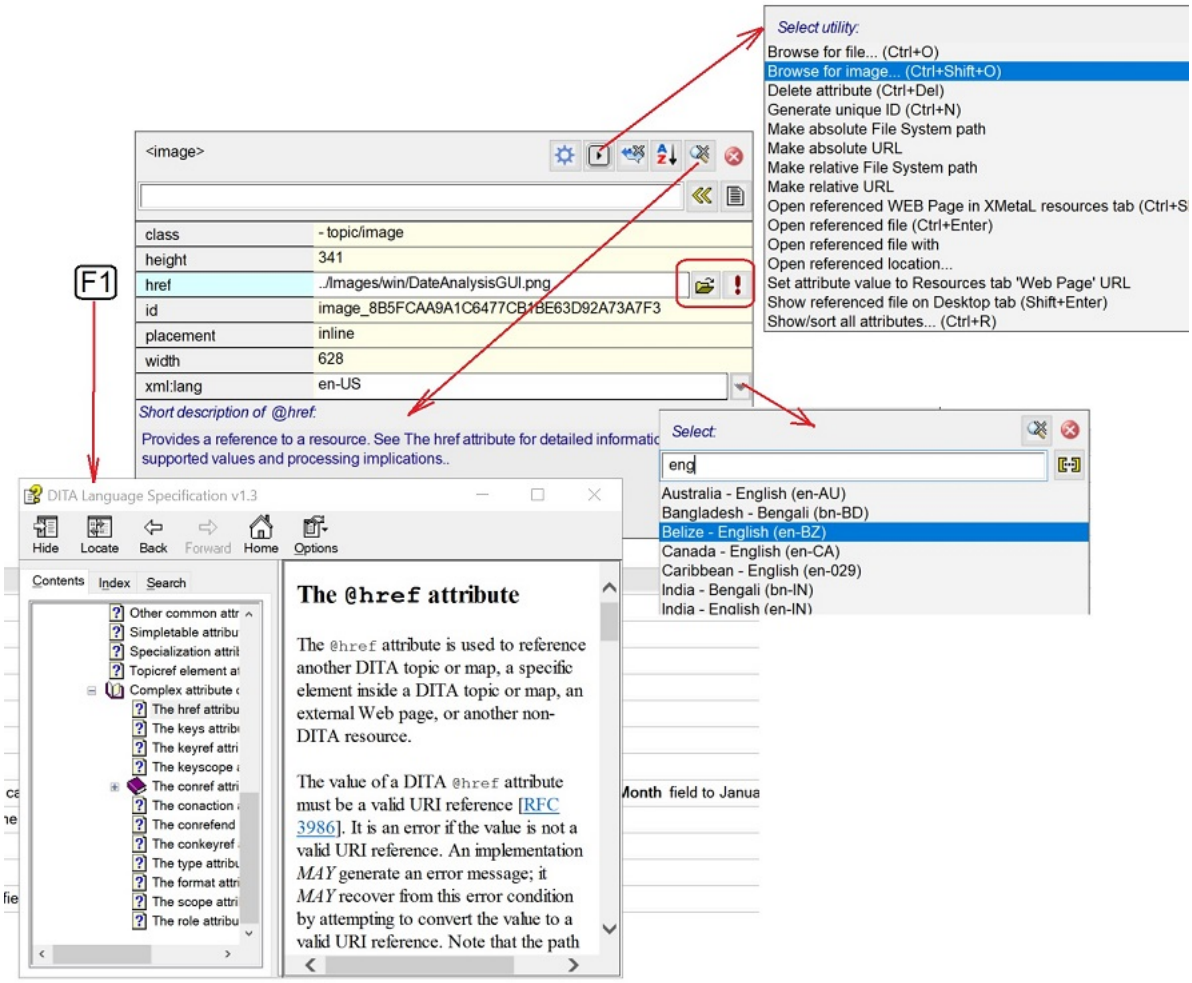
The inline attribute editor allows users to edit attributes in the element that is under the cursor. All actions can be completed via keyboard only.

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

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

Users can also:

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



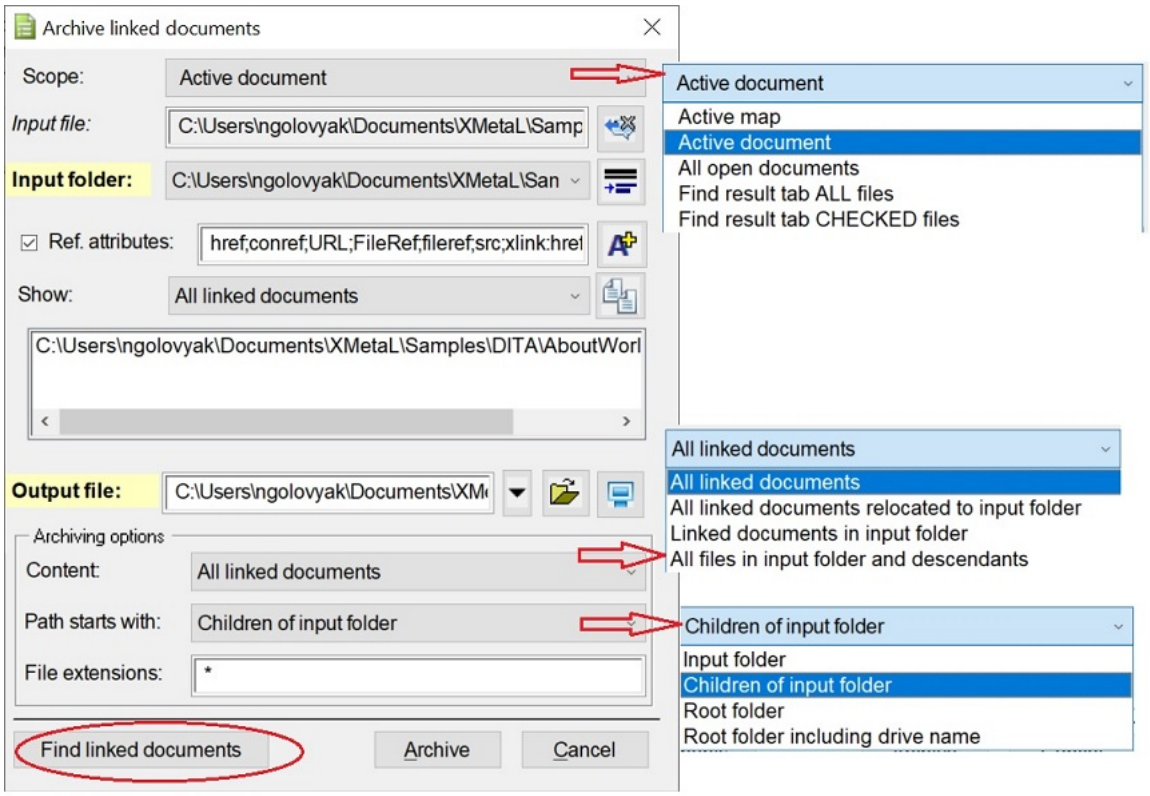
Archiving linked documents

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

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

To do this	Do this
Set the scope of the archive	Click the **Scope** field and select the scope from the available options.
Find linked documents	Click the **Find linked documents** button.
Set reference attributes	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.

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 18: 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**	

Note: When you open a DITA-based repository map file, you have the option of downloading all referenced components (for example, reusable components). You may wish to do this in order to improve performance.

Adapter configuration file

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

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

Related Links

Toolbars on page 16

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

Editing documents

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

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

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

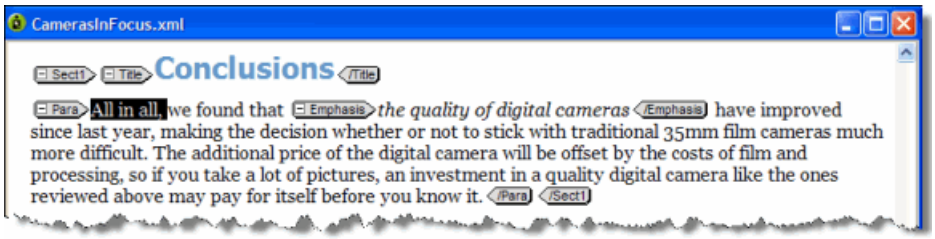
Note: You cannot delete a selection if it includes required elements, and you cannot paste a selection that would cause the markup to become invalid.

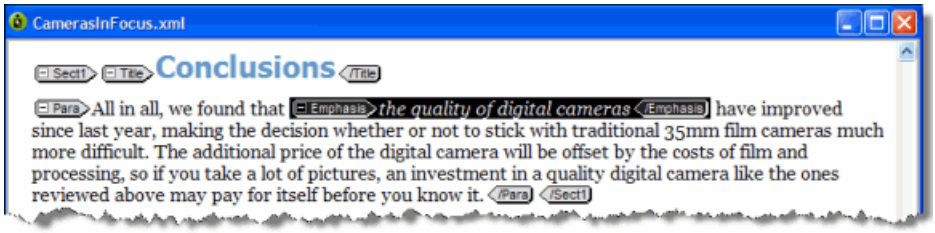
Selecting tags and text

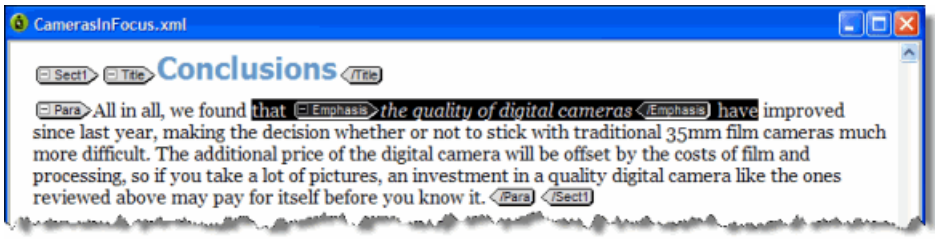
Selection behavior is similar to that in word processors, but selection rules prevent you from creating an invalid document. If you select a start (or end) tag, your selection is extended to include the corresponding end (or start) tag and all of the text in between.

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

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







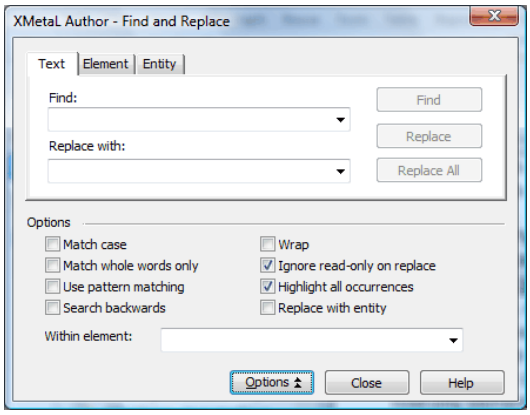
Finding and replacing text

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

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

Choose from the following search options:

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



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

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

Related Links

Finding and replacing across files on page 68

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 (.).

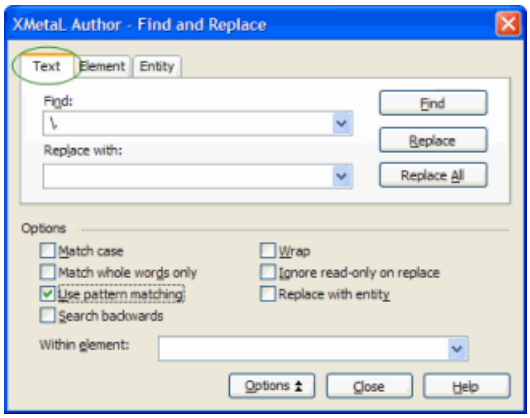


Table 19: Pattern summary

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”

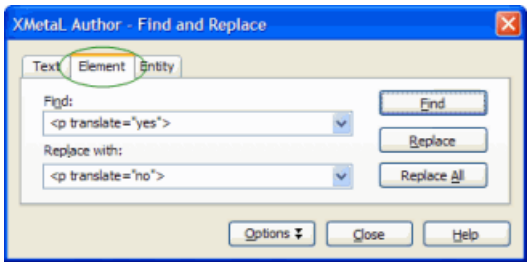
Finding and replacing elements

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.

Removing an attribute

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

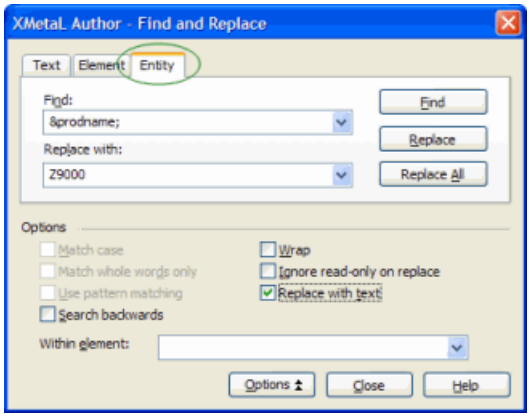
- Delete the attribute value in the Attribute Inspector. If the value is currently set to an empty string, enter a new temporary value, press Enter, and then delete the value.
- Switch to Plain Text view and modify the source.

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 55
You can check your spelling using the spell checker.

Using the background spell checker on page 59
You can check your spelling as you write using background spell-checking.

Main word lists on page 61
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 62
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

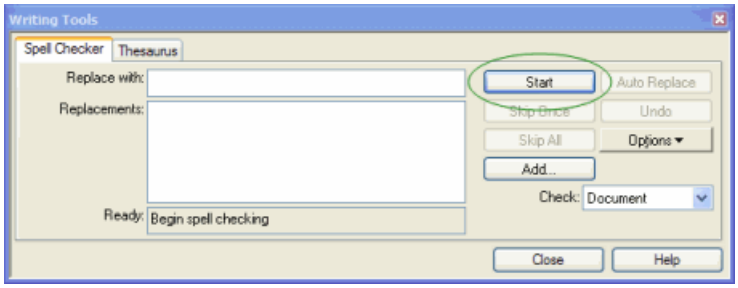
You can check your spelling using the spell checker.

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 61
- *User word lists* on page 62

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

Related Links

Using the background spell checker on page 59
You can check your spelling as you write using background spell-checking.

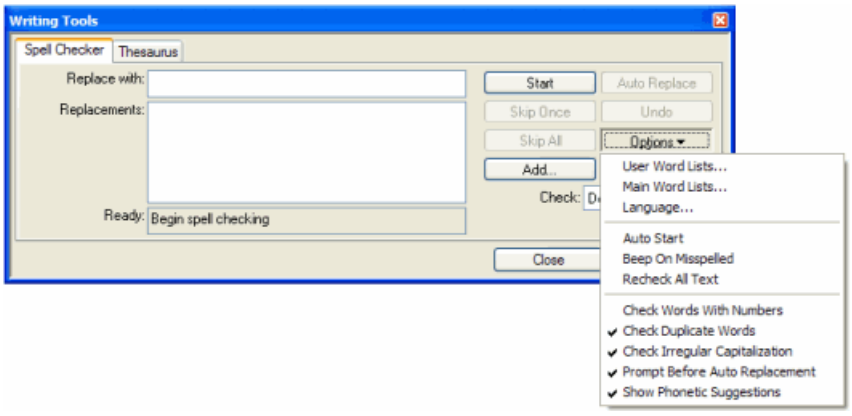
Main word lists on page 61
Main word lists are the built-in word lists for a given language. The default main word list is determined by the language you select. You can use more than one main word list to check your document.

User word lists on page 62
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 20: 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

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 60
Background spell-checking can be turned on or off. The change affects all documents.

Automatically correcting spelling on page 60

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 60
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 60
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 60
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 60
Background spell-checking can be turned on or off. The change affects all documents.

Manually correcting spelling on page 60
You can manually correct misspelled words with words from the main word list and user word lists.

Main word lists on page 61
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 62
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 60
You can set up XMetaL to automatically correct misspelled words that are similar to words in the main word list or user word lists. This feature is triggered for an individual word only when the spacebar is pressed immediately after that word.

Turning on background spell-checking on page 60
Background spell-checking can be turned on or off. The change affects all documents.

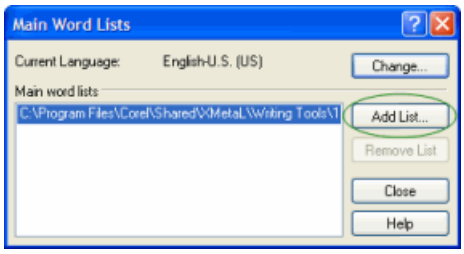
Main word lists on page 61
Main word lists are the built-in word lists for a given language. The default main word list is determined by the language you select. You can use more than one main word list to check your document.

User word lists on page 62
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 55
You can check your spelling using the spell checker.

Using the background spell checker on page 59
You can check your spelling as you write using background spell-checking.

User word lists on page 62
User word lists are unique to your XMetaL Author setup or document. You can add words to your user word list and tell Spell Checker to skip them, replace them with a different word, or suggest alternatives for them.

User word lists

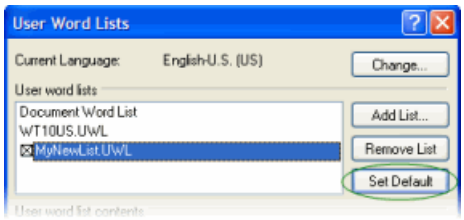
User word lists are unique to your XMetaL Author setup or document. You can add words to your user word list and tell Spell Checker to skip them, replace them with a different word, or suggest alternatives for them.

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

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

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

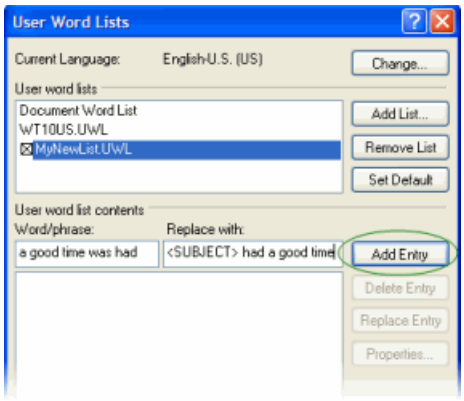
Note: When you ignore a word during spell checking by clicking **Skip All**, that word is added to the document user word list.



Adding an entry

To add an entry to the user word list:

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



Related Links

Deleting an entry on page 63
Changing the replacement text for an entry on page 63
Changing an entry on page 63

Deleting an entry

To delete an entry in a user word list:

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

Changing the replacement text for an entry

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

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

Changing an entry

To change an entry in a user word list:

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

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

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

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

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

Language settings

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

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

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

Related Links

Checking your spelling on page 54
You can check your spelling using the spell checker or as you write by using background spellchecking.

Using the thesaurus on page 65
You can look up a word and display synonyms, antonyms, and other related information using the thesaurus.

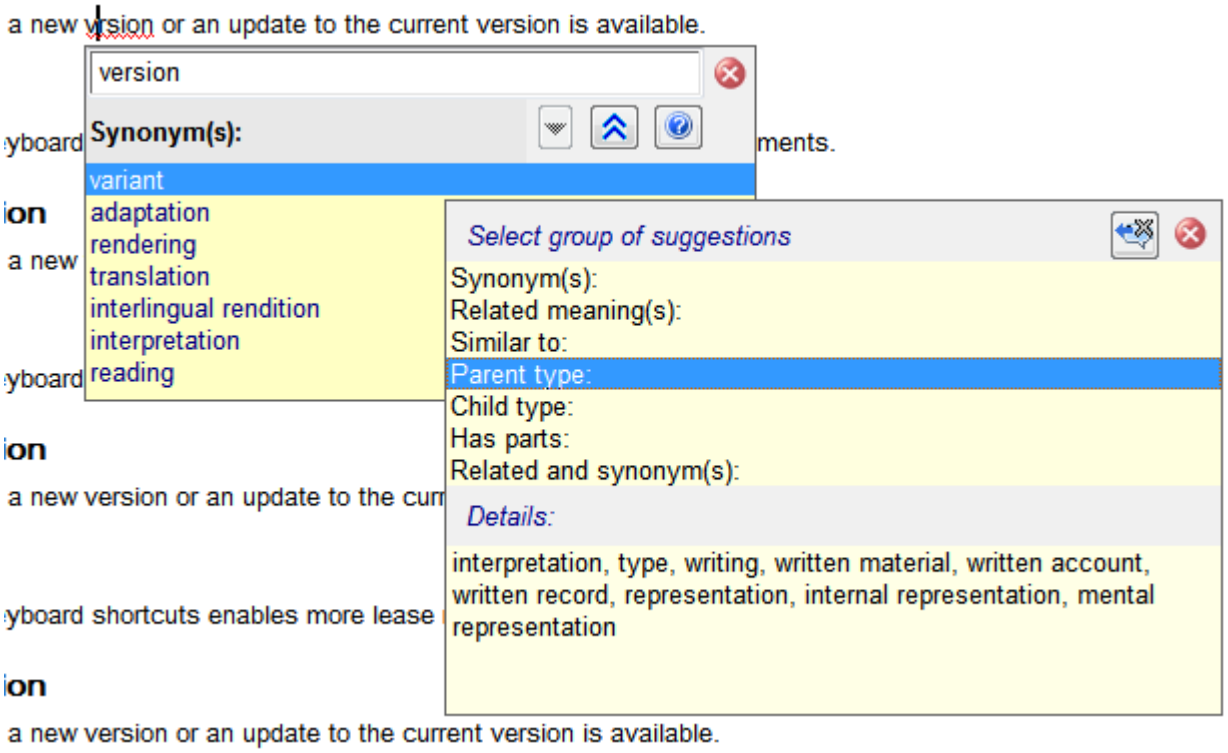
Checking a selected word's spelling and synonyms

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.

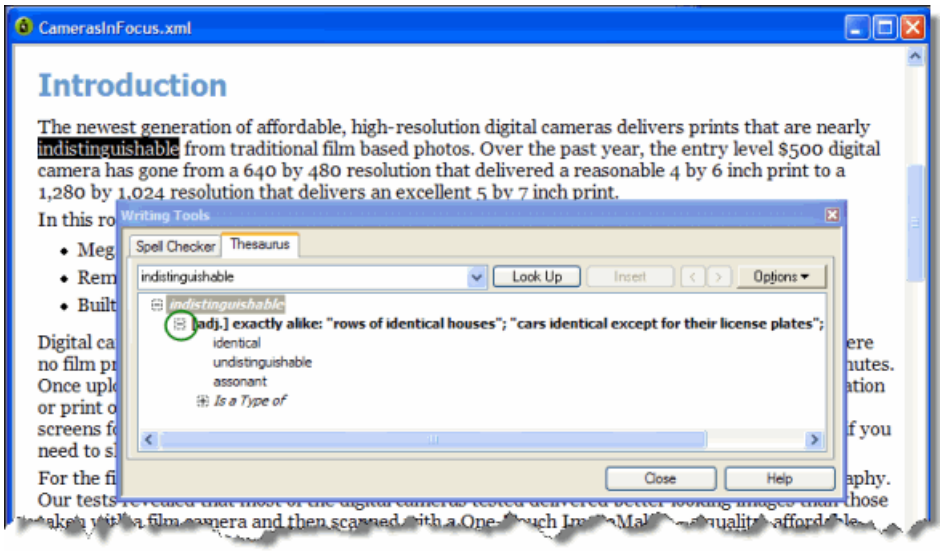
  You can navigate forward and backward between the lists of proposed words. Every related word can have its own list of related words, and it's possible to return back or move forward in the search chain.



Using the thesaurus

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

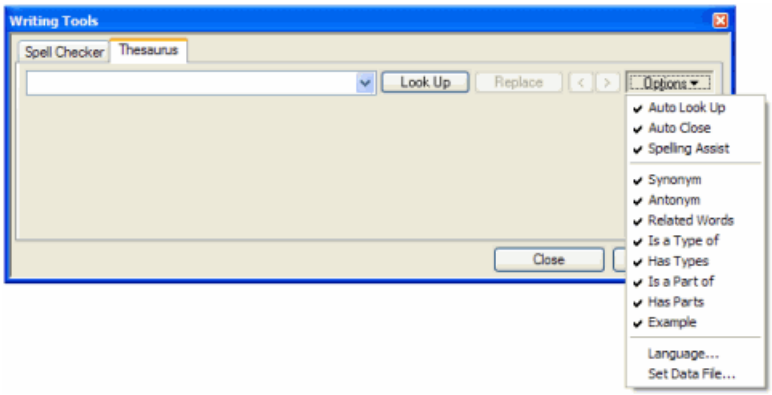
To do this	Follow these steps
Replace a word using the thesaurus	Select a word in your document, click **Tools** > **Thesaurus**, and click **Look Up**. Expand the desired definition to display a list of synonyms and other words. Choose a word and click **Replace**.
Insert a word from the thesaurus	Look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



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.

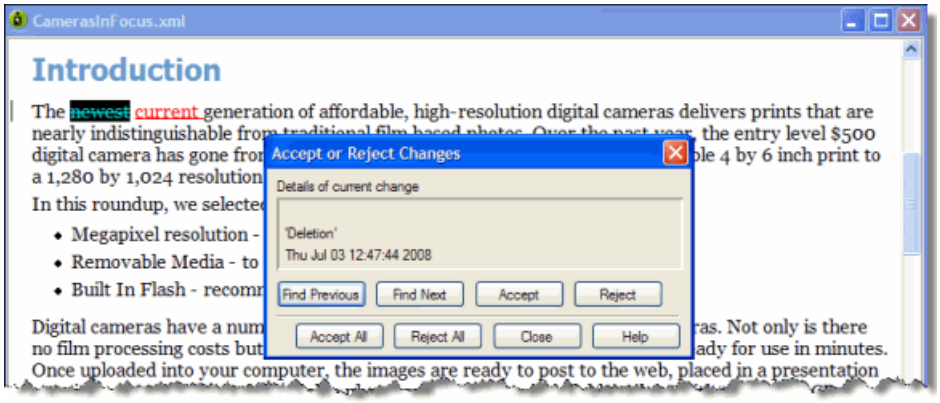
To do this	Follow these steps
Turn on (off) track changes	Click **Tools** > **Track Changes**
Scroll through changes	Click **Tools** > **Accept or Reject Changes**. Then click **Find previous** (**Find next**).
Accept (reject) all changes	Click **Tools** > **Accept or Reject Changes**. Then click **Accept 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 31

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.

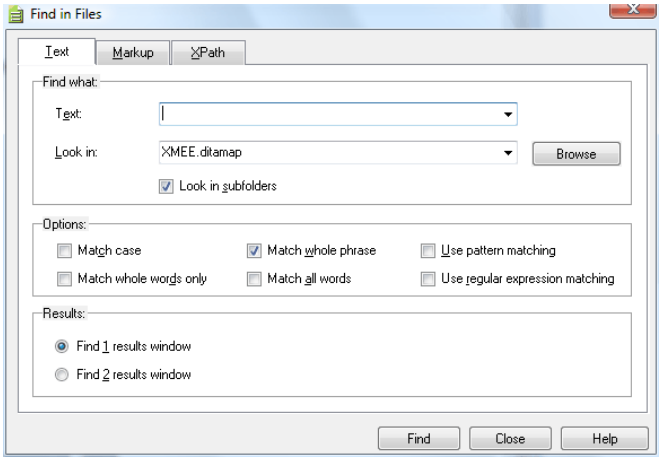
You can search for text, markup, and XPath expressions with the **Find in Files** feature. The results will be displayed in the **Results** pane. The results will be sorted alphabetically by filename. You can remove, select, highlight and replace results, as well as perform new searches on the results.

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 or Map Editor. 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 (topic and map files) that are currently open
   - **Current Document** - searches the topic file you have currently open
   - [currently active map file] - searches all files in the currently active map file in the Map Editor (the name of the map is displayed in the drop-down list)
   - **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 52
   - **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 51
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.

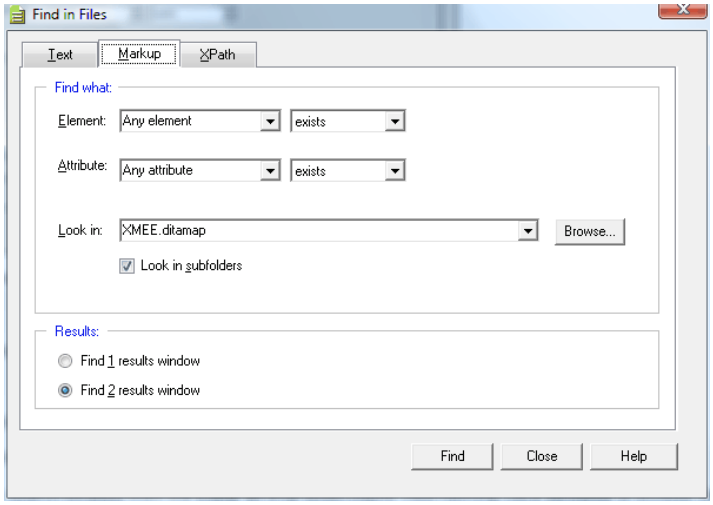
Find markup across files on page 69
You can search for occurrences of specific elements or attributes across files.

Find markup using XPath expressions on page 70
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.



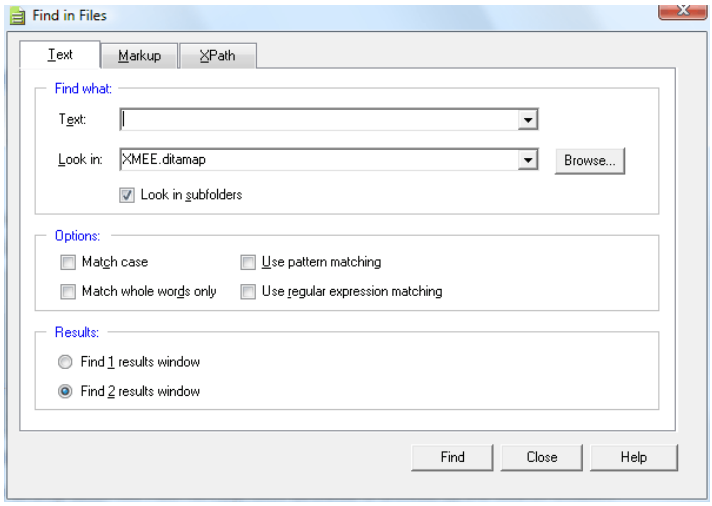
2. Click the **Markup** tab.

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

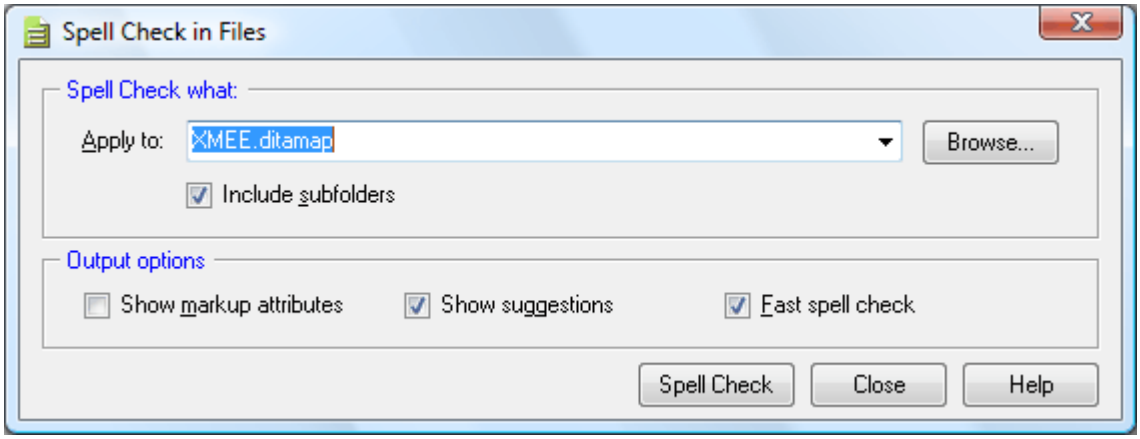
W3C Schools XPath Tutorial

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 or map file you want to spell check.

To do this:

1. Click **Tools** > **Spell Check in Files**.



2. Enter the name of the folder or map file 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 72.
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:
   - 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**

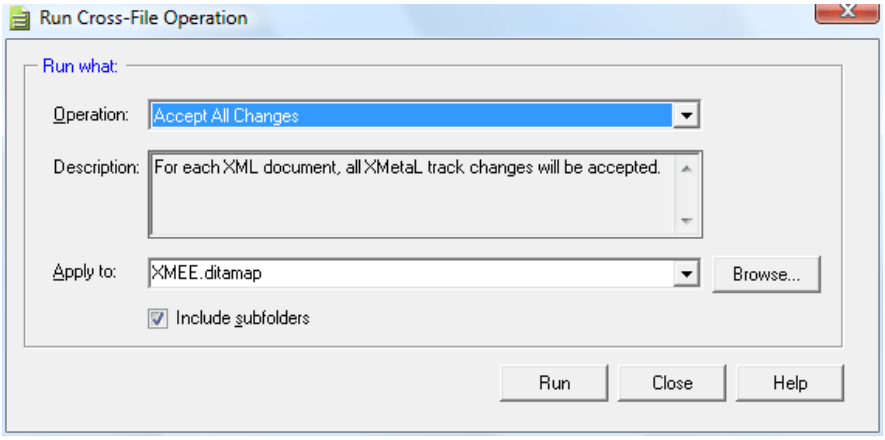
The Run Cross-File Operation feature allows you to run the chosen cross-file operations:

- **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 and map files) that are currently open
- **Current Document** - searches the topic file you have currently open

- [currently active map file] - searches all files in the currently active map file in the Map Editor (the name of the map is displayed in the drop-down list)
- 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

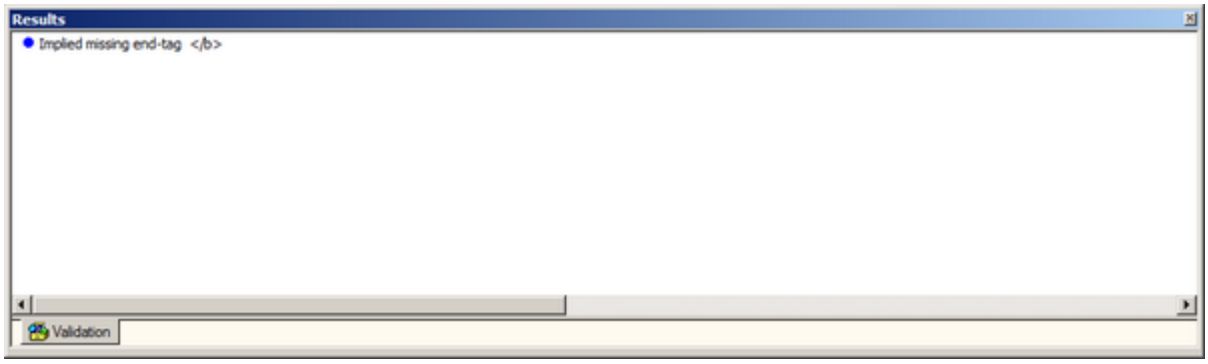
The Results pane displays the results of cross-file operations, such as the Find in Files feature, and error-reporting features, such as the Validation Log.

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**

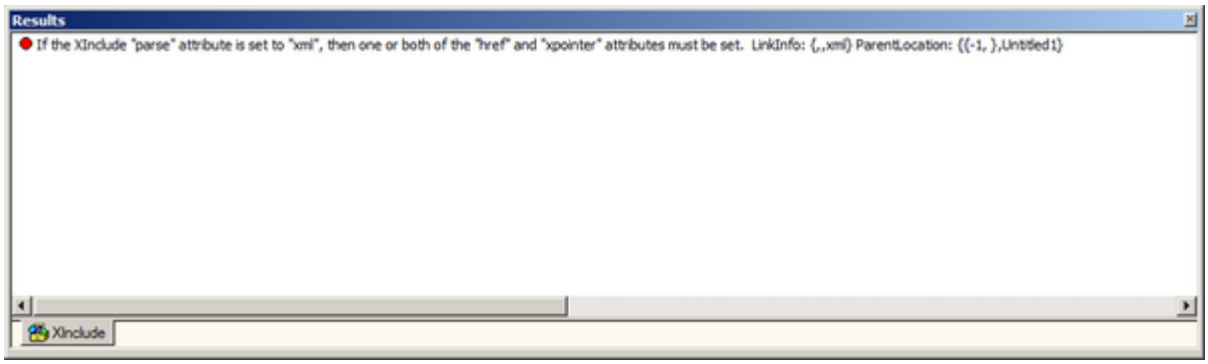
To do this	Follow these steps
Show Reference Checking	Click **View** > **Results > Reference Checking**
Show Topic References	Click **View** > **Results > Topic References**
Show Key References	Click **View** > **Results > Key References**
Show Cross-File Operation results	Click **View** > **Results > Cross-File Operation**

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

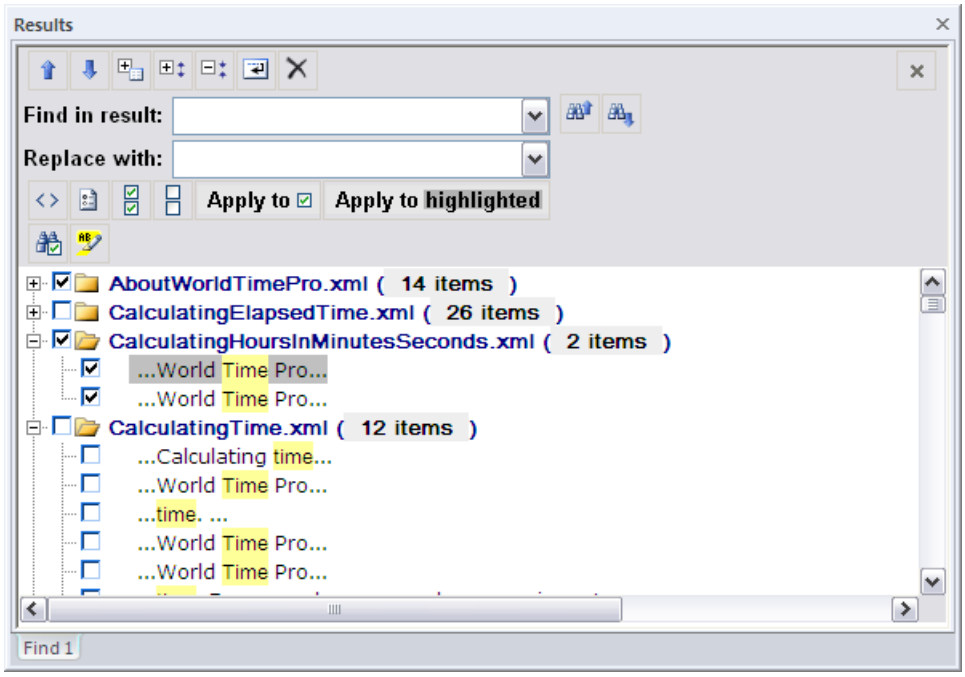
- **Validation** - Lists markup errors



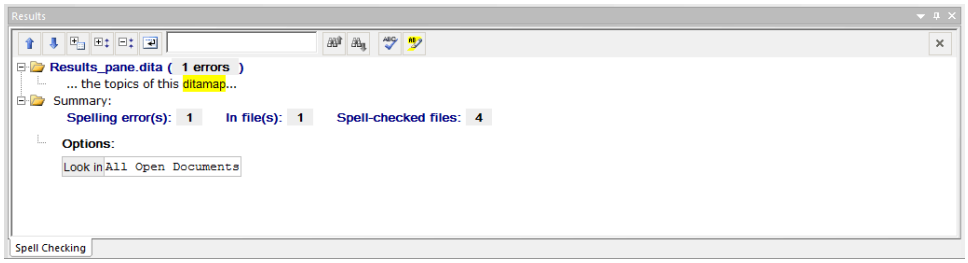
- **XInclude** - Displays XML inclusion link errors



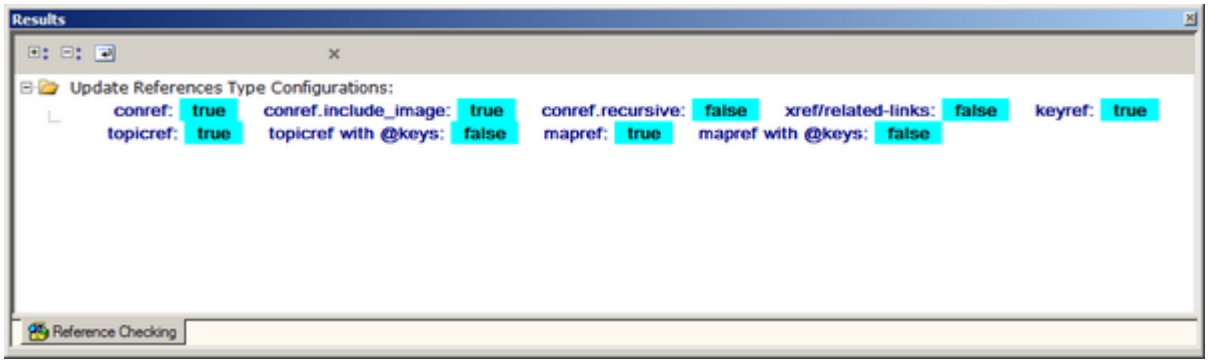
- **Find 1 and 2** - Lists search results for the **Find in Files** feature



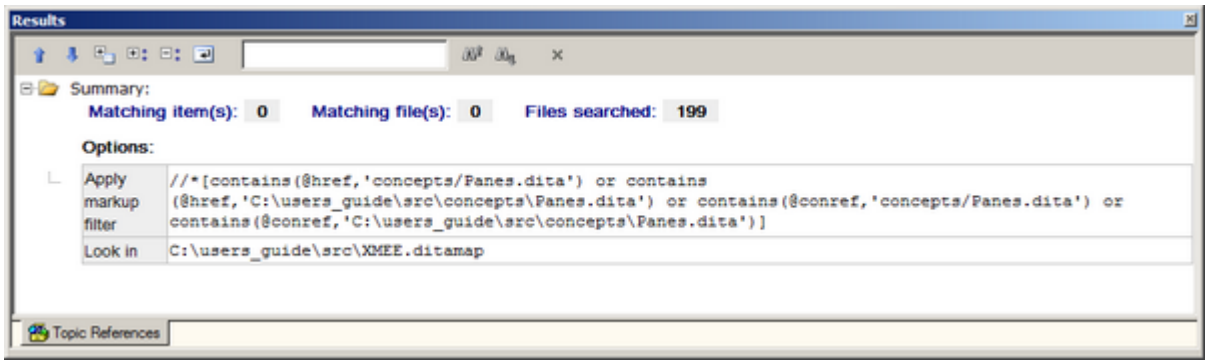
- **Spell Checking -** Lists all spelling errors



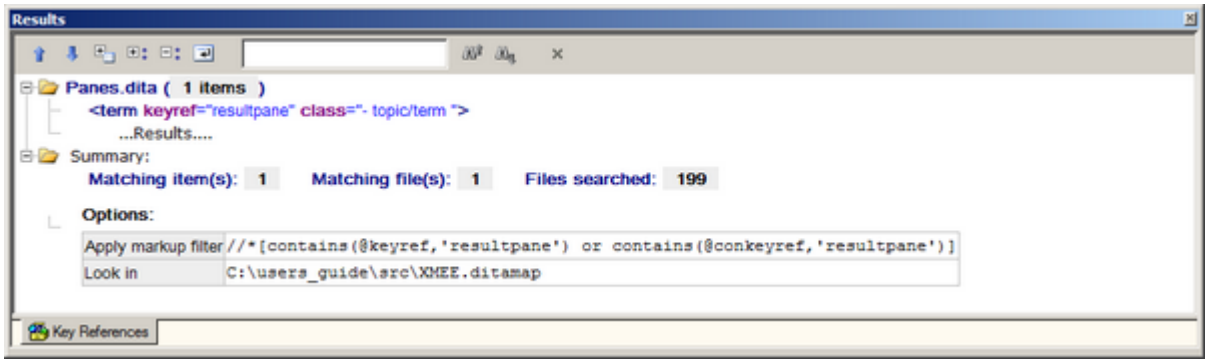
- **Cross-File Operation** - Lists results for the **Run Cross-File Operation** feature
  - **Accept All Changes** - For each XML document, all XMetaL track changes will be accepted
  - **Detect Duplicate Ids** - Look for duplicate occurrences of ID attribute values within each document
  - **Validate Cross References** - For each XML document, check for broken references
  - **Word Count** - Count all the words in all the topics of this ditamap
- **Reference Checking** - Checks the status of references



- **Topic References** - List results for **Find References to Topic**



- **Key References** - Lists results for **Find References to Keys**



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 21: 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)

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

Table 22: 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

Button	Name	Description
	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 23: Actions specific to Spell Check in Files

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

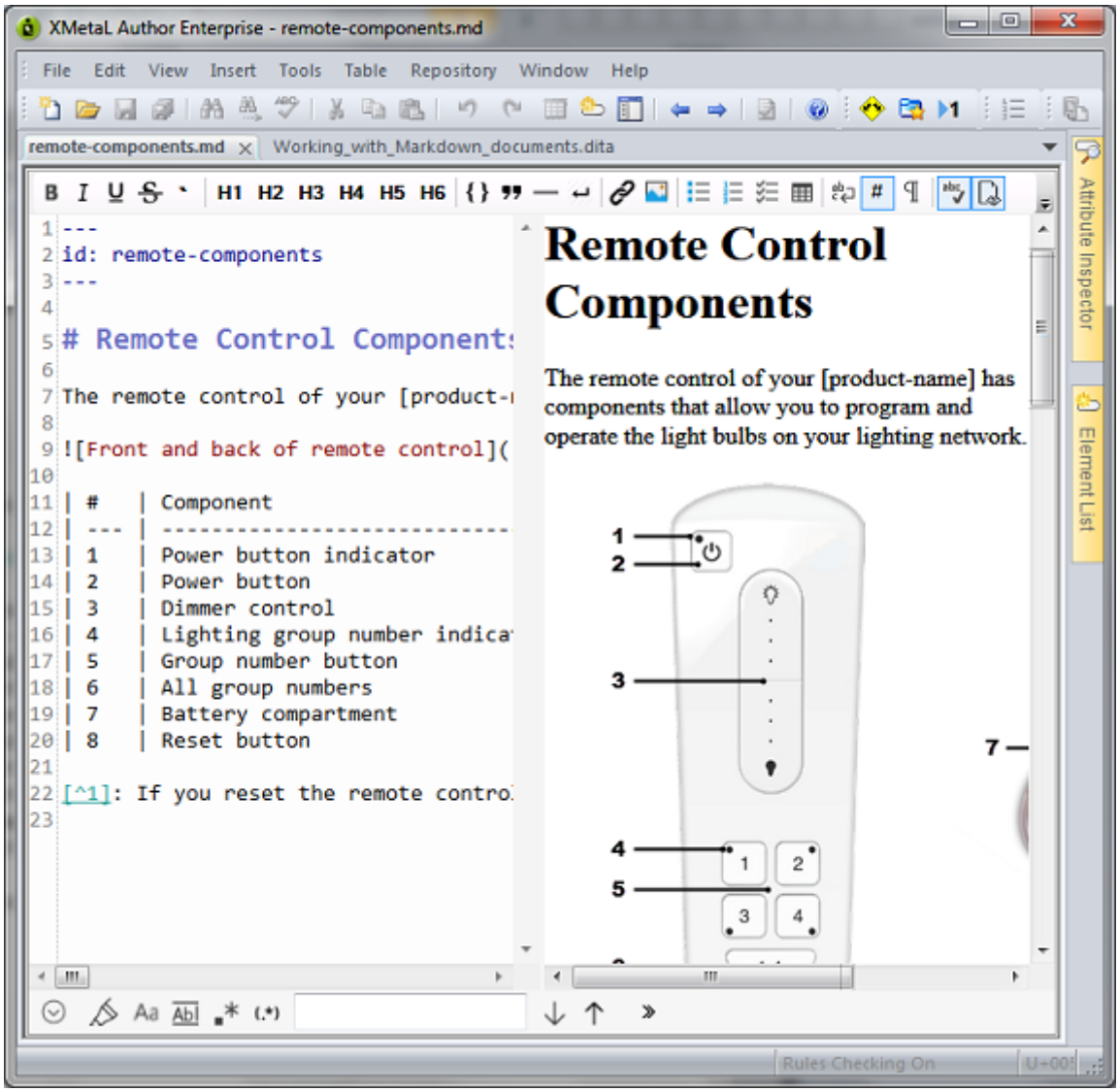
     Note: For this change to take effect, a system restart is required.
4. The trigger is, by default, **Ctrl + F3**. This trigger key can be edited in the Trigger section by selecting a keyboard trigger from the list.
5. Click **OK** to save changes.

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.


XMetaL Author Enterprise - remote-components.md
File Edit View Insert Tools Table Repository Window Help
remote-components.md
Working_with_Markdown_documents.dita
H1 H2 H3 H4 H5 H6
---
id: remote-components

Remote Control Component
The remote control of your [product-
![Front and back of remote control](
#	Component
1	Power button indicator
2	Power button
3	Dimmer control
4	Lighting group number indica
5	Group number button
6	All group numbers
7	Battery compartment
8	Reset button
[^1]: If you reset the remote contro
Remote Control Components
The remote control of your [product-name] has components that allow you to program and operate the light bulbs on your lighting network.
1
2
3
4
5
7
Attribute Inspector
Element List
Rules Checking On

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.
- You are prevented from applying a condition on elements that are required by your DTD or Schema.

Related Links

Appendix A: XML basics on page 192

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

Validation and rules checking

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

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

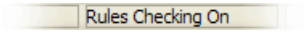
Validation occurs automatically when you save your document or when you switch from Plain Text view to Normal or Tags On view. You can validate an entire document, or you can select a selection of your document to validate. Errors are displayed in the Validation Log.

Validation checks that the following conditions have been met:

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

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

Rules checking occurs in Normal and Tags On views only.



Validation using Schematron

The Schematron differs in basic concept from other schema languages in that it 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 24: Global Parameters

Option	Description
Pass through non-Schematron elements	Please refer to *http://www.schematron.com* for more details.

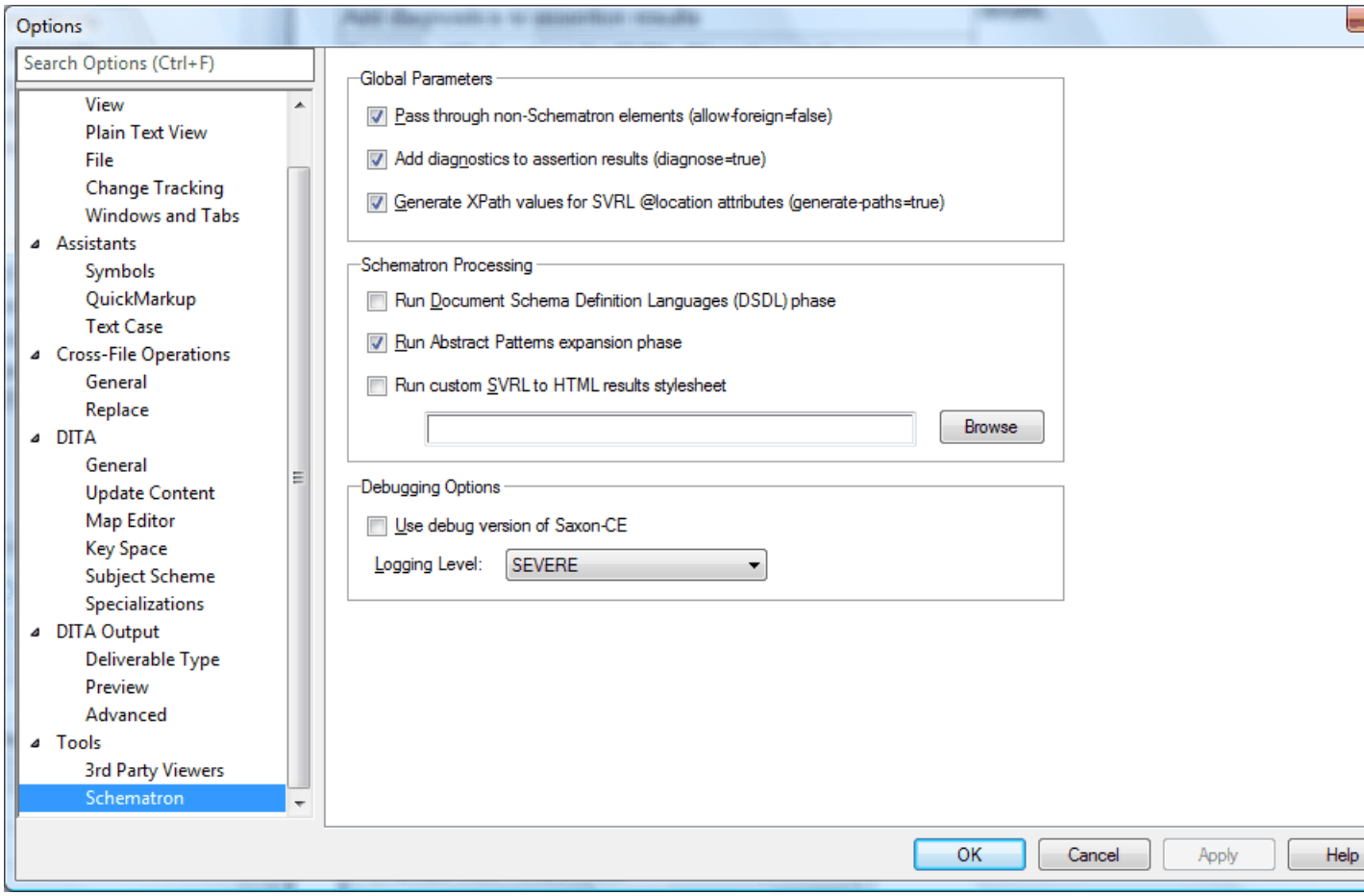
Option	Description
Add diagnostics to assertion results	
Generate XPath values for SVRL @location attributes	

Table 25: 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 26: 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.



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 27: 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 24
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 27
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 31
You can set options through the **Tools** menu.

Creating documents on page 34

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 91
You can insert images into your documents if your XMetaL customization recognizes elements in your DTD or Schema as image elements, or if you are using DITA.

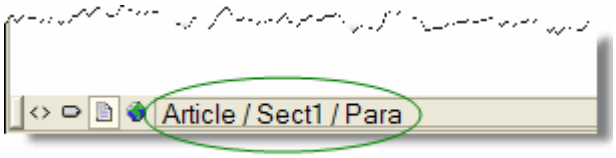
Working with elements

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
Insert an element (DITA only)	Click the **Insert** menu and select an element
Insert an inline element (DITA only)	Click **Insert** > **Inline Element** and select an element type
Change an element	In the Element List, click the **Change** option, select an element and click **Apply**
Split an element	Click **Edit** > **Split Element** or press Enter
Join two adjacent elements	Click **Edit** > **Join Element to Preceding**
Remove tags (Unwrap an element)	Click **Edit** > **Remove Tags**

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

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



Elements are categorized as follows:

- **Block elements.** These elements are preceded by and followed by line breaks, such as <Para> in the Journalist DTD.
- **Inline elements.** These elements are not preceded or followed by line breaks. They are often used for typeface modifications, such as <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**.

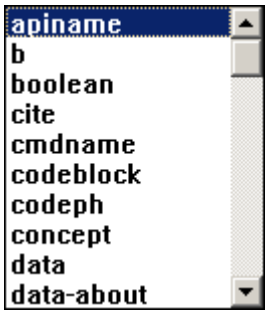
Creating well-formed XML documents on page 43
When you create a blank well-formed XML document, you must define elements and attributes before you can create content. Because the document is not based on a DTD or Schema no rules checking or validation occurs.

Keyboard shortcuts on page 174
Shortcut keys for menu commands are indicated in the menus. All menus, menu items, and dialog box controls are accessible by pressing the Alt key and the underlined letter (also called an access key or mnemonic) associated with that control. XMetaL Author also supports shortcut keys for window and dialog box navigation and other functions.

In-place, look-ahead element list

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

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



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

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

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

   The Options dialog box opens.
2. Under **Assistants**, select **QuickMarkup**.
3. In the **Display** section, customize the following display properties of the list:
   - **Width** - edit the width of the list
   - **Height** - edit the height of the list
   - **Position** - select whether the list appear above or below the cursor
   - **Depth** - select the number of container levels of valid elements that are displayed
   - **Include table elements** - include table-specific elements in the list
4. In the **Insert Action** section, select the action to be taken when inserting an element.
   - **Element-only** - XMetaL inserts only the selected quick-insert element
   - **Using mini-template** - XMetaL inserts the element using the mini-template defined in the customization (.ctm) file used to customize XMetaL for the DTD
   - **With required elements** - XMetaL analyzes the DTD or XSD and, based on the selected quick-insert element, inserts any additional elements that are required to make the document valid in that area of insertion
5. In the **Trigger** section, customize which CTRL+ keyboard combination opens the in-place, look-ahead element list.
6. Click **OK** to save changes.

Setting attribute values

You can set attribute values through the Attribute Inspector or through the Edit Properties dialog.

To do this	Follow these steps
Set an attribute value for an element	In the **Attribute Inspector**, type or select an attribute value
Set an attribute value for an element (DITA only)	Click **Edit** > **Element Properties**

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 31
You can set options through the **Tools** menu.

Displaying referenced content on page 140
When you open a file, referenced content is displayed according to the refresh preferences you have set in DITA options. You can also use the menus to refresh and show referenced content.

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, or if you are using DITA.

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
Insert a list (DITA only)	Click **Insert** > **List** and select a list type
Insert a list item (DITA only)	Position the cursor in a list and click **Insert** > **List Item**
Convert paragraphs to a list or change list type	Select one or more paragraphs and click or
Convert paragraphs to a list or change list type (DITA only)	Select one or more paragraphs, click **Paragraph** > **Apply/Remove Bullets** or **Apply/Remove Numbering**
Increase list indentation (DITA only)	Position the cursor in a list item and click **Paragraph** > **Increase List Indentation**
Decrease list indentation (DITA only)	Position the cursor in a list item and click **Paragraph** > **Decrease List Indentation**

To do this	Follow these steps
Split a list (DITA only)	Position the cursor in a list item and click **Paragraph** > **Split List**

Table 28: 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.

Images

You can insert images into your documents if your XMetaL customization recognizes elements in your DTD or Schema as image elements, or if you are using DITA.

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 a figure with a title (DITA only)	Click **Insert** > **Figure with Title** and select an image
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)
Edit image properties (DITA only)	Select an image and click **Edit** > **Element Properties**

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.

DITA images

DITA declares the `<image>` and `<fig>` elements. The `<fig>` element has `<title>` and `<image>` child elements. You can use this element to insert an image with a caption, for example:

```
<fig> <title>My summer getaway</title>
<image href="../images/LakeCharles.jpg" placement="break" width="300px">
<!-- alternative text (if specified) is saved in the alt element -->
<alt>Lake Charles in summer</alt> </image>
</fig>
```

Table 29: Image properties

Property	Attribute/element	Description
File	`href`	The relative path or URL to the image.

Property	Attribute/element	Description
Alt text	`<alt>`	Provides a text description when an image cannot be displayed by the user's software. (If the `<alt>` element does not exist, the contents of the `alt` attribute are displayed.)
Text wrapping	`placement`	Indicates whether an image should be displayed inline or separated from the surrounding text. The default is 'inline'.
Horizontal alignment	`align`	Controls the horizontal alignment of an image when placement is specified as 'break'.
Width	`width`	Indicates the horizontal dimension for the resulting image display. (If you specify an absolute size for the image, the aspect ratio is maintained unless you enter both a width and a height.)
Height	`height`	Indicates the vertical dimension for the resulting image display.
Units	N/A	The unit of measurement when a width and/or height is specified.
Scale	`scale`	Specifies a percentage by which to scale the image in the absence of any specified image height or width.

Related Links

Assets (unsupported) on page 26
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 84
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.

Note: To see which formats are supported in output, check the documentation for the DITA Open Toolkit.

Table 30: Supported display formats

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

Name	File extension	Notes
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

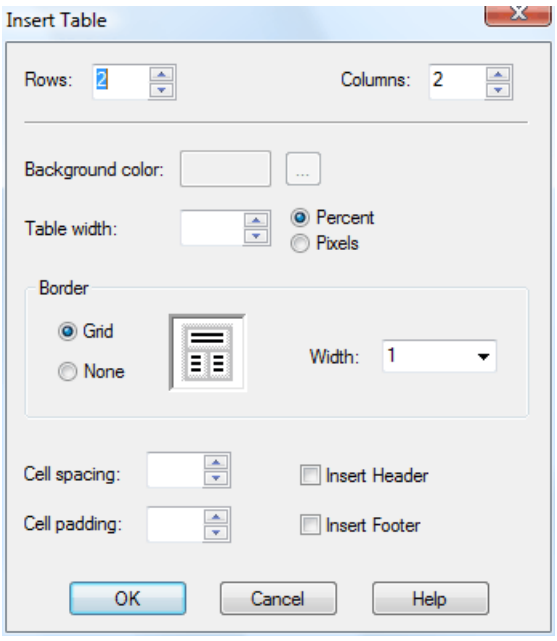
Options on page 31

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

Tables

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

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



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

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

Navigating within tables

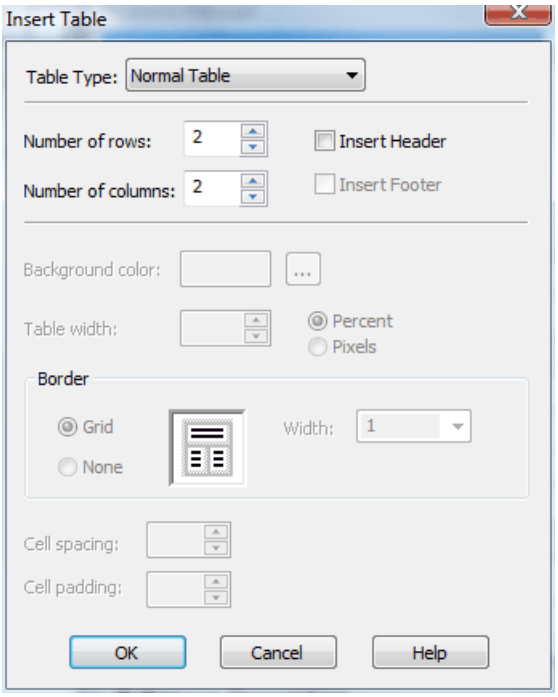
Here are some convenient ways to navigate between table cells:

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

Working with tables in DITA documents

If you are working in a DITA document, you can insert a CALS table, a simplified version of the CALS table, or a topic-specific table. Choose from the following:

- **Normal table.** The default CALS-based table model. Provides extensive control of display and structure.
- **Properties table.** For use in Reference topics. Gives a list of properties for the subject of the current topic.
- **Simple table.** A simplified version of a Normal table that allows fewer elements and less control over display.
- **Choice table.** For use in Task topics.



Related Links

Keyboard shortcutsShortcut 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, or if you are working in a DITA document, 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

Note: If you are working in a DITA topic and you are prevented from inserting the type of table that you select, it is because the topic type does not allow it.

If you are working in a DITA topic, you can restore the structure of a simple table, properties table, or step choices table (for example, after backspacing and removing a cell) by clicking **Table** > **Repair Table Structure**.

1. Place the cursor in the location you want to insert the table.
2. Click **Table** > **Insert Table**.
   The Insert Table window opens.
3. Select a table type (CALS only).

4. Select the number of rows and columns in the table.
5. Click **OK**.
   The table is inserted into the selected location.

To add a caption:

Note: For HTML tables only

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

Insert a cell, row, or column

Insert a cell

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

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

Insert a row

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

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

Insert a column

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

Edit a cell, row, or column

Move a row or column

1. Place the cursor in a row or column.
2. Click **Table** > **Move Row or Column**.

   The **Move Row or Column** dialog opens.
3. Choose an option.
4. Click **Apply** to apply the action and continue with more actions, or click **OK** to apply the action and close the dialog.

Move a cell

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

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

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

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

Merge cells

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

   The **Merge Cell** dialog opens.
3. Select a merge option.
4. Click **Apply** to apply the action and continue with more actions, or click **OK** to apply the action and close the dialog.

Contract a cell

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

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

Delete a cell, row, or column

Delete a cell

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

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

Insert a row

Note: The row is deleted without a prompt.

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

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

-OR-

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

   The row is highlighted blue.
3. Press the Delete key.

Delete multiple rows

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

   The rows are highlighted blue.
3. Press the Delete key.

Delete a single column

Note: The column is deleted without a prompt.

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

Copy a cell

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

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

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

Fill series of table cells

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

1. Enter the initial value in the anchor cell.

   Note: The anchor cell must be the top left cell in the table.
2. Select the cell(s) for which you want to fill the numerical series, starting with the anchor cell.

   Note: If any of the other cells contain text content, it will be overwritten by the series.
3. Select **Table > Fill Series**.

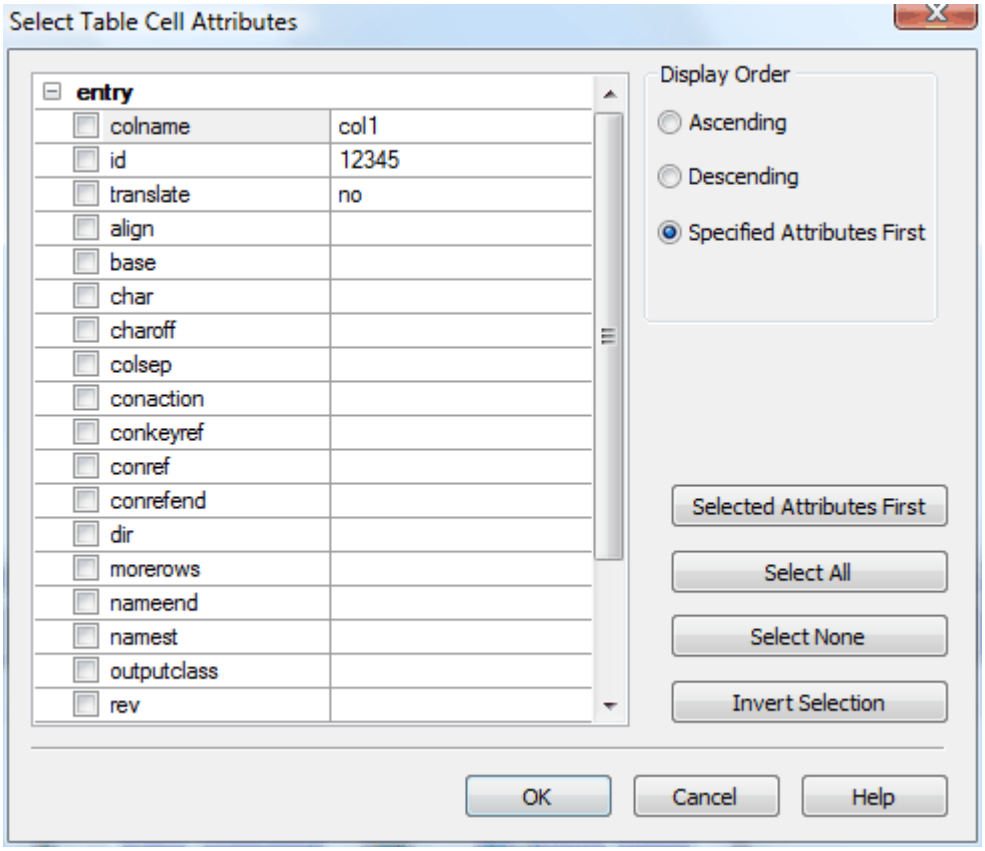
The series is displayed in selected cells in the table.

Fill cell attributes

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

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

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



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

Split a table

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

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

Related Links

Merge a table on page 100
Tables that have been split from each other can be merged back into one table.

CALS tables on page 95

If your DTD or Schema declares the <tgroup> element, or if you are working in a DITA document, 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 100
Tables that have been split from each other can be merged back into one table.

CALS tables on page 95
If your DTD or Schema declares the <tgroup> element, or if you are working in a DITA document, 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 100
You can sort tables, or selected rows in a table. Sorting is available for HTML and CALS tables as well as custom table models.

Sort a table

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

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

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

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

- **Microsoft® Excel Style** - sorts columns in the same way that Excel sorts values alphanumerically
- **Date** - sorts values by date

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

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

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

Enter a tab character in a table cell

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

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

Related Links

Macros on page 27

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).

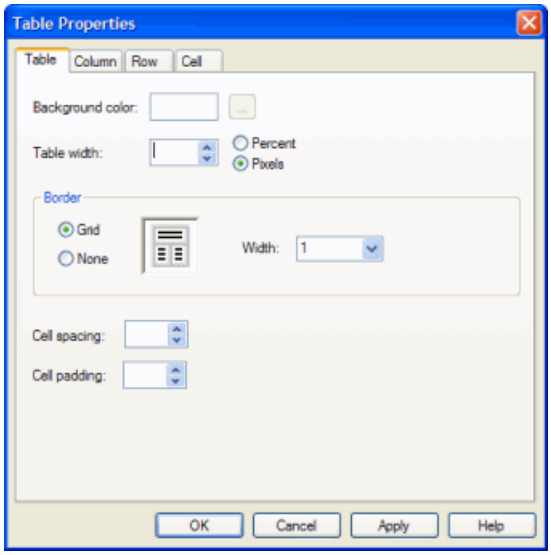
To do this	Follow these steps
Format a table	Place the cursor anywhere inside a table, click **Table** > **Table Properties**, and select the **Table** tab
Format a column	Place the cursor in a column, click **Table** > **Table Properties**, and select the **Column** tab
Format a row	Place the cursor in a row, click **Table** > **Table Properties**, and select the **Row** tab

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

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

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

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

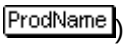


Working with entities

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

To do this	Follow these steps
Create an entity	Click **Tools** > **Text Entities**, **External Entities**, or **Graphic Entities**. Then complete the required fields and click **New**.
Modify an entity	Select an entity, make the required modifications, and click **Change**.

To do this	Follow these steps
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**.
Insert an entity reference (DITA only)	Click **Insert** > **Advanced** > **Entity Reference**, select an entity from the available sets and click **Insert**.
Open a document represented by an external entity	Double-click the entity icon

Text entities are displayed as icons (for example, 

) in Tags On view, and as the entity's replacement text (the content) in Normal view.

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

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

Graphic entities have the following content types:

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

Entity naming conventions

Follow these rules for entity names:

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

Create a text entity

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

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

Create an external entity

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

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

Create a graphic entity

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

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

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

Special characters and symbols

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

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

XML files with Unicode encoding

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

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

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

1. The characters '<', '>', and '&' are converted to entity references.
2. If the document encoding allows it, other characters are saved as actual characters.

3. If not, and if the character/entity conversion table has a corresponding entity reference, the character is saved as an entity reference.
4. If none of the above apply, the character is saved as a character reference.

SGML files with Unicode encoding

When you open an SGML file with Unicode encoding, entity references are converted to actual characters if they 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 42

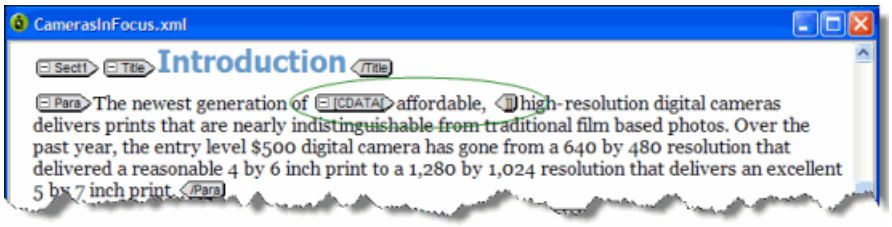
XMetaL Author supports US-ASCII, ISO-8859-1 (Latin-1), and Unicode™ (UTF-8 or UTF-16) character encoding. By default, XML files that you create with XMetaL Author use UTF-8 encoding.

Inserting CDATA sections

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

To do this	Follow these steps
Insert a CDATA section (not available in DITA)	Click **Insert** > **CDATA Section**
Insert a CDATA section (DITA only)	Click **Insert** > **Advanced** > **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.

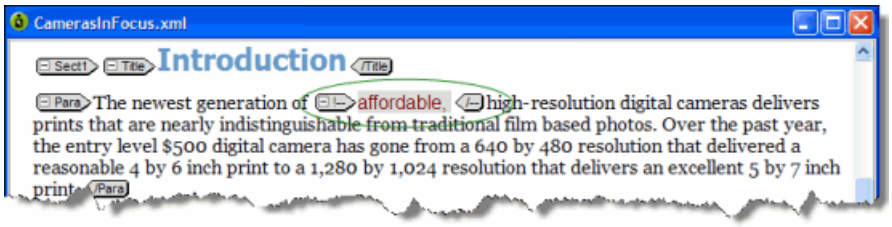
INCLUDE is the default for all marked sections.

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 (not available in DITA)	Click **Insert** > **Comment**
Insert a comment (DITA only)	Click **Insert** > **Advanced** > **Comment**

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



Related Links

Options on page 31
You can set options through the **Tools** menu.

Inserting processing instructions

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

To do this	Follow these steps
Insert a processing instruction (not in DITA)	Click **Insert** > **Processing Instruction**
Insert a processing instruction (DITA only)	Click **Insert** > **Advanced** > **Processing Instruction**

Importing databases

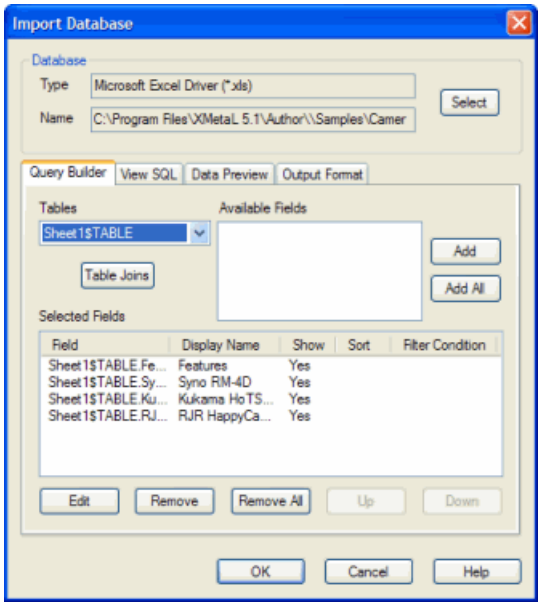
You can import the contents of a database or spreadsheet file into your structured document as a table. When you import a database, you create an SQL query that allows you to import only the data you need and in the format you want. When you import data, you apply elements and attributes that are used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

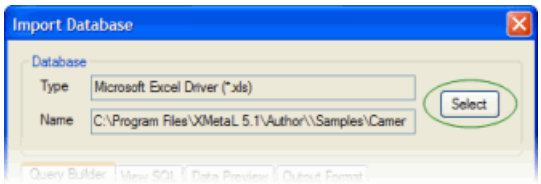
Macros on page 27

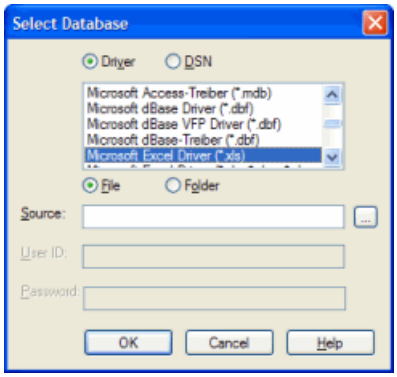
A macro is a sequence of operations that can be run as a unit. Macros can be associated with a shortcut key, toolbar button, or menu item. They are useful when you need to repeatedly execute a task that does not have a built-in shortcut key or command.

Choosing a database

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

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





Creating a query

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

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

You can specify the following field properties:

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

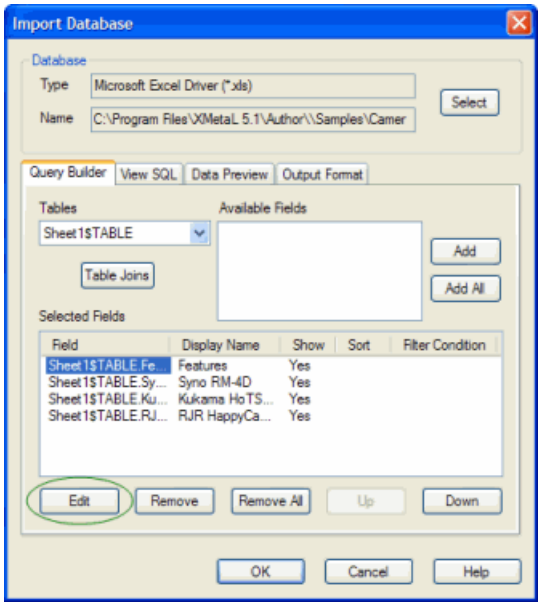
  Note: Hiding a field is not the same as removing it. A hidden field can still be used in a filter condition.

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

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

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

Note: Text strings must be enclosed within single quotes.



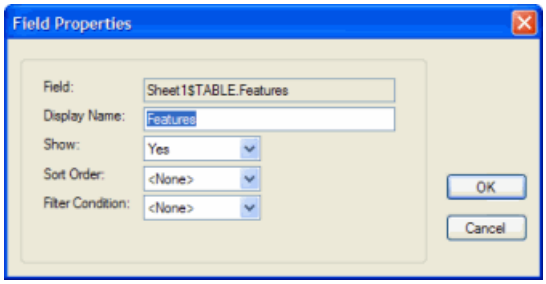


Table joins

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

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

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

Creating a joined table query

To create a joined table query:

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

Formatting table output

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

Options

Choose from the following options:

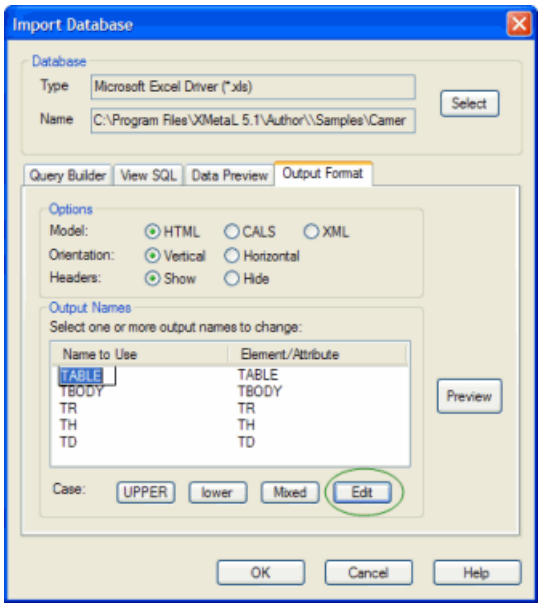
- The table model supported by your DTD.
- An orientation. Choose **Vertical** if you want the fields to be imported as columns (as in the original database) or **Horizontal** if you want the fields to be imported as rows.
- Headers. Choose **Show** to include the table header (the first row) in the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

Output names

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

Note: The elements must be declared in your DTD.

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



Working with DITA

All of the functionality necessary for creating and editing DITA topics and maps is available through the menus and toolbars. A full set of DITA templates is provided. You can edit maps and generate output through the Map Editor. DITA specializations are also supported.

Darwin Information Typing Architecture (DITA) is an architecture that lets you reuse information in different contexts and publish in various formats.

The basic unit of organization in DITA is the topic. This relatively small unit (as opposed to a section or book) facilitates information reuse and re-purposing. Maps contain references to topics and they organize topics for a particular deliverable.

Other important mechanisms for re-use are content references and conditions.

This architecture creates a standard structure that you can use to create consistently organized content that can be reused in a variety of contexts and published in any format using the DITA Open Toolkit. For example, you may need an online Help system that contains many of the same topics in a printed (PDF) user guide.

Table 31: DITA Topic templates

Name	Description	Root element
Generic topic	Topic with no specific or defined type. Provides the base for other specialized topic types, and also provides a place to author content that does not belong in existing specialized types.	<topic>
Concept	Conceptual information that answers “What is...”-type questions. They include a body-level element with a basic topic structure, including sections and examples.	<concept>
Reference	Reference material that describes regular features of a subject or product, such as commands in a programming language.	<reference>
Task	Task-based information that answers “How do I?”-type questions, and has a well-defined structure that describes how to complete a procedure to accomplish a specific goal.	<task>
Composite	A topic that contains one or more topics.	<dita>

Table 32: DITA Map templates

Name	Description	Root element
DITA Bookmap	Describes relationships among a set of resources for output in a traditional book format	<bookmap>
DITA Map	Describes relationships among a set of resources	<map>

DITA DTDs

The authoring DTDs are stored in the following folder: `..\XMetaL\Author\DITA\DITA_OT_DTD`. Check the release notes for version information.

DITA references

You are encouraged to consult the many available printed and online references. These include the following:

- dita.xml.org
- *Introduction to the Darwin Information Typing Architecture* and other DITA-related publications from IBM developerWorks at http://www.ibm.com/developerworks/
- Organization for the Advancement of Structured Information Standards (OASIS) at http://docs.oasis-open.org
- *DITA Open Toolkit 1.3.1 Documentation Package* from VR Communications at http://www.vrcommunications.com/resources.htm
- *xmetal-dita* and *dita-users* user groups on yahoo.com
- The DITA Open Toolkit project at http://dita-ot.sourceforge.net for the latest versions of the *DITA Open Toolkit User Guide* and other publications

Related Links

Templates on page 35

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.

DITA topics

Topics are units of information that are meaningful when they stand alone.

To do this	Follow these steps
Create a DITA topic	Click **File** > **New**, select the **DITA topic** tab, and choose a template
Insert a subtopic in a DITA topic	Click **Insert** > **Subtopic** and choose a topic type
Insert topic metadata (topic prolog elements)	Click **Insert** > **Topic Metadata**, select a metadata item, and provide value(s)
Promote or demote a topic in a DITA topic (Generic or Composite topics only)	Select a topic or topic-like element and click **Edit** > **Promote Topic** or **Edit** > **Demote Topic**

Although DITA topic structure varies by topic type, all topics share some basic elements.

The topic title provides the main identifying test for the topic. DITA also supports alternative titles for display as navigation titles and in search results. You may need to specify a navigation title when the topic title is long and you want a shorter title to appear in the table of contents. You can specify a search title when you want to provide additional clarification in the title that appears in search results, but not in the topic itself.

The short description appears directly after the title and before the body of the topic and serves the following purposes:

- Introduces the subject matter covered in the topic when the reader opens the topic
- Provides a summary of the topic contents when the reader sees it listed as part of the automatically-generated links in HTML output

Although the short description is not a required element, it is recommended that you include it.

You can specify the metadata that applies to the entire topic in the prolog. This includes index entries and keywords that apply to the topic, as well as author and copyright data. Metadata also includes elements that contain more information about the topic, such as the product version.

The topic body contains the topic content. Each topic type has a unique body structure and each requires some standard information. Concept and reference topics have the most flexibility in what elements you can include and where. For example, concept topics usually include sections, paragraphs, bulleted lists, and images. Reference topics usually contain tables. By contrast, the task topic type is restrictive because it allows only one set of steps and prescribes an order in which you can use the elements. For example, you cannot have a result element before the steps. Topic body structure is designed to help you author information more easily and is intended to follow the logical flow of information.

Related Links

Creating documents on page 34
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**.

Authoring structured content on page 81
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.

DITA maps

Maps contain topic references (`<topicref>` elements) and they organize topics for a specific deliverable. A DITA map template is provided. You can view and edit maps through the Map Editor or in XML view. DITA maps are saved with the '.ditamap' extension.

To do this	Follow these steps
Create a DITA map	Click **File** > **New**, click the **DITA Map** tab, and select the DITA Map template. Then enter a title for the map (saved in the <title> element).

The structure of your map is used as the basis for a table of contents. You can control whether the topic is listed in the TOC by setting the 'Include in TOC' property (`toc` attribute) in the map.

Maps are one of the primary drivers of content re-use as they allow you to include the same source content in multiple deliverables. For example, you can create a map file that organizes the topics for an online Help system and another that uses many of the same topics as well as additional topics for a PDF file. In addition, you can nest maps within maps to create new grouping levels.

You can specify the relationships between parent and child topics in a map through the `collection-type` attribute. This attribute is used by processors (such as the DITA Open Toolkit) to generate links between topics.

You can create non-hierarchical links or links between peer topics within a map with a relationship table (`<reltable>` element). The table is based on the topic types, with a column for each type. Relationship tables make links in your map easy to maintain as they are stored within the map file itself. If the topic file name changes, you can open the map file and update all of the references to that file in a single location;

you do not need to edit each file that links to that topic. This is especially useful when you are troubleshooting links.

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**.

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.

Creating documents on page 34
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**.

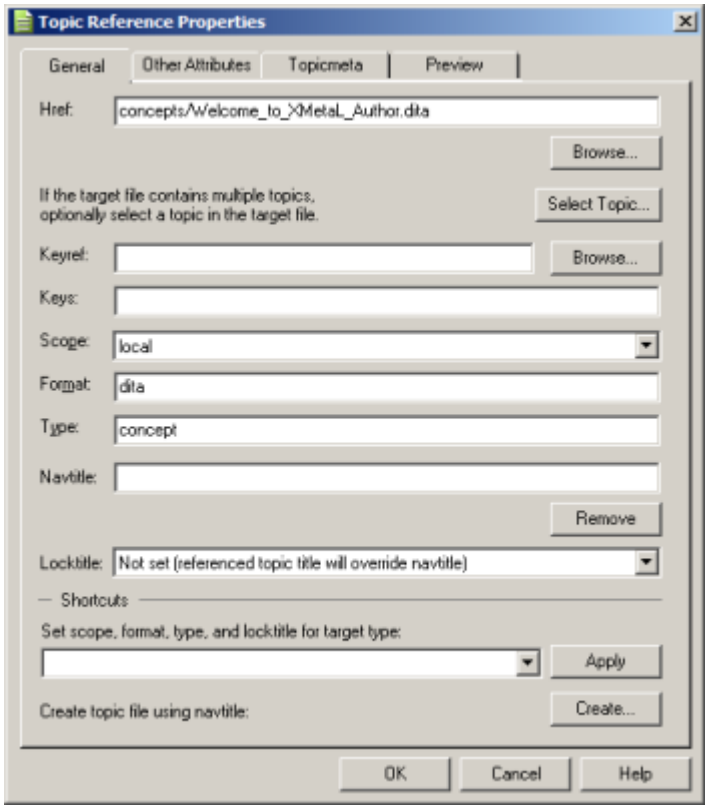
Authoring structured content on page 81
When you create a document instance of a DTD or Schema in Normal or Tags On view, XMetaL Author ensures that your content is valid by guiding you through the authoring process. You do not need to have a complete understanding of XML to begin authoring structured content.

Properties

References in a DITA Map contain properties that can be viewed in the Properties dialog box. The Properties dialog box will allow you to change the markup of ditamap elements such as topicref, topichead, topicgroup, chapter, and part. To view the element's properties, select the element in the Map Editor and click the **Element Properties...** icon () at the top of the pane. Similar dialog boxes will appear when using the inserting or editing elements, including **Topic Reference**, **File Reference**, **Web Link**, and **Map Reference**.

General tab

The General Tab will allow you to edit the properties of the Topic Reference, including the topic path, the key definition, and the format of the Topic.



The following fields can be set by using the General tab:

- **Href.** A direct reference to the location of the topic file.
- **Keyref.** An indirect reference to the location of the topic file.
- **Keys.** Keys associated with the topic reference.
- **Scope.** Indicates the relationship of the referenced file. Values can be set to local, peer, or external.
- **Format.** Indicates the format of the topic reference. Values can be set to dita, html, pdf, or ditmap. For other formats, you can use the file extension.
- **Type.** Indicates the topic type. Values can be set to concept, task, reference, topic, figure, table, other, and more.
- **Navtitle.** Sets the Navigation Title element of the topic. This takes precedence over the navtitle attribute.
- **Locktitle.** Determines which Navigation Title to use. The referenced topic title will be used if locktitle is not set.

  Note: Navtitle is an element while the rest are attributes.

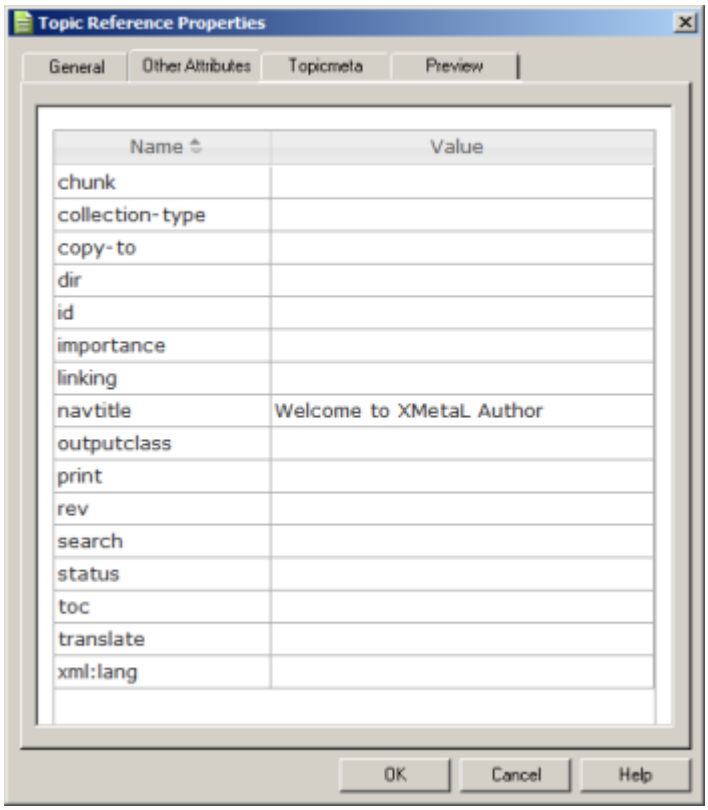
- **Shortcuts.** Selecting an option from the drop-down populates the appropriate values in the Scope, Format, Type and/or Locktitle fields as needed.

Note: Scope, Format, Type and Shortcuts are ONLY available in the classic map editor and not the new version of the map editor. If you are using the new map editor, these attributes are available in the Attribute Inspector pane directly below the Map Editor in the Resource Manager window.

Other Attributes tab

Note: The Other Attributes tab is ONLY available in the classic map editor and not the new version of the map editor. If you are using the new map editor, attributes are available in the Attribute Inspector pane directly below the Map Editor in the Resource Manager window.

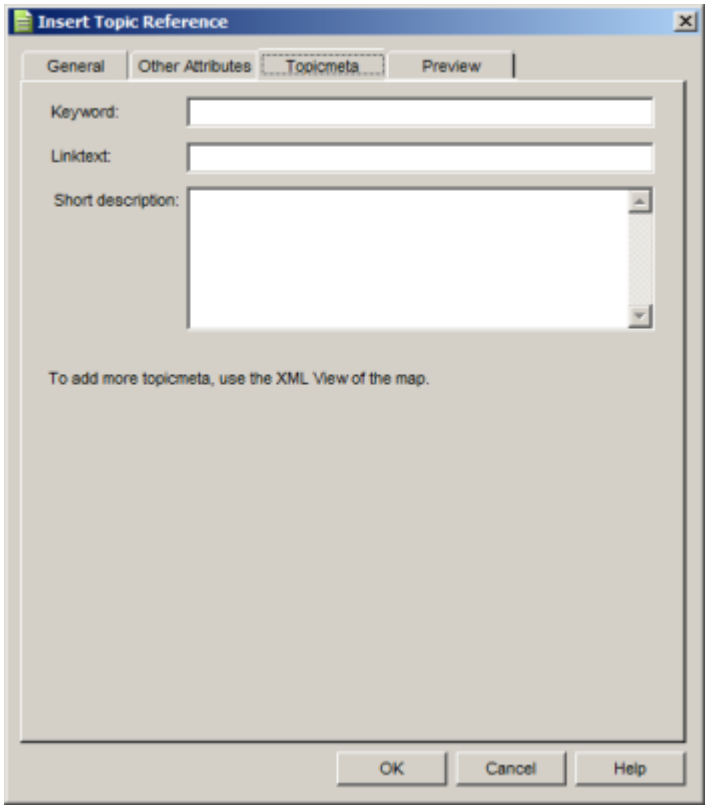
The Other Attributes tab will display a list of attribute names, along with their corresponding values, that are not listed in the General tab.



Topicmeta tab

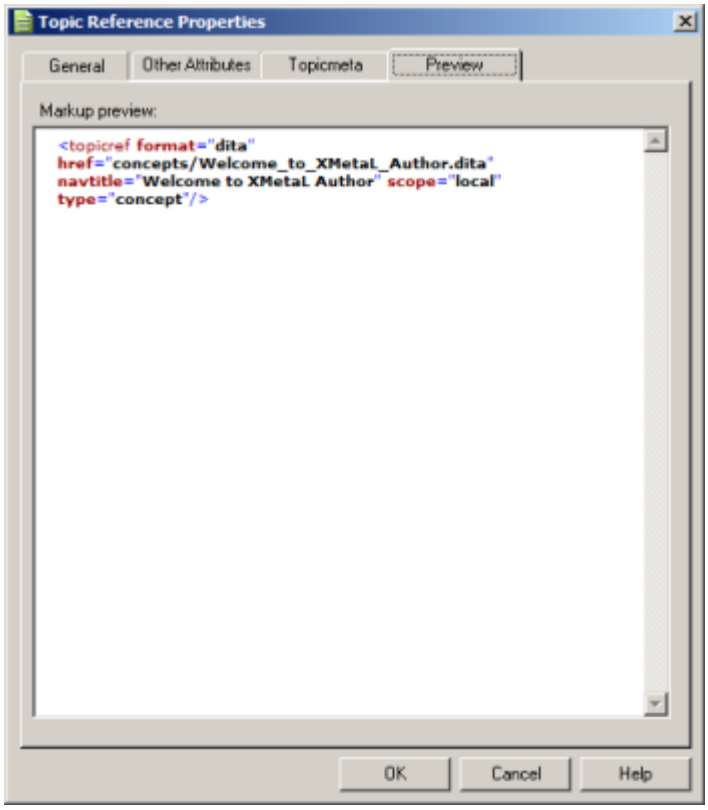
The <topicmeta> element defines the metadata that applies to a topic when it appears in a map, and to the other topics in the map that are contained by the same element that contains the <topicmeta> element. When creating links, it can also be used to override the title and short description of the topic. In addition, it can be used to add index entries to referenced content using the <keywords> element.

The following image displays the Topicmeta tab when using the **Insert Topic Reference** dialog box.



Preview tab

The Preview Tab will display a preview of the Topic Reference XML markup.



Map Editor

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

Table 33: Header Bar

To do this	Follow these steps
Open the folder that contains the map file	Click the App Menu icon ( ), and then select **Open Containing Folder**
Copy the path of the folder that contains the map file	Click the App Menu icon ( ), and then select **Copy Full Path**
Switch to XML view of map	Click the App Menu icon ( ), and then select **Switch to XML View of Map** from the menu that opens
Commit a map	Click the App Menu icon ( ), and then select **Commit Map** from the menu that opens. Committing a map saves it and deletes all cached versions.

Table 34: Toolbar

To do this	Follow these steps
Switch to tag view	Toggle the **Tag-On View** icon () to show or hide tags for all map items
Collapse all open folder paths	Click the **Collapse All** icon ()
Shift focus to a saved location	Tap the **Manage Locations** icon () and select the parent file to which you are shifting focus. All saved locations are named according to the map file that is at the top of the hierarchy.
Remove saved location(s)	If there are saved locations created using the Scope To This command, tap the **Manage Locations** icon () to view them. In the menu that opens, select **Remove All Locations** to immediately delete all saved locations OR select **Remove Location** to open a dialog where you can select the locations you want to remove.
Shift focus back to the root map when viewing a sub-map	Click the **Go to Map Root** icon () .
Create a topic and insert a topic reference in a DITA map	Click the **Insert Reference** icon () and select **Topic Reference** from the menu that appears. The **Properties** dialog box opens. For information on entering properties, see the *Properties* on page 115 topic.
Insert a topic reference	Click the **Insert Reference** icon () and select **Topic Reference** from the menu that appears. Then choose a DITA topic file in the **Properties** dialog box that opens
Insert a file reference	Click the **Insert Reference** icon () and select **File Reference** from the menu that appears. The **Properties** dialog box opens. Choose a file, and enter a navigation title (Navtitle).
Insert a Web link	Click the **Insert Reference** icon () and select **Web Link** from the menu that appears. The **Properties** dialog box opens. Enter a URL and navigation title (Navtitle).

To do this	Follow these steps
Insert a glossary reference	Click the **Insert Reference** icon () and select **Glossary Reference** from the menu that appears. The **Properties** dialog box opens. Enter the properties for the reference.
Insert a topic heading	Click the **Insert Reference** icon () and select **Topic Heading** from the menu that appears. The **Properties** dialog box opens. Enter a heading.
Insert a topic group	Click the **Insert Reference** icon () and select **Topic Group** from the menu that appears. The **Properties** dialog box opens. Enter properties for the new topic group.
Insert a map reference	Click the **Insert Reference** icon () and select **Map Reference** from the menu that appears. The **Properties** dialog box opens. Select a DITA map file for the new reference.
Insert an Eclipse navigation reference	Click the **Insert Reference** icon () and select **Eclipse Navigation Reference** from the menu that appears. The **Properties** dialog box opens. Select a DITA map file for the new reference.
Refresh all map references	Click the **Refresh All References** icon ()
Adjust the active key space for the ditamap	Click the **Keys Operations** icon () and select **Configure Key Space Association...**. The **Configure Key Space Associations** dialog box opens for managing the key space. For more information on key space associations, see *Managing Key Spaces* on page 143.
Edit element properties (attributes)	Select a map item, and then tap the **Element Properties** icon ()
Insert a relationship table	Select a map item under which the relationship table will be inserted, and then click the **Relationship Table** icon ()

To do this	Follow these steps
Change map sequence or structure	Use the arrows or the **Delete** icon in the Map Editor toolbar
Find text or markup amongst topics referenced by a ditamap	Click the **Cross-Map Find** toolbar icon ()
Spell Check the topics in a ditamap	Click the **Cross-Map Spell Check** toolbar button ()
Generate output	Click the **Generate Output for DITA Map** toolbar icon ()
Add, edit or remove subject schemes	Click the **Show subjectScheme Manager** icon ()
Open a sub-map for instant viewing	Select a sub-map, and then click the **Peek Target** icon (). The sub-map is read-only in this "peek" view mode. To edit the sub-map, double-click it open.

Table 35: Contextual Menu

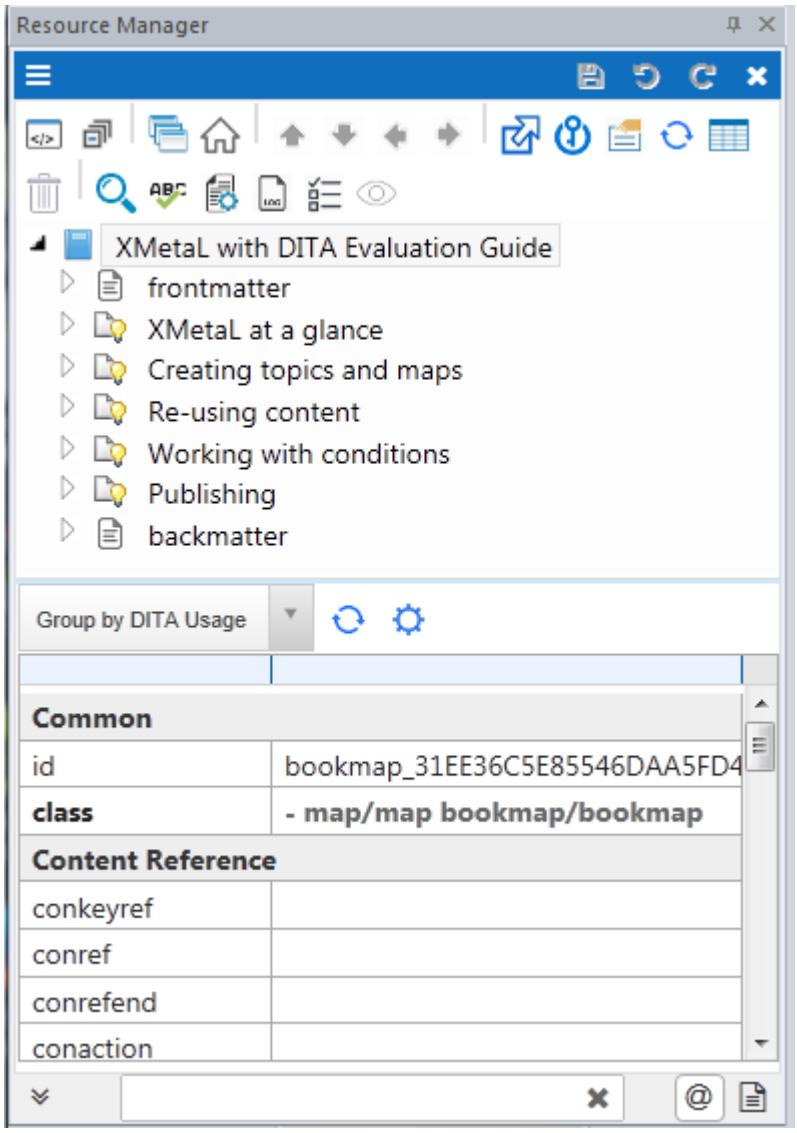
To do this	Follow these steps
Edit element properties (attributes)	Right-click on a map item, and from the menu that appears, click **Element Properties**.
Shift focus to a specific folder path	Right-click on a map item, and from the menu that appears, click **Scope to This**. The selected map item will become the highest level in the displayed folder hierarchy. The selected focus will be saved to the Manage Locations list, available by tapping the **Manage Locations** icon () in the Map Editor toolbar. To shift focus back to the root map, click the **Go to Map Root** icon () in the Map Editor toolbar.
Insert a quick outline for a topic	Right-click on a map item, and from the menu that appears, click **Append, Insert, or Insert (Before) > Quick Outline**.

To do this	Follow these steps
	See *Quick Outlines* on page 125 for more information.
Insert a key definition	Right-click on the map item for which you want to enter the key definition. In the menu that appears, select **Append, Insert, or Insert (Before)** > **Key Definition**.
Insert a key definition with keyword content	Right-click on the map item for which you want to enter the key definition with keyword content. In the menu that appears, select **Append, Insert, or Insert (Before)** > **Key Definition with Keyword**.
Refresh a single map reference	Right-click on the map reference you want to refresh. In the menu that appears, select **Update** > **Refresh Self**.
Refresh a map reference and all of its descendants	Right-click on the map reference you want to refresh. In the menu that appears, select **Update** > **Refresh Self and Descendants**.
Change map sequence or structure	Right-click on a reference or heading and select from **Move** > **Move Item Up**, **Move Item Down**, **Promote Item**, **Demote Item**, or **Delete Item**
Find cross references or conrefs to a topic	Right-click on a topic, and from the menu that appears, click **Find > Find References to Topic**
Find key references	Right-click on the key definition, and from the menu that appears, click **Find > Find References to Keys**

Tip: You can change the map sequence or structure by clicking and dragging references or headings in the Map Editor.

Note: The Map Title field in the Map Properties dialog box displays the contents of the `<title>` element, and contents of this field are saved to the <title> element. If the `<title>` element does not exist and the map already has a `title` attribute, the field displays the contents of the `title` attribute, and the changes to the field are saved to the `title` attribute.

Double-click to open any topic or map element.



Map Editor Attribute Inspector
The Map Editor's attribute inspector can be used to edit the attributes of items in the map.

The Map Editor's 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.

To do this	Follow these steps
Sort attributes	Click on the Sort drop-down list, and select a sort order.
Refresh Attribute Inspector	Click the **Refresh Attribute Inspector** icon ( )
Apply or remove conditions for the map that you're viewing	Click the Configure Attribute Inspector icon and select **Apply/Remove Conditions**.

To do this	Follow these steps
Classify a topic reference NOTE: This sets reference description attributes for the selected map item	Click the Configure Attribute Inspector icon. In the menu that appears, select **Classify Topic Reference** and the reference description type you want to use.
Set a value for an attribute	See *Setting attribute values* on page 88 for information.

Related Links

Setting attribute values on page 88
You can set attribute values through the Attribute Inspector or through the Edit Properties dialog.

Apply a condition on page 150
You can apply conditions to the current element or selection, or any ancestor.

Map Filter

The DITA Map Editor's tree view can be filtered to show only those items that match a text phrase you have provided. This can aid in searching large maps quickly to locate a given topicref or similar item for modifications.

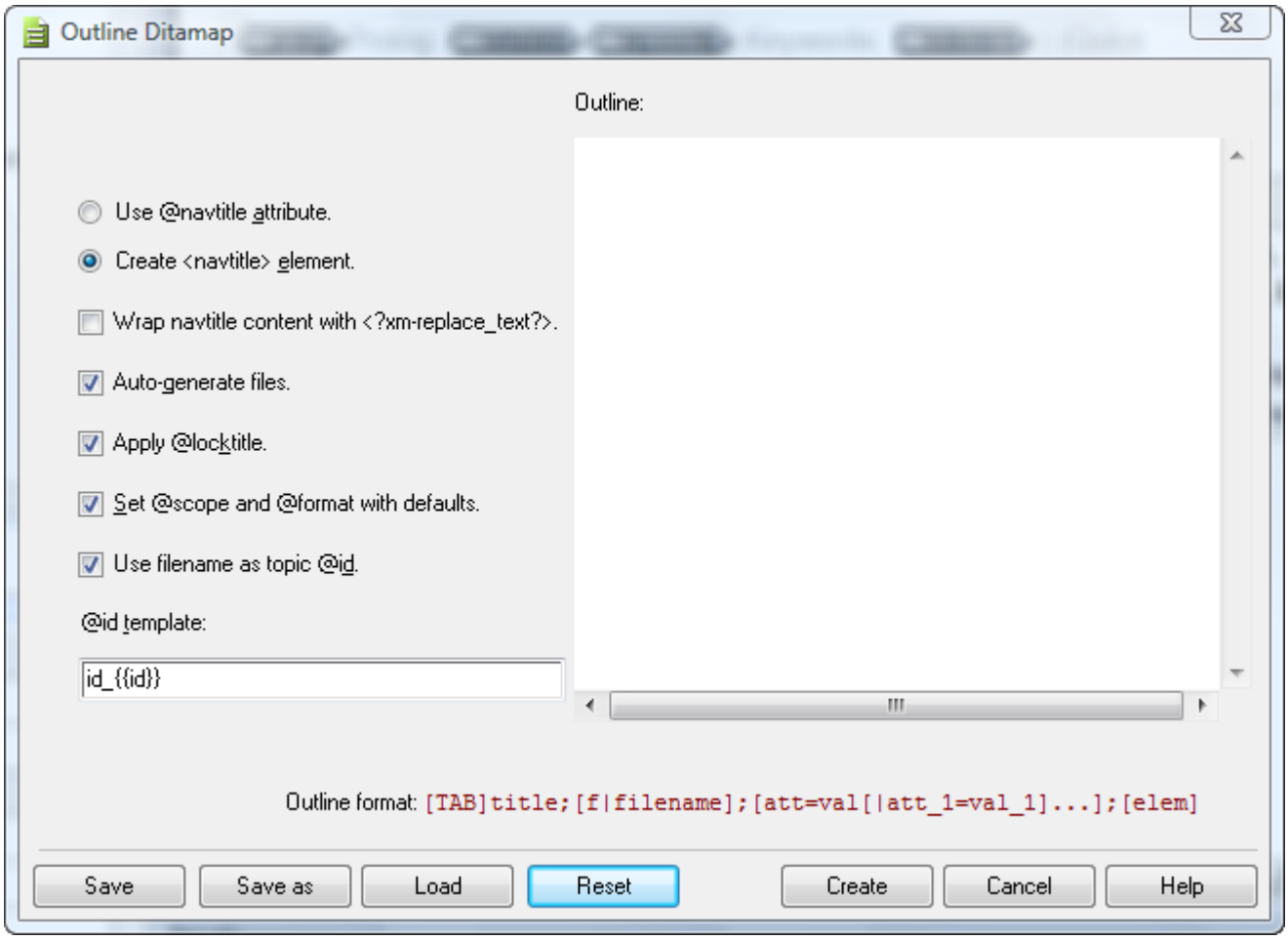
Table 36: Map Filter

To do this	Follow these steps
Filter a DITA map	Enter the filter criteria in the Map Filter field at the bottom of the Map Editor tab, and then press Enter. The text you used to filter the map will be highlighted in the results.

Quick Outlines

The DITA Map Editor's Quick Outline feature can auto-generate topicref markup and stub topic files with titles already filled in. You can also re-use outlines by saving customized outlines and then loading at a later date.

Insert a quick outline for a topic	Right-click on a map item, and from the menu that appears, click **Append, Insert, or Insert (Before) > Quick Outline**.



Topicref Target Preview
The DITA Map Editor's lower panel can be toggled to display a quick preview of the topicref's target that is being hovered over with the mouse.

To use the preview mode, select the **Preview Pane** icon ( ) at the bottom of the Map Editor, and then hover over the topicref you want to preview.

The topicref's title and short description will be displayed in the preview pane.

Classic Map Editor
The Classic Map Editor provides menus that let you perform map-specific functions and edit element and map editor properties. The Classic Map Editor is included in the Resource Manager but is not the default version of the Map Editor.

To use the Classic Map Editor, close any open maps. Select **Tools > Options**. Then select **Map Editor**, and select the **Use classic map editor** checkbox in the Editor Options section.

Note: Any maps that were open in the new Map Editor will not be displayed in the Classic Map Editor until they are closed and re-opened.

To do this	Follow these steps
Create a topic and insert a topic reference in a DITA map	Click **Insert** > **Topic Reference**. Then enter a topic title, click **Create**, and choose a template.

To do this	Follow these steps
Insert a topic reference	Click **Insert** > **Topic Reference** and choose a DITA topic file
Insert a file reference	Click **Insert** > **File Reference**, choose a file, and enter a navigation title
Insert a Web link	Click **Insert** > **Web Link** and enter a URL and navigation title
Insert a Glossary Reference	Click **Insert** > **Glossary Reference**
Insert a chapter	Click **Insert** > **Chapter** and choose the chapter file you want to insert
Insert an appendix	Click **Insert** > **Appendix** and choose the file you want to insert
Insert a part	Click **Insert** > **Part** and choose the file you want to insert
Insert a topic heading	Click **Insert** > **Topic Heading** and enter a heading
Insert a topic group	Click **Insert** > **Topic Group**
Insert a map reference	Click **Insert** > **Map Reference** and choose a DITA map file
Insert an Eclipse navigation reference	Click **Insert** > **Map Reference** and choose a DITA map file
Insert a key definition	Click **Insert** > **Key Definition**
Insert a key definition with keyword content	Click **Insert** > **Key Definition with Keyword**
Refresh map references	Click **Edit** > **Refresh All References**
Adjust the active key space for the ditamap	Click **Edit** > **Configure Keyspace Association**
Edit element properties (attributes)	Select a map item and click **Edit** > **Element Properties**
Edit Map Editor properties	Click **Edit** > **Element Properties** and select the **Map Editor** tab
Change map sequence or structure	Select a reference or heading, click **Edit** and select from **Move Item Up**, **Move Item Down**, **Promote Item**, **Demote Item**, **Delete Item**
Find cross references or conrefs to a topic	Click **Edit** > **Find References to Topic**
Find key references	Click **Edit** > **Find References to Key(s)**
Find text or markup amongst topics referenced by a ditamap	Click **Cross-map Find** toolbar button
Spell Check the topics in a ditamap	Click **Cross-map Spell Check** toolbar button
Generate output	Click **File** > **Generate Output for DITA Map**
Switch to XML view of map	Click **File** > **Switch to XML View of Map**

Tip: You can change the map sequence or structure by clicking and dragging references or headings in the Map Editor.

Note: The Map Title field in the Map Properties dialog box displays the contents of the `<title>` element, and contents of this field are saved to the <title> element.. If the `<title>` element does not exist and the map already has a `title` attribute, the field displays the contents of the `title` attribute, and the changes to the field are saved to the `title` attribute.

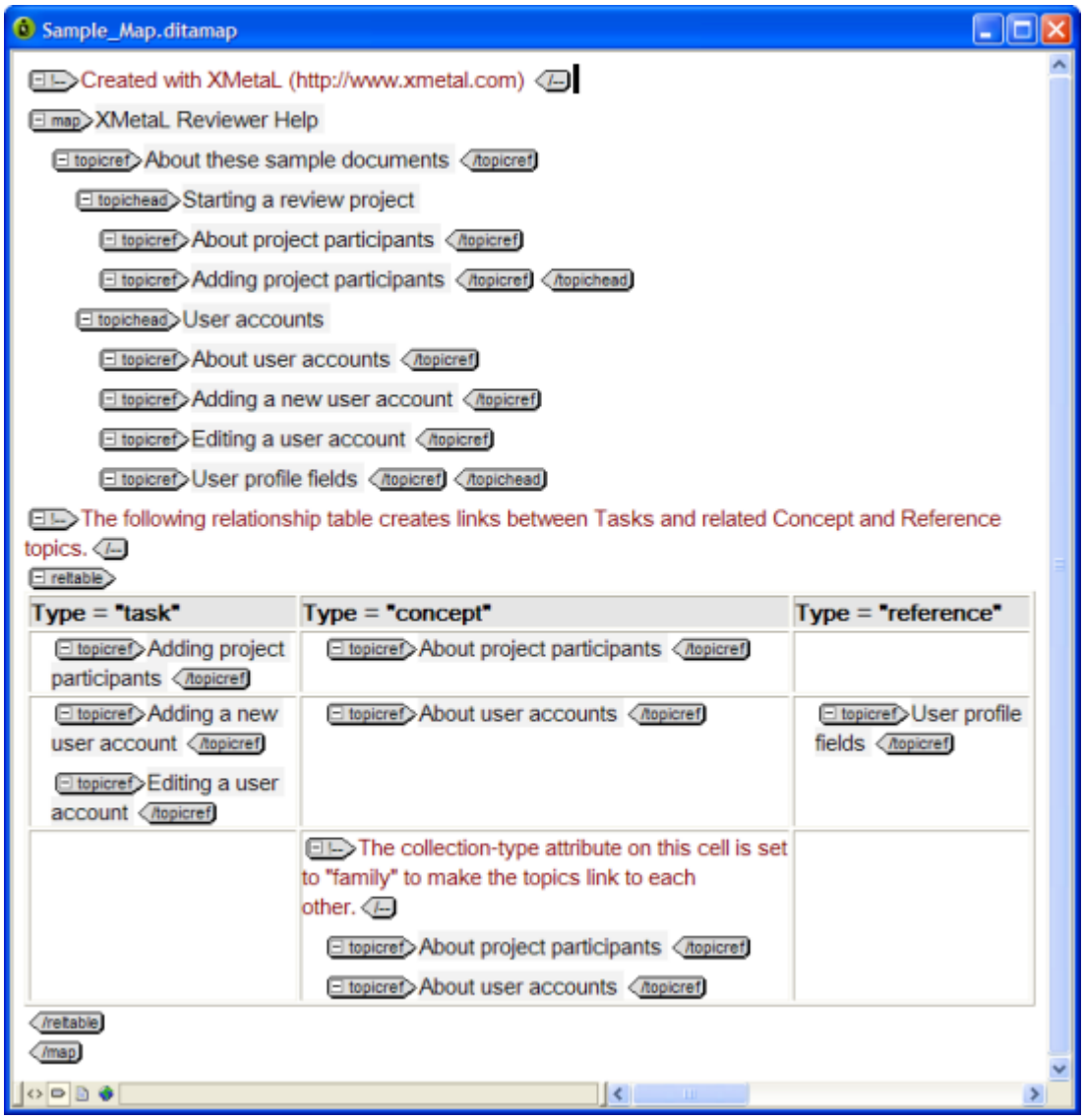
Double-click to open any topic or map element.

XML view

XML view is similar to Tags On view. You can perform additional map-related functions through the menus.

To do this	Follow these steps
Insert a relationship table	Click **Table** > **Insert Relationship Table**
Switch to Map Editor	Click **File** > **Switch to Map Editor**
Open a map element	Select an element and click **Reuse** > **Open Referenced File**

Note: When you open an invalid map, it appears in XML view.



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**.

Specifying a language

The language specified for your map or bookmap is used by processors such as the DITA Open Toolkit to determine sort order in booklists like, for example, glossaries. You can specify a language using the Language property (`xml:lang` attribute).

Language values are based on ISO-3166 Country Codes and RFC 3066 Language Codes. If you do not specify a language, it is assumed to be ‘en-us’ (US English).

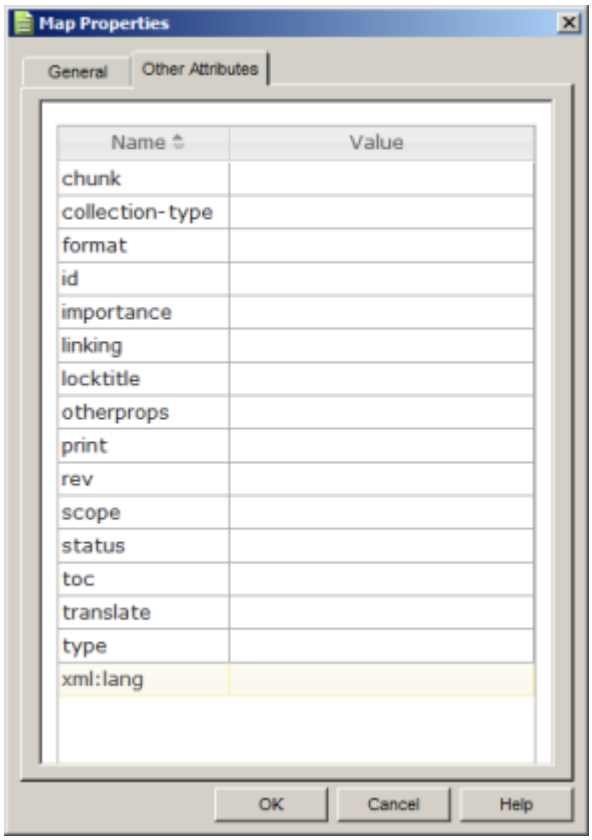
Note: Refer to the *DITA Open Toolkit User Guide* for more information on localizing your DITA content.

Setting xml:lang in your Content

It is strongly recommended that you set the xml:lang attribute at the root of the map file and the root of all topic files. Refer to the *list of xml:lang attributes* for which the DITA OT is pre-configured. If an element in a topic should be processed as a different language than the rest of the topic, set the xml:lang attribute on that element as well.

You can specify a language in the following locations:

- As a property of your map or bookmap. The Language property is displayed in the Other Attributes tab of the Properties dialog. You can also set the value for `xml:lang` through the Attribute Inspector. This value takes priority over other language settings.



- As a property of a component of a map or bookmap, such as a `<glossarylist>` element. The Language property is displayed in the Other Attributes tab of the Properties dialog.
- As a global or local parameter.

Parameters when Generating Output from XMetaL

For Microsoft HTML Help (CHM) or JavaHelp output, add the following parameter to the Advanced tab of the Edit Deliverable Type dialog: ANT_PARAM_args.dita.locale = <locale code> For example, to sort in Spanish, use ANT_PARAM_args.dita.locale = es-es For HTML, WebHelp, and "XMetaL Enhanced PDF" output, you do not need to add any parameters. Locale information will be picked up from your content.

Parameters when Generating Output Using a Standalone DITA OT

For generating Microsoft HTML Help (CHM) or JavaHelp output, set the following parameter:args.dita.locale = <locale code> For example, to sort in Spanish, this is args.dita.locale = es-es

Related Links

Setting attribute values on page 88
You can set attribute values through the Attribute Inspector or through the Edit Properties dialog.

Specifying parameters on page 161
You can change the way you generate output, including the appearance of your output deliverable, by specifying parameters. You can specify parameters either by setting options in fields and check boxes or by typing. Parameters can be global or local. Your settings are stored in the publishing configuration files.

Language tagging in HTML and XML

Chunking

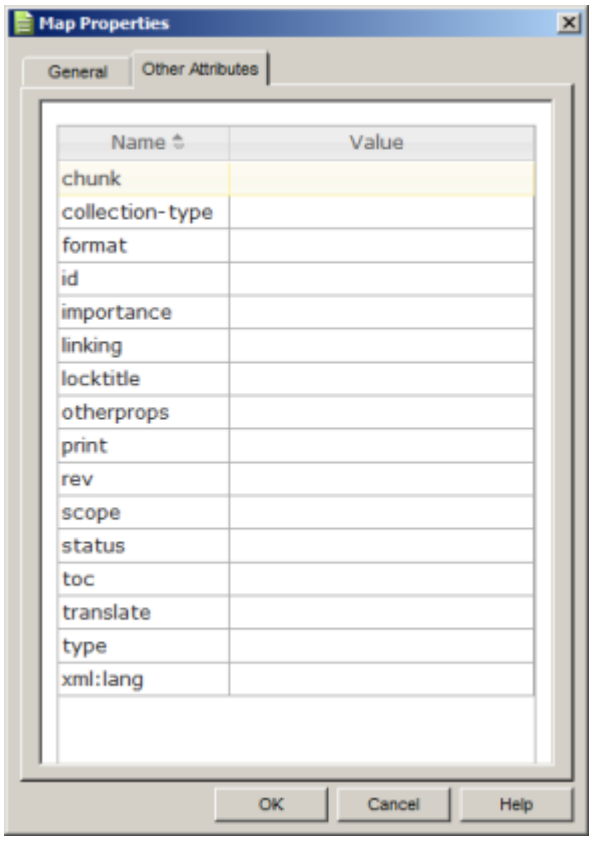
By default, the structure of the output from a DITA map reflects that which is represented in the Map Editor or XML view of the map, that is, topics (including composite topics) are saved as individual HTML files. However, you can specify different chunking behaviors.

To do this	Follow these steps
Set chunking	In the Map Editor, select an element and click **Edit** > **Element Properties**. Then click the **Special Attributes** tab and enter a value in the Chunk field.

Chunking refers to how the content you see in XMetaL is organized in files when you generate output from a DITA map. You can change the way content is chunked (divided or merged into new output documents) by setting the chunk attribute. The value of the chunk attribute consists of one or more space-delimited names. For more information about allowed values, see the *DITA Architectural Specification*.

Here are some example behaviors:

- You can split composite topics into several output files
- You can merge a group of topics into a single output file
- You can re-use a single topic from a composite topic and create output for that topic in a single file
- You can create a single navigation chunk (for example, a table of contents) within the contents of a map



Related Links

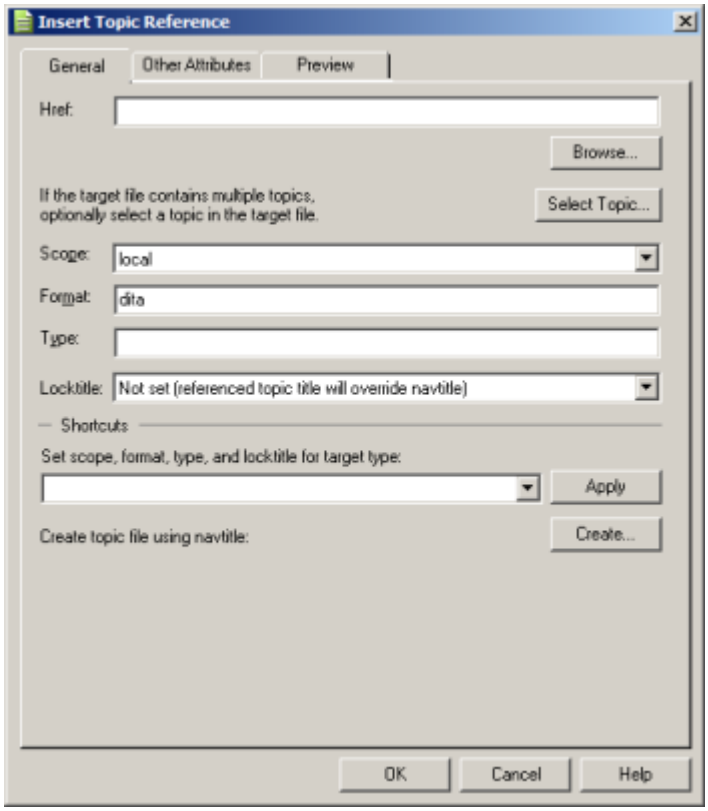
Setting attribute values on page 88

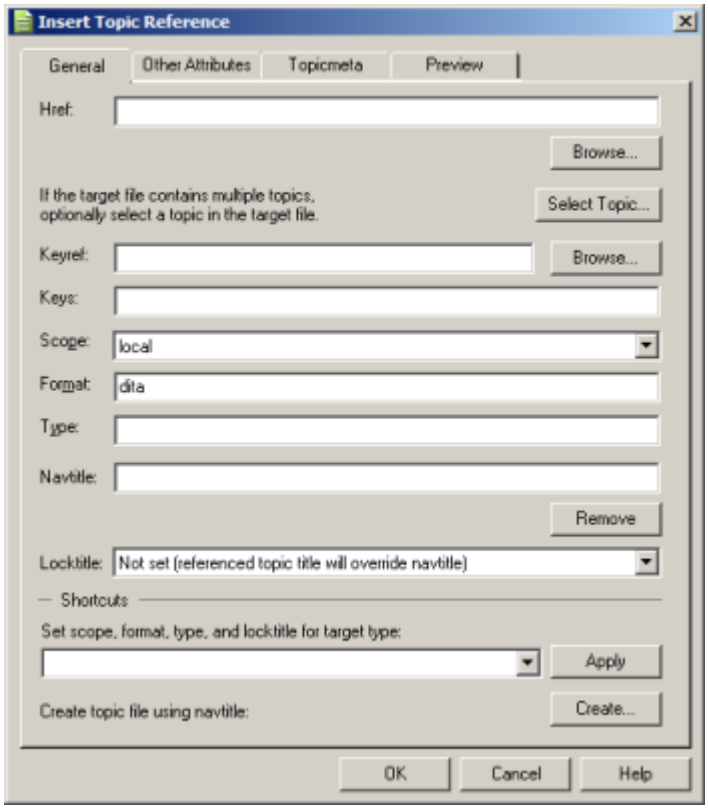
You can set attribute values through the Attribute Inspector or through the Edit Properties dialog.

DITA 1.1 vs 1.2/1.3 Authoring Environment

The authoring environment is context sensitive; some menu commands, dialog boxes, and fields will be different based on the DITA version in use. Elements pertaining to DITA 1.2/1.3 features will not appear if the default DITA version is set to DITA 1.1. The DITA version can be set by going to **Tools** > **Options**.

For example, the **Insert Topic Reference** dialog is different depending on the DITA version being used. When using DITA 1.1, the dialog box does not display any Key Reference properties or the TopicMeta tab. The following two images show the differences.


Insert Topic Reference
General
Other Attributes
Preview
Href:
Browse...
If the target file contains multiple topics, optionally select a topic in the target file.
Select Topic...
Scope:
local
Format:
dita
Type:
Locktitle:
Not set (referenced topic title will override navtitle)
Shortcuts
Set scope, format, type, and locktitle for target type:
Apply
Create topic file using navtitle:
Create...
OK
Cancel
Help


Insert Topic Reference
General
Other Attributes
Topicmeta
Preview
Href:
Browse...
If the target file contains multiple topics, optionally select a topic in the target file.
Select Topic...
Keyref:
Browse...
Keys:
Scope:
local
Format:
dita
Type:
Navtitle:
Remove
Locktitle:
Not set (referenced topic title will override navtitle)
Shortcuts
Set scope, format, type, and locktitle for target type:
Apply
Create topic file using navtitle:
Create...
OK
Cancel
Help

DITA bookmaps

DITA bookmaps let you organize book-type elements and metadata. You can view and edit bookmaps in XML view or in the Map Editor. Bookmaps are saved with the '.ditamap' extension.

To do this	Follow these steps
Create a DITA bookmap	Click **File** > **New**, click the **DITA Bookmap** tab, and select the DITA Bookmap template.
Create and insert a chapter reference, appendix reference, or part reference	Click **Insert** and select **Chapter Reference**, **Appendix Reference**, or **Part Reference**. Then type a topic title, click **Create**, and choose a template.
Insert a front matter section or back matter section *	Click **Insert** and select **Front Matter Section** or **Back Matter Section**
Create and insert a special topic reference *	Click **Insert** > **Special Topic Reference** and select **Abstract**, **Draft Introduction**, **Notices**, **Dedication**, **Colophon**, or **Preface**. Then type a topic title, click **Create**, and choose a template.
Create and insert a booklist *	Click **Insert** > **Booklist** and select **Table of Contents**, **Figures List**, **Tables List**, **Abbreviations List**, **Trademark List**, **Bibliography**, **Glossary**, or **Index**. Then select the booklist and click **Edit** > **Properties** and select or create a topic.

* These actions can only be done when editing only in XML view, and not in Map Editor.

Note: Some booklists (Table of Contents and Index) are generated lists. You do not need to select or create a topic for these.

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**.

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.

Creating documents on page 34
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**.

Authoring structured content on page 81
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.

Create and insert a glossary

You create glossary terms and definitions in a single file or group of files. Your bookmap can contain one or more glossary files. Templates for single and multiple glossary entries are provided. When you use the XMetaL

Enhanced deliverable types to create output, glossary terms are merged and sorted according to the language you specify in the Language property (`xml:lang` attribute).

1. In the XML view of the bookmap, place the cursor inside the book lists component and add a glossary list using the Element List.
2. Click **File** > **New** and select the **DITA Glossary** tab.
3. Create a new file using one of the following templates:
   - **Glossary - Multiple.** This template lets you enter one or more glossary terms.
   - **Glossary - Single.** This template lets you enter a single glossary term.
4. Enter the term(s) and definition(s) in the new glossary file and save.
5. In the XML view of the bookmap, click inside the `<glossarylist>` element.
6. Using the Attribute Inspector, specify a value for the `navtitle` attribute .
7. In the `<glossarylist>` element, click **Insert** > **Topic Reference** and select the glossary file.

Related Links

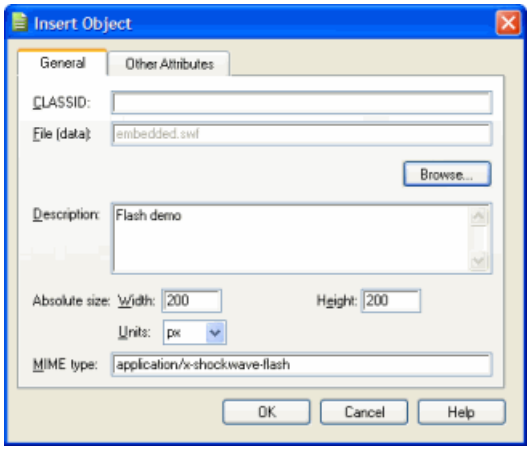
Specifying a language on page 129

The language specified for your map or bookmap is used by processors such as the DITA Open Toolkit to determine sort order in booklists like, for example, glossaries. You can specify a language using the Language property (`xml:lang` attribute).

Objects

An object describes animated images, applets, plug-ins, ActiveX controls, video clips, and other multimedia objects in a topic for rendering after transformation to HTML.

To do this	Follow these steps
Insert an object	Click **Insert** > **Object**, select a file, and specify attributes as required




```
<object
type="application/x-shockwave-flash" longdescre="Flash demo"
data="embedded.swf" height="200px" width="200px">
</object>
```

Note: You may need to include the CLASS ID for some output formats for some browsers.

Note: Some file formats require browser plug-ins.

Cross-references and related links

Cross-references and related links direct readers to additional information. This information can be a DITA topic, a non-DITA file, or a Web page. If you insert a cross-reference or a related link to a DITA topic, XMetaL also inserts the title of the topic you selected. This text is updated when you refresh references or when you generate output. Cross-references can be inserted in most places within a topic. Related links can be inserted only at the end of topics.

To do this	Follow these steps
Insert a cross-reference or related link	Click **Insert** > **Link** and select a link type
Refresh all references in a topic	Click **Edit** > **Refresh All References**

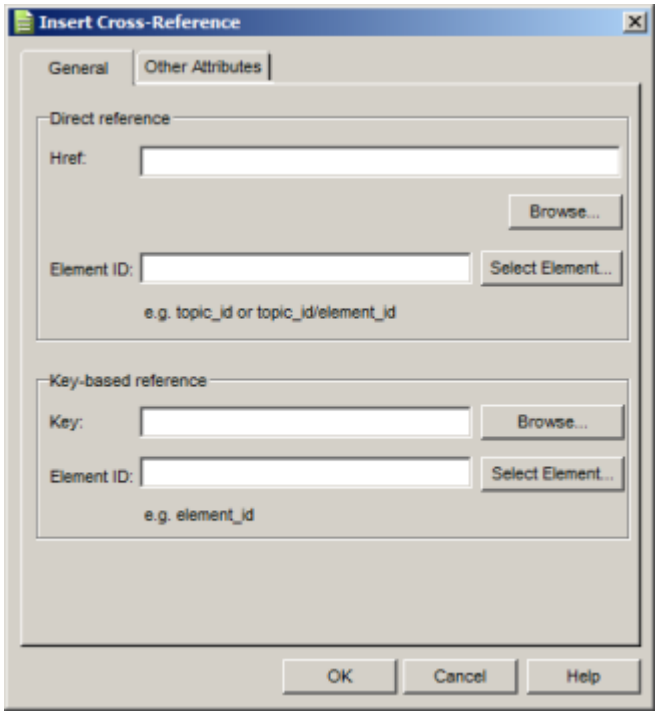
Tip: You can insert a cross-reference to a section or other element within a topic by selecting an element in the Insert Cross-Reference dialog box. (To view a list of target elements, click the **Target Element Type** list.)

Table 37: Link types

Name	Description	Element	Attribute	Default value
Cross-reference	Specify a location within the current topic, another DITA topic, or a location within another DITA topic	<xref>	href	*the target element*
			keyref	*the target key*
			type	*the type of the target element, e.g., fig, table*
			format	dita
			scope	local
File reference	Specify a file on your file system or content repository	<xref>	href	*the target element*
			keyref	*the target key*
			format	*file extension of the target file, e.g., pdf*
			scope	peer
Web link	Specify a URL or e-mail address	<xref>	href	*the target element*
			keyref	*the target key*
			format	html
			scope	external
Related link to topic	Specify a DITA topic	<link>	href	*the target element*
			keyref	*the target key*
			type	*the type of the target element, e.g., fig, table*
			format	dita
			scope	local

Name	Description	Element	Attribute	Default value
Related link to Web page	Specify a Web page or e-mail address	<link>	href	*the target element*
			keyref	*the target key*
			format	html
			scope	external
Related link to File	Specify a file on your file system or content repository	<link>	href	*the target element*
			keyref	*the target key*
			format	*file extension of the target file, e.g., pdf*
			scope	peer

The **Insert Cross-Reference** dialog box allows you to insert direct references or, when using DITA 1.2, key-based references. The following image is the **Insert Cross-Reference** dialog box when DITA 1.2 is used.



Indexes

You can create full-featured indexes for your documents by adding index markers to your topics. Index terms can contain simple terms consisting of one or more words, or terms that indicate a parent-child relationship (sub-entries).

To do this	Follow these steps
Insert an index marker	Click **Insert** > **Index Marker** and type an index term

Tip: You can add text to the Index Term field by selecting the words in your document first.

Tip: You can create sub-entries by separating terms with commas, for example, ‘Animals,Mammals’. (Do not type a space after the comma.)

Tip: You can add additional markers by clicking the **More Markers** button.

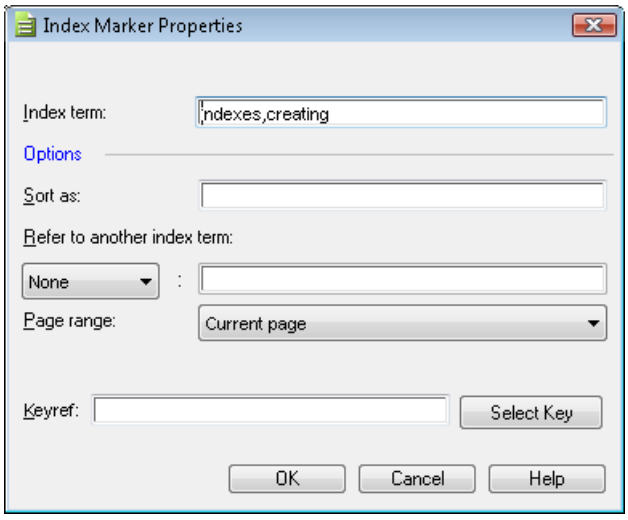
Options

You have the option of specifying alternate sorting for a term. For example, you may want to sort the terms ‘E*Corral’, ‘E*Kennel’ , and ‘E*Terrarium’ as ‘ECorral’, ‘EKennel’, and ‘ETerrarium’. You can also add terms that refer to other terms. These are called ‘See’ or ‘See also’ terms.

To specify that your index term is covered in a range of pages, you need to create page range index markers. For example, you may have a topic, ‘Mammals’, that is discussed from pages 3 to 4. In this case, need to insert one index marker at the beginning of the discussion to indicate the start of the range, and one at the end to indicate the end of the range. The current page is the default range (in this case, no range is specified). Page ranges are identified by name.

Table 38: Index marker options

Use this option	To do this
Sort as	Specify alternate sorting for the term
Refer to another index term	Create an index term that refers to another index term
Page range	Specify a page range for the current index term (if you are inserting an End of Page Range marker, leave the term blank)
Keyref	Specify a key reference, or click the **Select Key** button to select a key reference from the *Managing Key Spaces* on page 143 dialog box.



Related Links

Specifying a language on page 129

The language specified for your map or bookmap is used by processors such as the DITA Open Toolkit to determine sort order in booklists like, for example, glossaries. You can specify a language using the Language property (`xml:lang` attribute).

Content references

Content references allow you to refer to an element and use that element's content in place of the current element. They are denoted by the `conref` attribute. This feature is useful for text that may change frequently such as product names or version numbers or text that is reused in a variety of locations. XMetaL Author simplifies the process of creating and inserting content references through reusable components.

To do this	Follow these steps
Insert a reusable component	Click **Reuse** > **Insert Reusable Component** and choose a file
Insert an element with a content reference	Click **Reuse** > **Insert Element with Content Reference**, choose a file, and select an element
Attach a content reference to an element	Click **Reuse** > **Attach Content Reference**, choose a file, and select an element
Detach (remove) a content reference from an element	Click **Reuse** > **Detach Content Reference**

Related Links

Creating content references on page 138
Content references can be created by inserting a reusable component, inserting an element with a content reference, or attaching a content reference to an element.

Displaying referenced content on page 140
When you open a file, referenced content is displayed according to the refresh preferences you have set in DITA options. You can also use the menus to refresh and show referenced content.

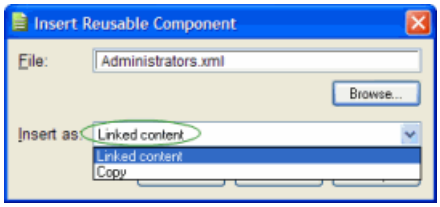
Creating a reusable component on page 141
When you create a reusable component, you save the selected element in a separate file. You can refer to this file using a content reference (`conref` attribute).

Creating content references

Content references can be created by inserting a reusable component, inserting an element with a content reference, or attaching a content reference to an element.

You can create content references in the following ways:

- **By inserting a reusable component.** You insert a reference to an element that you have previously created and saved (in a separate file) as a reusable component. If you insert as linked content, the source element specifies a `conref` attribute and you can refresh the reference at a later time. If you insert a copy, a `conref` attribute is not specified and the element and its content are copied into the document just as if you had typed it. Content that you insert this way cannot be refreshed.



- **By inserting an element with a content reference.** You can insert an element that specifies a `conref` attribute. If the element you are inserting is not valid in the current content model, a generalized element is inserted. For example, if you attempt to insert a `<steps>` element in a Reference topic, an `<ol>` (ordered list) element is inserted.
- **By attaching a content reference to an element.** You can attach a `conref` attribute to an existing element. The referenced element must have an ID.

Content Reference Range

When you create a content reference, you can insert a range of content from the referenced topic. You can do this by:

1. Selecting to show **Element IDs** or **Titles (for topics, sections, etc.)**.
2. Selecting an Element ID or a Title from the **Start of Range** column.
3. Checking **End of Range**.
4. Selecting an Element ID or a Title from the **End of Range** column.

The content from the range of Element IDs or Titles will then appear in the topic.

Requirements

Content references must conform to the following requirements:

- The target file specified must exist
- The target ID must exist in the target file
- The target document must be valid XML
- The target must be a different node than the source node, that is, it must not be a circular reference
- The target element and the referencing element must be of the same type or the target element must be generalizable back to the source type
- The target domain set must be equal to or a subset of the source domain set
- The target element must be a descendent of a topic or a map

Example

The file `About_user_accounts.dita` has a `<section>` element with a `conref` attribute. This attribute refers to a `<section>` element that was saved as a reusable component in a separate file, `administrators.xml`. The reusable component file contains a root element, `<ditacomponent>`, that is a specialization of the `<topic>` element. The `<ditacomponent>` element contains a child `<reusable-content>` element that is a specialization of the `<required-cleanup>` element.

```
<!--
the source file: About_user_accounts.dita --> <concept>
<title>About user accounts</title> <conbody> <p>There
are two types of accounts: administrator and user. <!-- referenced content
is stored outside of the source element --> <section
conref="administrators.xml#reusableconcept/administrators"> <!-- local
content is stored in the file --> <title><?xm-replace_text_Section
Title?></title> <p><?xm-replace_text_Paragraph?></p>
</section> ... </conbody> </concept>
```

```
<!-- the target file: administrators.xml --> <ditacomponent
id="reusableconcept"> <reusable-content> <!-- the referenced
content --> <section id="administrators">
<title>Administrators</title> <p>Reviewer
```

```
<i>administrators</i> are responsible...</p> </section>
</reusable-content> </ditacomponent>
```

Related Links

Displaying referenced content on page 140
When you open a file, referenced content is displayed according to the refresh preferences you have set in DITA options. You can also use the menus to refresh and show referenced content.

Creating key references on page 143
Links, topic references and content reference can use key references to point to the destination.

Displaying referenced content

When you open a file, referenced content is displayed according to the refresh preferences you have set in DITA options. You can also use the menus to refresh and show referenced content.

To do this	Follow these steps
Refresh (and show) all referenced content	Click **Edit** > **Refresh All References**
Refresh and show a single content reference	Select a content reference and click **Reuse** > **Refresh and Show Referenced Content**
Show local content for a single content reference	Click **Reuse** > **Show Local Content**
Show referenced content for a single content reference	Click **Reuse** > **Show Referenced Content**
Edit a content reference	Click **Reuse** > **Open Referenced File**

Note: When you refresh references, the latest version of all referenced content is displayed. Local content is not overwritten.

Referenced content and local content

XMetaL distinguishes between referenced content and local content.

Referenced content is stored outside of the source element, either within the same file or in another file, and is specified by the `conref` attribute. Referenced content is not editable.

There are two types of accounts: administrator and user.

Administrators

Reviewer *administrators* are responsible for managing the system and its user accounts. Their main responsibilities are adding users to the system, enabling/disabling existing users, updating user information, and creating other administrators.

Local content (referred to as a “placeholder” in the *DITA Architectural Specification*) contains elements, attributes, and text that you create, and is stored within the current file. If the local content is empty, its mini-template is displayed.

There are two types of accounts: administrator and user.

Section Title

Paragraph

Note:

- When you generate output, referenced content appears in place of local content.
- Find and replace, spell check, and track changes accept/reject functions operate on local content only. These operations may force local content to be displayed.
- To set the attribute values of any element that has a `conref` attribute, you must show local content.
- Only local content is checked for validity.

Related Links

DITA options on page 167
You can control DITA behaviors using the settings in the DITA Options dialog box. Options can be set for all specializations or on a per-specialization basis.

Setting attribute values on page 88
You can set attribute values through the Attribute Inspector or through the Edit Properties dialog.

Creating a reusable component

When you create a reusable component, you save the selected element in a separate file. You can refer to this file using a content reference (`conref` attribute).

1. Select the content you want to make into the reusable component.

   Note: If you want to reference multiple elements, they must be contained within a single parent element.

2. Click **Reuse** > **Create Reusable Component**.
3. Enter the following information:
   - **Component range -** Select the current element or an ancestor.
   - **Description -** Type a description for the component.
   - If you want to replace the selected text with a reference to the component you are in the process of creating, click **Replace selected content with a reference to the new component**. When you select this option, XMetaL creates a `conref` attribute on the current element and assigns a value to it. The value contains the ID of the reusable component. The contents of the current element are replaced with the element's mini-template.
   - If you want to replace the selected text as it appears throughout the document, click **Find other candidates**. When you select this option, XMetaL searches for other matches after you have saved the reusable component. The results of the operation are displayed in the Results window.
4. Click **Continue** and save the component.

Key references

Key references are an indirect addressing mechanism introduced in DITA 1.2. Keys are defined in the DITA map. Topics can be given a symbolic name (keys attribute) that points to the path of the topic (href attribute). References can now point to the Topic by using a key reference to the symbolic name. The topic path only needs to be updated once in the DITA map in which it is defined.

Creating key definitions

Key definitions are defined in the DITA map. You can use the keys attribute within the topicref element, or the keydef element to define keys. By default, the topicref element will include the topic in the navigation when generating an output, while the keydef element will not.

To do this	Follow these steps
Insert a key definition using the topicref element	In the Map Editor, click the **Insert Reference** icon (), and then select **Topic Reference**. In the Insert Topic Reference dialog box, type in the Key into the **Keys** field
Insert a key definition using the keydef element	In the Map Editor, right-click on the map. In the menu that appears, select **Append** > **Key Definition**.
Insert a key definition with keyword using the keydef element	In the Map Editor, right-click on the map. In the menu that appears, select **Append** > **Key Definition with Keyword**.
Add a key definition to an existing topic	In the Map Editor, right-click on a topic. In the menu that appears, select **Element Properties**.

Key Definition

Key definitions are defined in the DITA map. The Key Definition can be set as a keys attribute for the topicref element. The following example shows that the concepttopic.dita topic file has a key named concept associated with it, while the tasktopic.dita topic file does not have a key associated with it.

```
<map> <title>DITA Map
Title</title> <!-- key defined for concepttopic.dita topic-->
<topicref keys="concept" href="concepttopic.dita"/> <topicref
href="tasktopic.dita"/> </map>
```

The key can also be defined by using the keydef element. The following example shows that the key concept is associated with the concepttopic.dita topic file. By default, the processing-role attribute is set to resource-only, therefore the topic will not appear in the output navigation. However, if it is set to normal, the topic will appear in the output navigation.

```
<map>
<title>DITA Map Title</title> <!-- key defined for
concepttopic.dita topic--> <keydef keys="concept"
href="concepttopic.dita" processing-role="resource-only" /> <topicref
href="tasktopic.dita"/> </map>
```

Key Definition with Keyword

Keys and key references provide another way to handle variables. The <keyword> element is used within <keydef> element to define keywords; these keywords are then referenced elsewhere. The following example illustrates the keyword "XMetaL Author 10.0" defined.

```
<keydef keys="sample" href="sample.dita"/> <topicref
keys=“sample" href="sample.dita"/> <keydef keys="product-name">
<topicmeta> <keywords> <keyword>XMetaL Author
7.0</keyword> <keywords> </topicmeta>
</keydef>
```

When creating ley definitions, the **Find other candidates** operation can be selected to open the Find in Files dialog to find other matches. The results of the Find in Files operation are displayed in the Results window.

To make use of a keyword, use a key reference to reference the key definition. The following example illustrates references pointing to the keys defined in the previous example.

```
<xref keyref="sample"/> <link keyref="sample"/>
<keyword keyref="product-name"/>
```

Creating key references

Links, topic references and content reference can use key references to point to the destination.

To do this	Follow these steps
Insert Element with Key-based Content Reference	Click **Reuse** > **Insert Element with Key-based Content Reference**
Attach Key-Based Content Reference	Click **Reuse** > **Attach Key-Based Content Reference**
Detach Key-Based Content Reference	Click **Reuse** > **Detach Key-Based Content Reference**
Insert Element with Keyref	Click **Reuse** > **Insert Element with Keyref**

You can create key references in the following ways:

- **By inserting an element with a key-based content reference.** You can insert an element that specifies a `conkeyref` attribute. If the element you are inserting is not valid in the current content model, a generalized element is inserted. For example, if you attempt to insert a `<steps>` element in a Reference topic, an `<ol>` (ordered list) element is inserted.
- **By attaching a content reference to an element.** You can attach a `conkeyref` attribute to an existing element. The referenced element must have an ID.
- **By inserting links using keys.** You can create links by using key references.

Related Links

Creating content references on page 138

Content references can be created by inserting a reusable component, inserting an element with a content reference, or attaching a content reference to an element.

Managing Key Spaces

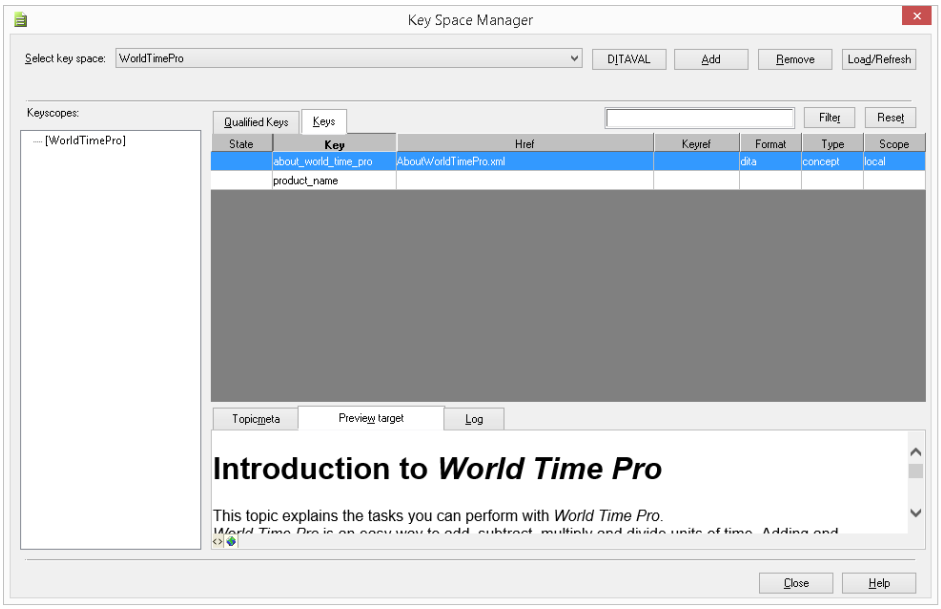
A Key Space is the set of possible keys that is established by the hierarchy of the root map and its directly addressed, local scope descendant maps. You can manage key spaces by using the **Keyspace Manager** by going to **Reuse** > **Show Keyspace Manager** or by clicking the **Keys Operations** icon, and selecting **Show Keyspace Manager**, in the Map Editor.

To do this	Follow these steps
Configure Keyspace Associations	In the Map Editor, click the **Keys Operations** icon and select **Configure Key Space Association...** from the menu
Add Keyspace	From the main menu, click **Reuse** > **Show Keyspace Manager** and click on **Add**
Attach Keyspace	In the Map Editor, click the **Keys Operations** icon and select **Configure Key Space Associations**, and then click on **Attach**

To do this	Follow these steps
Load or refresh Keyspace	In the Map Editor, click the **Keys Operations** icon and select **Configure Key Space Associations**, and then click on **Load/Refresh** OR From the main menu, click **Reuse** > **Show Keyspace Manager** and click on **Load/Refresh**
Apply .ditaval to Keyspace	From the main menu, click **Reuse** > **Show Keyspace Manager** and click on **Ditaval**. For further details, see *Configuring a .ditaval Association* on page 145
Detach Keyspace	In the Map Editor, click the **Keys Operations** icon and select **Configure Key Space Associations**, and then click on **Detach**

The Key Space Manager will allow you to see and edit available key spaces. Each DITA map can be chosen to define a key space. Topics opened from the Map Editor will have that map's key space implicitly associated for future key-related actions.

The Key Space Manager has the following settings:



- **Keyscopes -** Tree-view that displays where in the map a given keyscope is defined, and lets you control which scope you want first.
- **Key spaces list -** Displays the effective keys and their values.
- **Filter -** Allows you to filter the list by key, href, element name, format, or type.
- **Reset** - Clears the selected filters.
- **Keys list -** Displays a list of keys associated with the keyspace, along with the associated href, element name, format, and type.
- **Topicmeta tab -** Displays a preview of the metadata information.
- **Preview target tab -** Displays a preview of the topic.

- **Log tab -** Displays a log of warnings.
- **Document View -** Allows you to view the Topicmeta tab, the Preview target tab, and the Log tab. The Preview target tab can be viewed in the Plain Text and Page Preview views.

Key Space Association

When refreshing references, XMetal Author searches the current key space for valid keys to use. To refresh references successfully, the open file needs to be associated with a key space.

Files that are opened directly from the Map Editor are automatically set up with the same key space assigned to the ditamap. If the file is opened from another source, XMetaL Author will by default prompt you to associate it with a key space.

Related Links

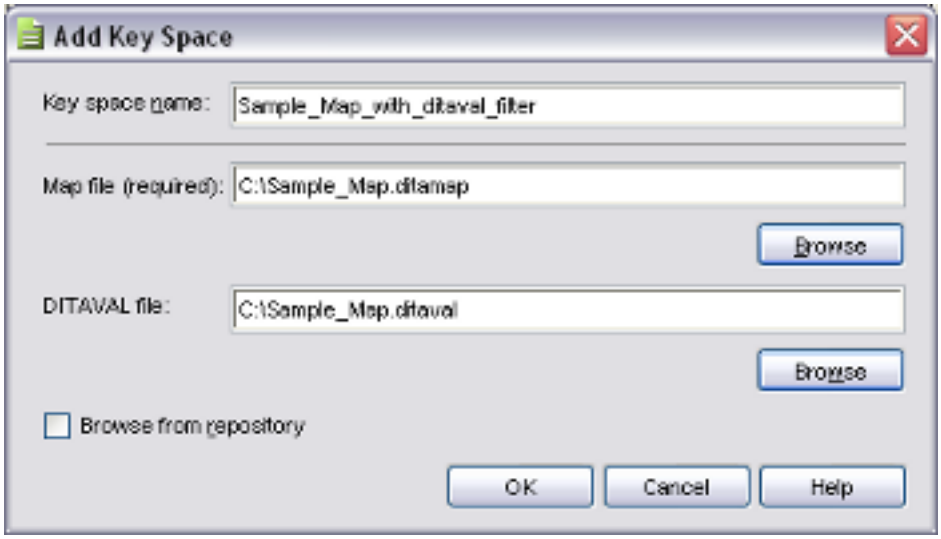
Options on page 31

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

Adding a Key Space

You can add a Key Space through the Key Space Manager (**Reuse** > **Show Keyspace Manager**).

1. Click on **Add** in the Key Space Manager.



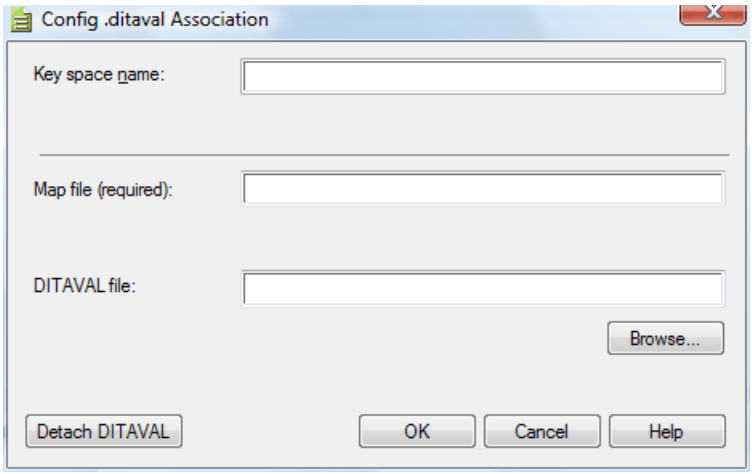
2. (Optional) Type in the name of the key space in the **Key space Name** field. If no name is specified, the key space name will be the same as the DITA Map filename.
3. (Optional) Check **Browse from repository** if you want to browse for the files in the current CMS system.
4. Click **Browse** to select a DITA Map file.
5. (Optional) Click **Browse** to select a DITAVAL file.

Configuring a .ditaval Association

You can add a .ditaval association through the Key Space Manager (**Reuse** > **Show Keyspace Manager**).

1. Click **Ditaval** in the Key Space Manager.

   The Config .ditaval Association dialog opens. The name of the current key space is displayed in the **Key space Name** field and The current DITA Map file is selected in the **Map file** field.



2. Click **Browse** to select a DITAVAL file you want to associate with the key space that is currently open.
3. Click **Detach DITAVAL** to remove an existing association.
4. Click **OK** to save changes.

Ditaval references

A Ditaval reference points to a Ditaval document that specifies conditions for the map or map branch where it is referenced.

To do this	Follow these steps
View the properties of a ditaval reference	In the Map Editor, right-click the ditaval reference. In the menu that appears, select **Element Properties**. The **Ditaval Reference Properties** dialog box can be used to view and edit reference properties.

Creating ditaval references

Ditaval references can be created in the Map Editor.

To do this	Follow these steps
Append a ditaval reference to a map	In the Map Editor, right-click on the map you want to create the reference. In the menu that appears, click **Append > Ditaval Reference**. In the **Insert Ditaval Reference** dialog box, map the reference to a .ditaval file and enter a navtitle to display a custom name for the reference instead of the filename. An appended ditaval reference is inserted as the last reference in the map.

To do this	Follow these steps
Insert a ditaval reference in a map or map branch	In the Map Editor, right-click on a location in the map where you want to create the reference. In the menu that appears, click **Insert > Ditaval Reference** if you want to place the reference below the current map item, or **Insert > Ditaval Reference** if you want to place the reference above it. In the **Insert Ditaval Reference** dialog box, map the reference to a .ditaval file and enter a navtitle to display a custom name for the reference instead of the filename.

Note: The navtitle and other attributes of ditaval references can be viewed and edited in the Map Editor's Attribute Inspector.

Related Links

Map Editor Attribute Inspector on page 124
The Map Editor's attribute inspector can be used to edit the attributes of items in the map.

Relationship tables

Relationship tables (or reltables) indicate linking relationships between topics in a ditamap.

A relationship table defines the relationships in a grid-like structure, with rows in the table determining the links between topics.

To Do This	Follow These Steps
Append a relationship table to a ditamap	In the Map Editor, right-click on the ditamap. In the menu that appears, select **Append > Relationship Table**. The Insert Relationship Table dialog box allows you to set the columns and number of rows for your relationship table. The produced relationship table is appended as the last file in your ditamap collection.

TIP: It's recommended that you wait until you're mostly done with your content before producing a relationship table as you may be changing link names as you're creating your content.

Conditional text

You can create versions of your deliverables without having to maintain more than one set of source content by applying conditions. For example, you may have some content that is intended for administrators and other content that is intended for users. You can indicate which sections are intended for each audience and style your conditions so that you can easily identify conditional content.

When you apply a condition, you specify an attribute and a value. For example, when you set a value of 'administrator' for the `audience` attribute of a paragraph, the following markup results:

```
<p
audience="administrator"> ... </p>
```

DITA defines the following base conditional attributes:

- `audience`
- `platform`
- `product`
- `otherprops` (for anything else)

Here is the definition of the `audience` attribute and the values 'administrator' and 'user'. The `title` attribute contains the user-friendly name that appears in the Apply/Remove Conditions dialog.

```
<attribute
name="audience" title="Audience"> <value name="administrator"
title="Administrator" /> <value name="user" title="User" />
</attribute>
```

Creating and modifying conditions in XMetaL

You can change the conditional attributes and values and create new ones by modifying the condition configuration file using XMetaL.

You can modify the file in the following ways:

- Add or change values for audiences, platforms, or products
- Change how attributes and values appear in the Apply/Remove Conditions dialog
- Add an `otherprops` attribute that includes new values
- Add new attributes (other than `otherprops`) and values

Note: If you add attributes other than `otherprops`, you also need to add them to your DITA DTDs. (If you are using only the base DITA attributes, you do not have to change the DITA DTDs.)

To configure or view current settings for conditional text in XMetaL, select **Tools** > **Configure Conditional Text** to open the Configure Conditional Text dialog.

To do this	Follow these steps
Create a new configuration	Click the  button, and then add values
Save a configuration	Click the  button
Save a configuration with a new name	Click the  button

To do this	Follow these steps
Undo changes	Click the button **Note:** Applies only to changes that were made since the file was last saved.
Delete a configuration file	Click the button
Rename a configuration file	Click the button, and then enter the new name
Open the folder containing the configuration file(s)	Click the button
Refresh all configuration files	Click the
Apply the configuration to a particular DTD **Note:** The built-in configuration can be global and does not have to be applied to a public ID.	Enter the name of the public ID in the **Apply to Public ID** field.
Apply the configuration to other DTDs	Enter the name of the public ID in the **Also apply to Public IDs** field.

Creating and modifying conditions in a text editor

You can change the conditional attributes and values and create new ones by modifying the condition configuration file in a text editor. In order for your changes to be effective, you need to re-start XMetaL Author.

Conditional attributes and values are defined in the condition configuration file, `%AppData%\Roaming\SoftQuad\XMetaL\<version>\ct_config.xml`. You can modify the file in the following ways:

- Add or change values for audiences, platforms, or products
- Change how attributes and values appear in the Apply/Remove Conditions dialog
- Add an `otherprops` attribute that includes new values
- Add new attributes (other than `otherprops`) and values

Note: If you add attributes other than `otherprops`, you also need to add them to your DITA DTDs. (If you are using only the base DITA attributes, you do not have to change the DITA DTDs.)

The following example adds the value ‘evaluator’ to the `audience` attribute.

```
<attribute name="audience" title="Audience"> ... <value
name="evaluator" title="Evaluator" /> </attribute>
```

The following example `otherprops` attribute creates the values ‘beta’ and ‘1.0’. The attribute appears as ‘Release’ in the Apply/Remove Conditions dialog.

```
<attribute name="otherprops"
title="Release"> <value name="beta" title="Beta" /> <value
name="1.0" title="1.0" /> </attribute>
```

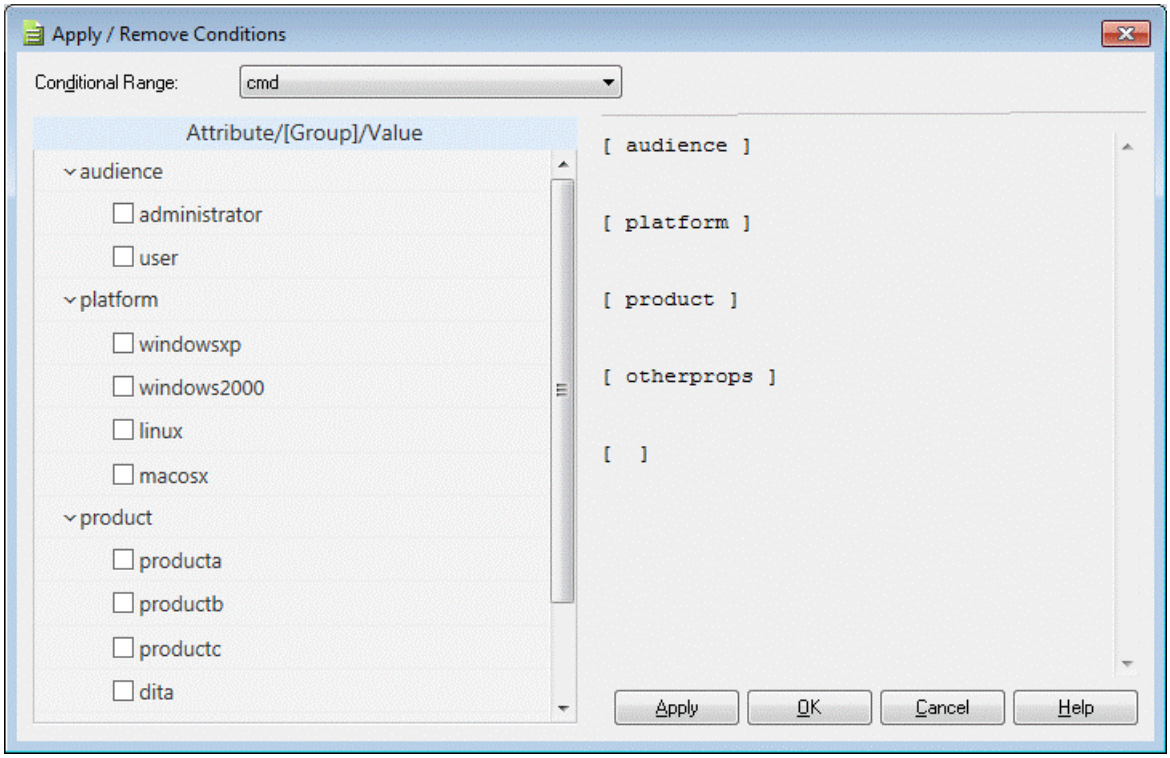
Apply a condition

You can apply conditions to the current element or selection, or any ancestor.

1. Select text or an element.
2. Click **Reuse** > **Apply/Remove Conditions**.

   Tip: You can also apply conditions through the **Element Properties** dialog.

3. Select one or more values.
   For example, if you want the text you selected to be for the administrator audience only, check the **Administrator** box.



Tip: The attributes and values specified in the condition configuration file are displayed in the Attribute Inspector. You can set a value for a conditional attribute (for example, `audience`) in the Attribute Inspector.

Related Links

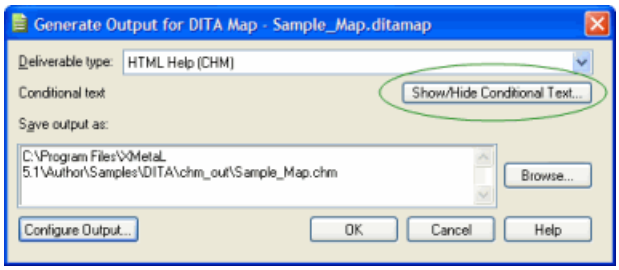
Setting attribute values on page 88
You can set attribute values through the Attribute Inspector or through the Edit Properties dialog.

Show conditional text in previews and output

You can specify which conditions to include in previews and output through the **Generate Output** dialog. Advanced options let you export your settings to a DITAVAL file or to use another DITAVAL file. DITAVAL files are stored in `..\XMetaL\Author\DITA\XACs\shared\renditions\filters`.

1. Open a DITA map file.

2. In the Map Editor, click the **Generate Output For DITA Map** icon ( ).
3. Select a deliverable type and click **Show/Hide Conditional Text**.



4. Expand an attribute and select one or more values.

   Content that is common to all deliverables (that is, content that has no conditions applied), plus content that matches at least one selected value for each attribute will be shown.
5. (Optional) Click **Advanced** and specify advanced settings.

Related Links

Publishing on page 152

XMetaL uses the DITA Open Toolkit to transform DITA maps into an output deliverable such as, for example, a PDF or CHM file. You supply settings to the DITA Open Toolkit through the combination of an output format and a deliverable type. You can preview a topic before you generate output and you can view processing messages in the output log after generating output.

Style conditional text

You can control how conditional text appears in XMetaL Author.

Note: This feature is disabled for limited users under Citrix.

1. Click **Reuse** > **Style Conditional Text** OR **Tools** > **Style Conditional Text**.
2. Expand an attribute and select one or more values.
3. For each value, indicate the following:
   - Text color
   - Highlight color
   - Format
4. You can also perform any of the following actions:

To do this	Follow these steps
Save a style file	Click the button
Undo changes	Click the button **Note:** Applies only to changes that were made since the file was last saved.
Delete a style file	Click the button
Rename a style file	Click the button, and then enter the new name

To do this	Follow these steps
Open the folder containing the style file(s)	Click the  button
Refresh all style files	Click the 
Allow styling of conditional text in Normal and Tags On views	Select the "Style conditional content in Normal and Tags On views" check box

Publishing

XMetaL uses the DITA Open Toolkit to transform DITA maps into an output deliverable such as, for example, a PDF or CHM file. You supply settings to the DITA Open Toolkit through the combination of an output format and a deliverable type. You can preview a topic before you generate output and you can view processing messages in the output log after generating output.

To do this	Follow these steps
Generate output (publish)	In the Map Editor, click the **Generate Output for DITA Map** icon () and select a deliverable type (click **Show/Hide Conditional Text** to include conditions in your output)
View the output log (debug output)	In the Map Editor, click the **View Output Log** icon ()
Preview a DITA topic or map	Click **View** > **Page Preview**
Set output options	Click **Tools** > **Options** > **DITA Output**

Output options

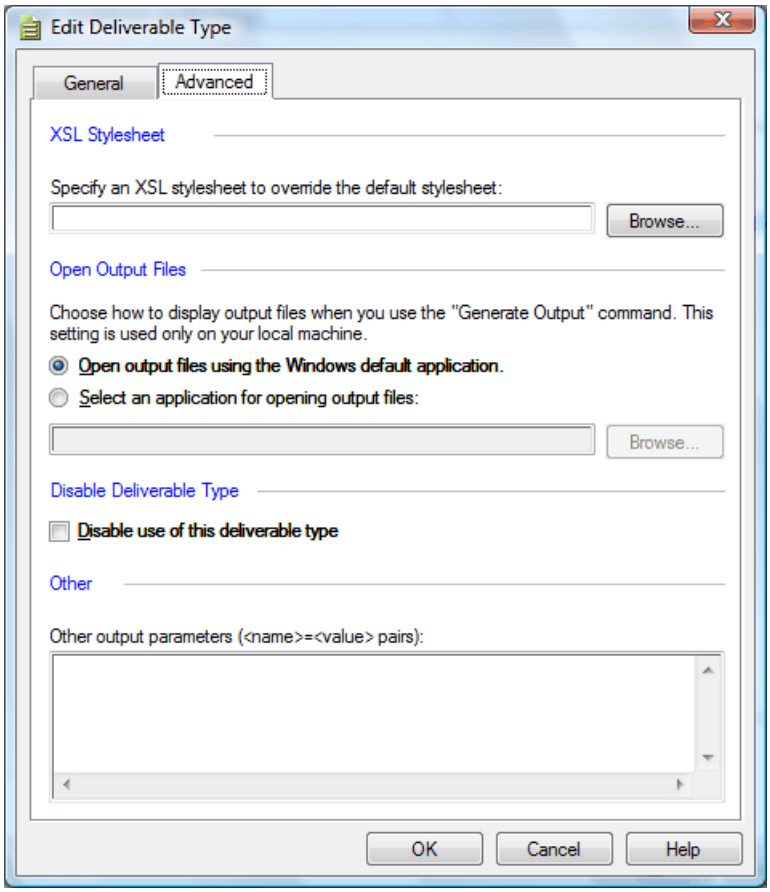
You can set output options in the **Options** window:

- The **Preview** page lets you set a deliverable type to use when previewing a topic or map.
- The **Advanced** page lets you choose elements to display in output and set debugging options. You can specify additional parameters as name/value pairs in the **Other Output Parameters** text box.

On the **Advanced** page, you can:

To do this	Follow these steps
Set the Generate Output process to happen in the background (minimizes the **Generate Output** dialog box during output generation to allow you to continue authoring)	Remove `rem_` from the line `rem_cmd_synchro_mode = 2`.

Note: The settings you make here apply to *all* deliverable types.



Output log

The output log is displayed in the Results panel. The log includes Build Info and Error Summary sections. In the Error Summary section all warnings are highlighted with a yellow frame and all errors are highlighted with a red frame.

You can quickly navigate to build errors and warnings by clicking the downward arrow icon (↓) adjacent to an error or warning. You can also return to the original location by clicking the upward arrow icon. Accessible files and DITA OT errors messages are highlighted blue. You can click on a file causing a given error to open that file, and an error message to view the details of the DITA OT error.

The location of the log file is indicated by the **Log Path** specified in the Build Info section of the log file.

You can set the log to always open after you generate output by setting the following parameter:

```
cmd_always_open_log = yes
```

DITA DTDs

The publishing DTDs are stored in the following folder: `..\Program Files\Common Files\XMetaL Shared\DITA_OT\dtd`.

Related Links

Specifying parameters on page 161

You can change the way you generate output, including the appearance of your output deliverable, by specifying parameters. You can specify parameters either by setting options in fields and check

boxes or by typing. Parameters can be global or local. Your settings are stored in the publishing configuration files.

Displaying referenced content on page 140
When you open a file, referenced content is displayed according to the refresh preferences you have set in DITA options. You can also use the menus to refresh and show referenced content.

Appendix C: Configuring XHTML, CHM and WebHelp output on page 201
You can use XMetaL to produce XHTML and Microsoft HTML Help (CHM) output using the DITA Open Toolkit.

Appendix D: Configuring PDF output on page 207
You can use XMetaL in conjunction with the DITA Open Toolkit to produce PDF output from your DITA topics and maps. To produce PDF, XMetaL first transforms DITA-based content into an FO file (XML with formatting objects) and then sends it to an FO processor, which renders it as PDF.

Deliverable types

A *deliverable type* specifies an output format and additional configuration settings. For example, you can apply your own CSS stylesheet to change the appearance of HTML output files. Several deliverable types for popular output formats are included out of the box.

To do this	Follow these steps
Create a deliverable type	Click **Tools** > **Options** > **DITA Output**, then click **Add** and select an output format
Edit a deliverable type	Click **Tools** > **Options** > **DITA Output**, then select a deliverable type and click **Edit**

Table 39: Deliverable types

Name	Description
Book via RenderX	Enhanced PDF output using XEP. Includes improved pagination, indexing, and table layouts. Also referred to as the 'Idiom plug-in' or 'Idiom FO 1.1' in the DITA Open Toolkit documentation. Uses the DITA OT 'pdf2' transtype.
Eclipse Content	Produces an XML file for each topic reference and a root XML file for the map, and the index
Eclipse Help	Produces an HTML file for each topic reference and a root XML file for the map, and the index
EPUB (experimental)	Produces a single EPUB file. Includes support for custom CSS files and header/footer files.
HTML Help (CHM)	Produces a single compiled Microsoft HTML Help CHM file. Includes support for map and alias files for context-sensitive Help. Requires Microsoft HTML Help Workshop.
HTML2 (experimental)	Includes support for custom CSS files and header/footer files.

Name	Description
INDESIGN (experimental)	Produces a single production-quality Adobe InDesign file
JavaHelp	Produces an HTML file for each topic reference and a root JavaHelp map
KINDLE (mobi format experimental)	Produces a single mobi file. Includes support for custom CSS files and header/footer files.
Markdown GitBook files	Produces output in GitBook-flavored markdown syntax
Markdown GitHub files	Produces output in GitHub-flavored markdown syntax
Markdown files	Produces output in the markdown syntax
Multiple HTML files	Produces an HTML file for each topic reference and a root HTML file for the map. Includes support for custom CSS files and header/footer files.
Multiple HTML files with JavaScript-based table of contents (experimental)	Produces an HTML file for each topic reference and a root HTML file for the map. Includes support for custom CSS files and header/footer files. This deliverable includes support for a JavaScript-based table of contents.
Multiple HTML5 files	Produces an HTML5 file for each topic reference and a root HTML5 file for the map. Includes support for custom CSS files.
PDF via Antenna House Formatter and PDF5-ML plugin	Produces PDF output that includes a main XML file and subsequent XML files for each language. The main XML file contains the most commonly used style properties. This output requires installation of the Antenna House XSL Formatter to run.
Single HTML file	Produces a single HTML file with a linked table of contents. Includes support for custom CSS, header, and footer files. The ‘Single HTML File (example)’ deliverable type contains specific CSS, metadata, header, and footer files. You can modify these files to produce custom output.
The text processor for typesetters (troff)	Produces output that uses the troff transtype
WebHelp	Produces a compiled frameset help that features a table of contents, search and index. Viewed on an Internet browser, WebHelp lets you deliver help for web-based

Name	Description
	applications across multiple platforms.
XMetaL Enhanced PDF via RenderX XEP	Produces production-quality print output using XEP and a fully configurable set of parameters. See *XMetaL Enhanced deliverable types* on page 157 for more information.
XMetaL Enhanced PDF via RenderX XEP and Acrobat Distiller	Produces production-quality print output using XEP and a fully configurable set of parameters. Also includes support for EPS graphics. Requires purchase and installation of Adobe Acrobat Distiller. See *XMetaL Enhanced deliverable types* on page 157 for more information.

Note: By default, some deliverable types are disabled. To view them, click **Show disabled deliverable types** in the **DITA Output** option windows.

Options

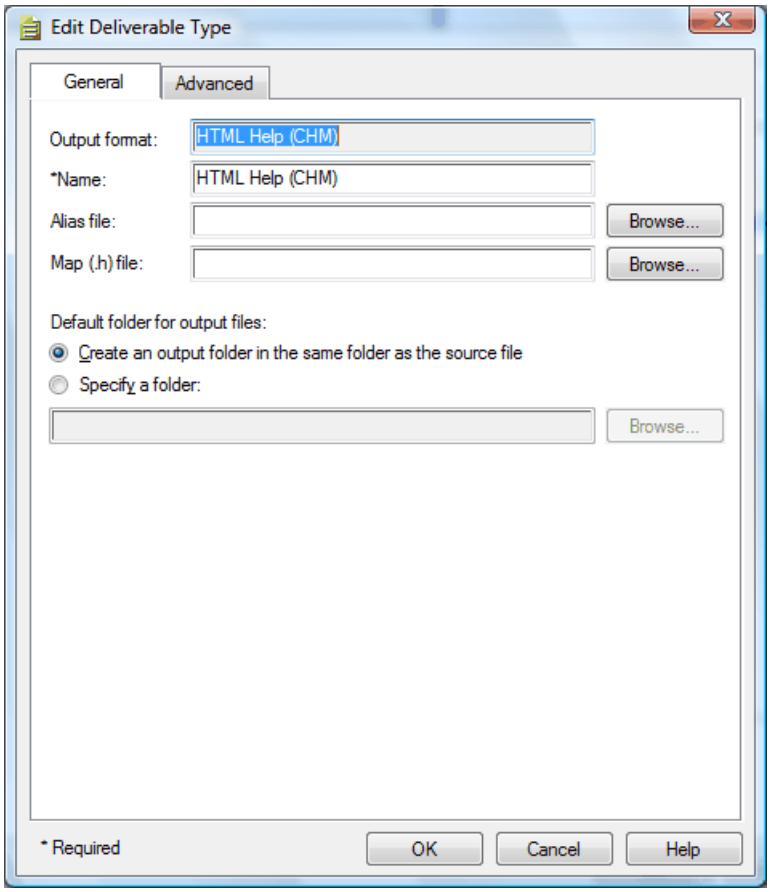
You can set options for a deliverable type through the **Edit Deliverable Type** dialog box:

- The General tab lets you specify an output folder.
- The Advanced tab lets you specify an XSL stylesheet, choose a viewer application, and enable/disable the deliverable type. You can specify additional parameters as name/value pairs in the **Other Output Parameters** text box.

Note: When you specify a stylesheet, you override one of the default transform (XSL) files in the DITA Open Toolkit. Specifying a stylesheet has the effect of setting the 'args' parameter. For more information, refer to the *DITA Open Toolkit User Guide*. This option is recommended for advanced users who are familiar with the DITA Open Toolkit and XSL.

Other options are available, depending on the output format.

Deliverable type	Options
Multiple HTML files, Single HTML file	Custom CSS stylesheet, header and footer files, extension for output files
HTML Help (CHM)	Alias and map file
XMetaL Enhanced PDF	Show/hide related links in output



Related Links

Specifying parameters on page 161

You can change the way you generate output, including the appearance of your output deliverable, by specifying parameters. You can specify parameters either by setting options in fields and check boxes or by typing. Parameters can be global or local. Your settings are stored in the publishing configuration files.

Show conditional text in previews and output on page 150

You can specify which conditions to include in previews and output through the **Generate Output** dialog. Advanced options let you export your settings to a DITAVAL file or to use another DITAVAL file. DITAVAL files are stored in `..\XMetaL\Author\DITA\XACs\shared\renditions\filters`.

Appendix C: Configuring XHTML, CHM and WebHelp output on page 201

You can use XMetaL to produce XHTML and Microsoft HTML Help (CHM) output using the DITA Open Toolkit.

XMetaL Enhanced deliverable types

You can generate production-quality print output out of the box using the 'XMetaL Enhanced PDF via RenderX XEP' and 'XMetaL Enhanced PDF via RenderX XEP and Acrobat Distiller' deliverable types. You can customize the output that you create with them through a fully configurable set of parameters.

These deliverable types work with the RenderX XEP print formatter that is included with XMetaL Author. They have also been tested with Antenna House XSL Formatter. They are optimized to produce book-type deliverables that include book lists such as a table of contents and index and book divisions such as parts and chapters.

The XMetaL Enhanced deliverable types feature processing improvements over previous print deliverable types and the default toolkit 'PDF2' output. For example, the <booktitlealt> and <bookpartno> appear as the subtitle and part number on the title page. Page numbers appear for topics contained within front matter. By default, page numbers and the book title appear in the footer. Headers are separated by a horizontal line.

The appearance of the book deliverable features improved default margins. The first page of chapters, parts, and appendixes are space-efficient and feature an increased right margin to accommodate tables, definition lists, and images. They do not include the wide left margin or mini-TOC in the default toolkit processing. Chapter headings are right-justified. Topic headings are not separated by a horizontal line.

Book output features improved typography, with a sans-serif font for titles, headers, and footers. <menucascade> elements use a greater-than ('>') symbol instead of the curved arrow used by the toolkit.

Icons for notes, tips, and other note-type elements have been improved and table rows now have a gray background.

Other enhancements

Other enhancements to the DITA Open Toolkit processing include the following.

- Seamless integration into the authoring environment. You can preview and generate output directly from the authoring interface through menus and dialogs.
- Ease of configuration and troubleshooting. XMetaL includes a default set of deliverable types for the various output formats supported by the toolkit. You can change and add new deliverable types and deploy them across an organization. You can customize output by specifying parameters.
- Single HTML file output format. You can create a single HTML file that includes a table of contents. The 'Single HTML file (example)' deliverable type demonstrates custom styling, and headers and footers.
- Glossary merging and sorting. Glossary entries are merged from multiple sources and sorted according to the language specified.
- Technical support. Contact XMetaL Technical Support for assistance with configuring the DITA Open Toolkit. Support policies are available from the XMetaL website.
- Improved documentation. Detailed documentation on how to customize PDF, HTML, and CHM output is provided.

Sample output

You can view an example of a book-type deliverable created using an XMetaL Enhanced deliverable type through **Help** > **XMetaL with DITA Evaluation Guide**.

Extending the publishing framework

XMetaL Author, together with the DITA Open Toolkit, provides a flexible framework for publishing DITA maps. You can extend this framework by creating and modifying output formats and specifying parameters.

The publishing framework lets you publish documents in any of the standard formats, including PDF, CHM, and HTML. An *output format* specifies the file format of an output deliverable and, in the case of PDF, a print formatter. A *print formatter* is a third-party tool that renders XML content as PDF. Each output format specifies a *transformation type* (transtype) that contains Java and XSL processing. Some transformation types are native to the DITA Open Toolkit and some are supplied by XMetaL. Transformation types are specified in the publishing configuration files.

You may want to override the settings in the output formats or specify new output formats. Consider the following scenarios:

- You need to override default parameter settings in an output format on a consistent and repeated basis. For example, you may need to specify alternative stylesheets in order to make the output conform to corporate style guidelines.
- Your organization needs to support additional targets as provided by new DITA Open Toolkit plug-ins. For example, you may wish to create an output format that supports a new print formatter.

Once you have created a new output format, you can distribute it to other users in a publishing configuration file.

Table 40: Output formats

Name	Description
PDF via FO with default processing	Basic PDF output. Uses the DITA OT ‘pdf’ transtype.
Book via RenderX	Enhanced PDF output using XEP. Includes improved pagination, indexing, and table layouts. Also referred to as the ‘Idiom plug-in’ or ‘Idiom FO 1.1’ in the DITA Open Toolkit documentation. Uses the DITA OT ‘pdf2’ transtype.
XMetaL Enhanced PDF via RenderX XEP	Enhanced PDF output using XEP and a fully configurable set of parameters. Provides production-quality print output out of the box. Uses the XMetaL 'pdf3' transtype, a plug-in based largely on 'pdf2'. Supports bookmaps.
XMetaL Enhanced PDF via Antenna House XSL Formatter	Enhanced PDF output using XEP and a fully configurable set of parameters. Requires purchase and installation of Antenna House XSL Formatter. Uses the XMetaL 'pdf3' transtype, a plug-in based largely on 'pdf2'. Supports bookmaps.
XMetaL Enhanced PDF via RenderX XEP and Acrobat Distiller	Enhanced PostScript output using XEP and a fully configurable set of parameters. Provides production-quality print output out of the box. Uses the XMetaL 'pdf3' transtype, a plug-in based largely on 'pdf2'. Supports bookmaps. By default, an attempt to open the output in Acrobat Distiller is made; however, other software capable of processing PostScript may be used instead.
XMetaL TopLeaf Plugin	Enhanced PDF output using TopLeaf's graphical page layout editor. Requires purchasing and installing TopLeaf Workstation. Uses the TopLeaf 'pdf' transtype.
Single HTML file	A single HTML file containing all content merged by the DITA OT (typically all topics referenced by a DITA map) and including a table of contents listing each topic at the top of the file.
Multiple XHTML files	Uses the XMetaL 'html' transtype.

Name	Description
HTML Help (CHM)	A single compiled Microsoft HTML Help CHM file containing all content merged by the DITA OT (typically all topics referenced by a DITA map). Uses the XMetaL 'htmlhelp' transtype.
WebHelp	A compiled frameset help of multiple HTML files containing all content merged by the DITA OT (typically all topics referenced by a DITA map) that features a table of contents, search and index.
JavaHelp	Uses the 'javahelp' transtype
Eclipse Help	Uses the 'eclipsehelp' transtype
Eclipse Content	Uses the 'eclipse content' transtype
The Text Processor for Typesetters (troff)	Uses the 'troff' transtype
Rich Text Format (RTF)	Uses the 'wordrtf' transtype
DocBook	Uses the 'docbook' transtype

Related Links

W3C XSL Specification
RenderX
Antenna House

Publishing configuration files

The publishing settings consist of batch code and parameters as specified in configuration files. Batch code is executed when you generate output for a DITA topic or map. You can supply values to the batch by setting parameters. These values are used by the DITA Open Toolkit when generating output.

Table 41: Publishing configuration files

Name	Description
..\XMetaL\Author\DITA\XACs\shared\renditions\print_dita142.xml	Contains parameter settings and batch code for output formats. The <globals> element contains parameters that apply to *all* output formats. The <config> elements contain parameters for *specific* output formats.
In Windows Vista and Windows 7 and 8: ..\Users\<user_name>\AppData\Roaming\SoftQuad\XMetaL\<version>\print_local.xml	Contains parameter settings for deliverable types. The <globals> element contains parameters that apply to *all* deliverable types. The <config> elements contain parameters for *specific* deliverable types. These settings override parameters of the same name in print_dita142.xml. The <base_config> ID attribute references a <config> element (that is, an output format) in print_dita142.xml

Specifying parameters

You can change the way you generate output, including the appearance of your output deliverable, by specifying parameters. You can specify parameters either by setting options in fields and check boxes or by typing. Parameters can be global or local. Your settings are stored in the publishing configuration files.

To specify	Do this
Global parameters	Click **Tools** > **Options** > **DITA Output**, and then click **Advanced**. The settings you make here apply to *all* deliverable types.
Local parameters	Click **Tools** > **Options** > **DITA Output**. Select a deliverable type and click **Edit**. Click the **Advanced** tab. The settings you make here apply to the selected deliverable type only.

Parameter sets

You can use the following parameter sets:

- XMetaL parameters. These are described in the `print_dita142.xml` configuration file.
- Java-based parameters and Ant-based parameters. These are described in the *DITA Open Toolkit User Guide*. Some output formats use Java-based parameters, others use Ant-based parameters.

Tip: You can check the output format used by your deliverable type by clicking **Tools** > **Options** > **DITA Output**. Then select your deliverable type and click **Edit**. The format is displayed in the **Output format** field.

Table 42: Parameter sets by output format

Java	Ant
Multiple XHTML files	HTML Help (CHM)
PDF via FO with default processing	Structured FrameMaker
JavaHelp	XMetaL Enhanced PDF via RenderX XEP
Eclipse Help	XMetaL Enhanced PDF via Antenna House XSL Formatter
Eclipse Content	XMetaL Enhanced PDF via RenderX XEP and Acrobat Distiller
The Text Processor for Typesetters (troff)	
Rich Text Format (RTF)	
DocBook	
Book via RenderX	
Single HTML file	

Parameter syntax

You can type parameters in the **Other Output Parameters** box in the **Advanced** tab. Parameters consist of name/value pairs. Check the documentation for valid values.

For Java parameters, the format is as follows:

```
DSDK_PARAM_<parameter name> =
<parameter value>
```

For Ant parameters, the format is as follows:

```
ANT_PARAM_<parameter name> = <parameter
value>
```

For example, to specify the ‘logdir’ parameter in the ‘Single HTML file’ output format, type the following:

```
DSDK_PARAM_logdir = html
```

To specify the same parameter in the ‘XMetaL Enhanced’ output format, type the following:

```
ANT_PARAM_args.logdir = html
```

Note: Ant parameters may contain more than one segment (denoted by the ‘.’ character).

Create an output format

You can create a new output format by creating an XML configuration file and saving it in the same folder as `print_dita142.xml`. You can distribute new configuration files in order to give all users access to the new output format.

1. Open `print_dita142.xml` in a text editor.
2. Create a new XML document that contains the following markup:
   - An XML declaration
   - The print configuration DOCTYPE declaration: `<!DOCTYPE print SYSTEM "print_config.dtd">`
   - A single `<print></print>` root element
   - Optionally, a `<globals></globals>` element that contains settings that apply globally to all output formats in the new configuration file. Refer to `print_dita142.xml` for an example.
3. Copy an existing `<config>` element from `print_dita142.xml` and paste it into the `<print>` element in the new configuration file.

   You may wish to choose a configuration that has settings similar to those you wish to use in the new configuration. For example, if your new configuration is based on HTML Help (CHM) output, copy and paste the HTML Help configuration.
4. Type a unique ID for the new `<config>` element.

   New deliverable types that you create for this output format will refer to this ID.
5. In the `<config_title>` element, type a unique title for the new configuration.
6. Add new parameters or change settings for existing parameters.

   Parameters are specified in `<instruction>` elements.
7. Change the batch code as required and save the file in the same folder as `print_dita142.xml`.

You can now create a deliverable type that uses the new output format.

Related Links

Modify an output format on page 163

To modify an output format, change the contents of `print_dita142.xml`, the publishing configuration file that contains parameters for output formats.

Modify an output format

To modify an output format, change the contents of `print_dita142.xml`, the publishing configuration file that contains parameters for output formats.

1. go to `..\XMetaL\Author\DITA\XACs\shared\renditions` and open `print_dita142.xml` in a text editor.
2. Scroll to the output format that you wish to modify.
   Output formats are specified in `<config>` elements.
3. Add new parameters or change settings for existing parameters.
   Parameters are specified in `<instruction>` elements.

Related Links

Create an output format on page 162
You can create a new output format by creating an XML configuration file and saving it in the same folder as `print_dita142.xml`. You can distribute new configuration files in order to give all users access to the new output format.

Troubleshooting publishing issues

When you generate output, you may receive error messages in the output log, or output may fail.

If you cannot generate output, you can check and debug the log file. In the log, warnings are surrounded by a yellow box and errors and warnings are surrounded by a red or orange box. You can jump to the next or previous warning or error by pressing Ctrl+Down Arrow or Ctrl+Up Arrow.

You can also refer to the *DITA Open Toolkit User Guide* and related online user forums. Issues related to generating output are also described in the release notes.

Also check the following:

- If a file with the same name (for example, a CHM or PDF file) as the one you are currently generating is open. Close the file and re-generate.
- If you are generating output from a DITA topic file that is saved with a '.dita' extension, check to see that you have included the following parameter in your deliverable type: 'DSDK_PARAM_ditaext = .dita' (for output formats that use Java) or 'ANT_PARAM_dita.extname=.dita' (for output formats that use Ant) and re-generate.
- The contents of the topics and the map are valid.
- Ensure that all link elements such as `<topicref>` and `<xref>` point to a target that exists. (If you are working with a specialized DITA document, check that you have assigned an ID to your specialized element if it is the target of a reference.)
- If your CHM file is written to a computer other than your own (for example, a network drive), you may not be able to view the contents. Copy the CHM file to your local drive.

File and folder naming rules

The DITA Open Toolkit has requirements for file and folder names. Problems with file and folder names may cause publishing to fail. Check the following:

- The file extensions of the topic references in your map are of one type; they must all be either '.xml' or '.dita'.
- Your map file has the extension '.ditamap'.
- All files are stored on the same drive letter.

- File names do not contain punctuation except for the dot (.) before the file extension.
- Folder names in paths (for example, in <xref>, <image> and <topicref> elements) do not contain spaces or punctuation.
- Your filenames conform to the naming recommendations.

Related Links

Saving documents on page 40
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.

Options on page 31
You can set options through the **Tools** menu.

DITA specializations

The DITA standard includes a framework for writing new DTDs that are valid *specializations* of the base DITA DTDs. You can create content that is based on your DITA specialization. The concept of specialization is described in the *DITA Architectural Specification*.

For example, files for a specialized DTD called 'faq' are available in the following folder: `..\Program Files\Common Files\XMetaL Shared\DITA_OT\demo\faq`. The faq specialization is designed to support a list of frequently asked questions.

When you configure XMetaL for use with a specialized DTD, you generate a set of customization files that XMetaL uses when you work with your specialized document. Specialized elements are styled the same way as their base elements. For example, <faqitem> is styled as a table row because its base element, <strow>, is styled as a table row.

After performing the basic configuration steps, there are other steps you will probably want to perform to optimize XMetaL for your specialization:

- Create a template for creating new documents in your specialization
- Modify stylesheets for the new elements in your specialization
- Add new menus and toolbars

For information about extending the interface, you can modify the DITA customization files and DitaSpecializationExtender.js (see the *XMetaL Programmer's Guide* for details). For complete information about creating and deploying customizations, see the *XMetaL Customization Guide*.

Before you begin

Check to see that the system IDs in your specialization DTD files resolve correctly.

Check that your DTD defines a root element. The root element must define `xmlns:ditaarch`, and `ditaarch:DITAArchVersion` attributes. Here is an example:

```
<!ENTITY % arch-atts "
xmlns:%DITAArchNSPrefix; CDATA #FIXED
'http://dita.oasis-open.org/architecture/2005/'
%DITAArchNSPrefix;:DITAArchVersion CDATA #IMPLIED '1.1'" > <!ATTLIST
yourRootElement id ID #REQUIRED conref CDATA #IMPLIED %select-atts; outputclass
CDATA #IMPLIED xml:lang NMTOKEN #IMPLIED domains CDATA "&included-domains;"
%arch-atts; >
```

It is recommended that you create a folder for your specialization DTD files in the `..\Program Files\Common Files\XMetaL Shared\DITA_OT` folder for the following reasons:

- The DITA Open Toolkit requires access to the specialized dtd. This is provided by catalog entries added to `catalog-dita.xml` and `catalog-dita_template.xml`. Since catalog files denote paths in a manner relative to the catalog file itself, it is easiest to formulate paths if the specialized DTD is nearby.
- Specializations must include `topic.mod` and similar stock DITA entities; relative paths for system IDs can be formulated easily from demo specialization examples, which have relative path system IDs that resolve to the `DITA_OT\dtd` folder.
- For easy identification of specialization folders in the event of an un-install or re-install.

To take full advantage of the formatting and customization options, you should be familiar with the following:

- DITA specializations as described in the *DITA Architectural Specification*
- XMetaL customizations
- Document type declarations
- Catalog files
- CSS
- Forms

Related Links

Document type declarations on page 193

Document type declarations associate XML documents with a DTD. They consist of an external identifier, an internal subset, or combination of the two.

Configure XMetaL

Note: The **Select Specialized DITA DTD** option is disabled for limited users under Citrix.

1. Create a folder for your specialization.
   For example: `..\Common Files\XMetaL Shared\DITA_OT\demo\faq`.
2. Place your specialized DTD files in the specialization folder.
   These include .dtd files and any modules.

   Note: The system IDs in your specialization DTD must resolve correctly.

3. Start XMetaL.
4. Click **Tools** > **Options**, and go to **DITA** > **Specializations**.
5. Choose your specialized DITA DTD.
6. Choose the base document type that is most similar to the specialized document type (for example, Topic) and type the public ID for the specialized DTD. Do not include quotation marks.
   Here is an example of a public ID:

   ```
   -//IBM//DTD DITA FAQ//EN
   ```

7. Click **OK**.
   XMetaL creates a customization folder for your specialization, for example, `..\XMetaL\Author\DITA\XACs\1.2\faq_shell`.
8. Close and re-start XMetaL.
9. If you want to create reusable components from your specialized topic, add an entity to the reusable components entity file, `..\XMetaL\Author\DITA\DITA_OT_DTD\dcspecialized-typemods.ent`.

Example:

```
<!ENTITY %
faq-shell-mod SYSTEM "C:\Program Files\Common Files\XMetaL
Shared\DITA_OT\demo\faq\faq.mod"> %faq-shell-mod;
```

Related Links

Content references on page 138

Content references allow you to refer to an element and use that element's content in place of the current element. They are denoted by the `conref` attribute. This feature is useful for text that may change frequently such as product names or version numbers or text that is reused in a variety of locations. XMetaL Author simplifies the process of creating and inserting content references through reusable components.

Create a specialization template

Once you have configured and re-started XMetaL, you can create a template so that authors can create new documents using your specialization.

1. Click **File** > **New**.
2. In the **General** tab, select **Blank XML Document**.
3. Select your DTD.
   For example, `..\XMetaL\Author\DITA\XACs\1.2\faq_shell\faq_shell_ditabase.dtd`.
4. Add elements and attributes your template requires in order to be valid using the Element List and Attribute Inspector.
5. Once you have created a valid document, switch to Plain Text view and remove the path segments and "_ditabase" portion of the filename in the document type declaration.
   Example:

   ```
   <!DOCTYPE faq SYSTEM
   "faq_shell.dtd">
   ```

6. Change the keyword SYSTEM to PUBLIC and add the public ID for this document type, and simplify the system ID.
   Example:

   ```
   <!DOCTYPE faq PUBLIC
   "-//IBM//DTD DITA FAQ//EN" "faq_shell.dtd">
   ```

7. Click **Tools** > **Macros** and select the run the 'DITA Configuration: Save Copy as Template' macro.
   This macro removes all `ID` attributes and all attributes of type `class`, `domains`, `xmlns:ditaarch`, and `ditaarch:DITAArchVersion`.
8. Save the file with the extension '.xml', '.dita', or '.ditamap' in your DITA templates directory, specifying UTF-8 encoding type.

If you want to create references to the elements in your specialization, you need to assign IDs to them. You can auto-assign element IDs in the **DITA Output > Advanced** section of the Options window.

Test your template by clicking **File** > **New**.

Related Links

Options on page 31

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

Templates on page 35

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.

Apply custom formatting

You can create custom formatting for DITA specializations.

1. Open the CSS stylesheet for your specialization (for example, `..\XMetaL\Author\DITA\XACs\1.2\faq_shell\faq_shell_ditabase-specialized.css`).
2. Add selectors and styles for your specialized elements.

Deploy a specialized DITA customization

You can configure additional installations of XMetaL to use the same specialized DITA customization.

When you choose Tools > Options and go to DITA > Specializations, the currently configured *DITA options* on page 167 is used to configure the specialized DITA DTD's authoring experience, and the files and folders created for that incorporate the version number. This means the files created during that process, and the files you need to distribute, will be different depending on that version.

Note: The files you need to copy from a configured machine are as follows, where "n.n" is equal to the DITA version (1.1, 1.2, etc) and where "nn" is that same version without the literal period (11, 12, etc).

1. Copy this entire folder <xmetal install path>\Author\DITA\XACs\n.n\<specialized DITA DTD's filename>.
2. Copy the reusable components file `<xmetal install path>\Author\DITA\DITA_n.n_DTD\dcspecialized-typemods.ent`.
3. Copy the XAC catalog file `<xmetal install path>\Author\DITA\XACs\n.n\dita_xac_catalog_specialized.xml`.
4. If you created one or more templates copy them to the same folder you saved them in inside `<xmetal install path>\Author\Template`.
5. Copy the rules catalog file `<xmetal install path>\Author\Rules\ditann_specialized.soc`.

Example where the DITA version was set to 1.2 and your specialized DTD's file name is "faq_shell":

1. Copy this entire folder `<xmetal install path>\Author\DITA\XACs\1.2\faq_shell`.
2. Copy the reusable components file `<xmetal install path>\Author\DITA\DITA_1.2_DTD\dcspecialized-typemods.ent`.
3. Copy the XAC catalog file `<xmetal install path>\Author\DITA\XACs\1.2\dita_xac_catalog_specialized.xml`.
4. If you created one or more templates copy them to the same folder you saved them in inside `<xmetal install path>\Author\Template`.
5. Copy the rules catalog file `<xmetal install path>\Author\Rules\dita12_specialized.soc`.

DITA options

You can control DITA behaviors using the settings in the DITA Options dialog box. Options can be set for all specializations or on a per-specialization basis.

To do this	Follow these steps
Change certain DITA options on a global basis, for all specializations	Close all DITA-based documents and, open the **Options**window, and select **DITA** or **DITA Output**
Change DITA options for one specialization	Open a specialized document, open the **Options**window, and select **DITA** or **DITA Output**

Show/hide domains

Domains are groups of elements that are useful in specific industries such as software development. The Typographic domain includes elements for formatting text, such as Bold and Italic. If you choose to hide a domain, options for inserting elements into the domain will be disabled or hidden in the user interface. The settings for show/hide domains are specific to the doctype or specialization.

In the General tab, select a domain from the **Hide these domains** list and click the button to move it to the **Show these domains** list.

DITA Version

You can set the default DITA version to be used by XMetaL Author. You have a choice between DITA 1.1, DITA 1.2 and DITA 1.3.

Auto-assign element IDs

You can control the automatic assignment of element IDs. When this option is selected, globally unique IDs are assigned. If this option is not selected, IDs must be assigned by setting the `id` attribute. The list of element types to auto-assign an ID is specific to the document type declaration or specialization.

You can indicate which elements have IDs automatically assigned to them by clicking **Options** and selecting elements.

When you have set your DITA options to automatically assign element IDs, the following operations can result in duplicate IDs:

- **File** > **Save As**
- Copying files using Windows Explorer or similar mechanisms
- Setting the `id` attribute through the Attribute Inspector
- Copying/pasting in Plain Text view (in Tags On and Normal views, IDs are adjusted if duplicates exist)

To fix duplicate IDs, clear the `id` attribute first, then enter a new value or click **File** > **Save** to trigger the auto-id generation (if the preference is on).

Note: Duplicate IDs are supported by version 1.4 of the DITA Open Toolkit as long as they do not occur in the same document instance. Problems with duplicate IDs were known to occur in earlier versions of the toolkit.

Note: You can change the format of the generated ID using the DitaSpecializationExtender interface. For more information, see the *XMetaL Programmer's Guide* and the *XMetaL Customization Guide*.

Allow editing DITA specialization attributes

Select this option if you want to allow changing of the DITA specialization attributes.

Update content

Through options in the **Update Content** tab, you can control the following:

- Downloading of referenced files when opening a repository-based DITA map file
- Behavior when double-clicking a referenced component in a DITA map file
- Refreshing references when opening DITA topics and maps
- Behavior when refreshing references of a topic not associate with a key space
- Reference types to be refreshed when going to **Edit** > **Refresh All References**
- Displaying or hiding revision marks in a transclusion target

Map Editor

In the **Map Editor** tab, you can control the degree to which editing is possible in the Map Editor, how topic references are inserted into a bookmap, and highlighting of the currently active topic. The following features can be selected:

- Open DITA maps either in the XML view or map editor
- Group attributes either by DITA usage, value, or alphabetically
- Set the initial display height of the lower pane
- Allow bookmaps to be edited
- Allow specialized maps to be edited
- Insert topic references after, not within, a selected item
- Highlight the topic reference for the currently active topic
- Display repository lock status in map editor
- Manually refresh repository lock status in map editor
- Use the new map editor or the classic map editor

Note: Choose to allow editing bookmaps and other specialized maps in the Map Editor only if you know the rules for these structures well enough to not make them valid.

Key Space

In the **Key Space** tab, you can set XMetaL Author to remember key space associations, and to set the number of items that are remembered. The association is remembered across sessions.

If you are using a CMS, you can also set XMetaL Author to use strict address matching.

Subject Scheme

Subject scheme maps are used to define sets of controlled values for use in classifying content. Sets of controlled values can be bound to DITA attributes, allowing DITA users to share the controlled values for an information set without having to modify a DTD or XML schema.

In the **Subject Scheme** tab, you can control how subject scheme maps are handled in XMetaL.

The following features can be selected:

- Open subjectScheme map in XML view
- Allow only one controlled value per attribute
- Use compact value-selector inside Attribute Inspector
- Exclude <subjectdef> from key spaces

- Actively refresh Subject Scheme when its content changes
- Ignore subject mappings when applying DITAVAL files
- Report Subject Scheme errors when validating document

Specializations

If you are authoring content for a specialized DITA DTD, use this dialog to configure and register the specialization.

The author experience can be set to be like a topic, map, bookmap, or glossary.

Note: After you have registered a specialized DITA DTD, restart XMetaL to use the specialization.

Setting a filename prefix

By default, a prefix is assigned to DITA topic filenames when you save a topic for the first time. You can modify this behavior.

File prefixes are specified in `..\XMetaL\Author\DITA\topic_types.xml`. Concept, task, and reference topics are saved with 'c_', 't_', and 'r_' prefixes. To change this behavior, modify the `prefix` attribute.

For example, to remove the default prefix from a concept topic and specify no prefix, modify the file as follows:

```
<templates_type name="concept" display_name="Concept"
template="Concept.xml" prefix=""/>
```

DITA stylesheets

The formatting of DITA elements in XMetaL Author is determined by CSS stylesheets. You can change the appearance of any DITA element by editing the stylesheets in a text editor. You can also change the formatting for your specialized elements.

Styling of DITA elements is based on the `class` attribute and the cascade order determines which rule applies.

To override formatting for base and derived DITA elements, edit the overriding CSS styles. (These are contained in files that end in '-override'.)

To change the formatting for specialized elements, edit the CSS styles that are generated for your specialized DTD.

Table 43: Cascade order

CSS file	Location	Specifies
ditabase-base.css	..\XMetaL\Author\DITA\XACs\shared	Baseline styles for base DITA elements
ditabase-base-override.css	..\XMetaL\Author\DITA\XACs\ditabase	Overriding styles for base DITA elements
ditabase-derived.css	..\XMetaL\Author\DITA\XACs\shared	Baseline styles for derived DITA elements

CSS file	Location	Specifies
ditabase-derived-override.css	..\XMetaL\Author\DITA\XACs\ditabase	Overriding styles for derived DITA elements
<$specialized_dtd>_ditabase-specialized.css	..\XMetaL\Author\DITA\XACs\<$specialized_dtd>	Styles for specialized elements

Note: Modifying the files with names ending in '-base.css' and '-derived.css' is not recommended, as these are updated with each release.

Changing the display font size

You can change the size of the display font. For example, to increase the default font size of a document, type the following in `ditabase-base-override.css`:

```
$DOCUMENT {
font-size: 18px; }
```

Subject schemes

Subject scheme maps are used to define sets of controlled values for use in classifying content. Sets of controlled values can be bound to DITA attributes, allowing DITA users to share the controlled values for an information set without having to modify a DTD or XML schema.

For more information on DITA Subject schemes and controlled values, see the DITA 1.3 spec section *2.2.3 Subject scheme maps and their usage*.

Applying or removing a subject scheme

Controlled values from subject scheme maps that are part of a map can be applied to the parent map, and any topics or elements within a topic within that map.

To do this	Follow these steps
Apply or remove a subject scheme for a map	1. Right-click on a map in the Map Editor 2. Select**Apply/Remove Subject Scheme** from the menu that opens 3. In the **Apply/Remove Subject Scheme** dialog, select/unselect the values you want to add or remove **Note:** A map that has a subject scheme applied to it is highlighted in the Map Editor.
Apply or remove a subject scheme for a topic (topicref)	1. Right-click on a topic in the Map Editor

To do this	Follow these steps
	2. Select**Apply/Remove Subject Scheme** from the menu that opens 3. In the **Apply/Remove Subject Scheme** dialog, select/unselect the values you want to add or remove **Note:** A topic that has a subject scheme applied to it is highlighted in the Map Editor.
Apply or remove a subject scheme for an element in a topic	1. Open the topic to which you want to apply a subject scheme 2. Place the cursor in the element to which you want to apply the subject scheme 3. Open **Reuse** > **Apply/Remove Subject Scheme** 4. In the **Apply/Remove Subject Scheme** dialog, select/unselect the values you want to add or remove **Note:** An element that has a subject scheme applied to it is highlighted.

Managing subject schemes

You can attach or detach subject scheme maps to/from active documents or DITA maps, inspect the use of subject schemes in opened documents, and view reference and definition pairings and subject definitions within scheme maps.

To do this	Perform these steps
Add a subject scheme to the current edit session	1. Open **Reuse** > **Show Subject Scheme Manager**. 2. Click **Add**. 3. Select the subject scheme map you want to add, and then click **Open**. The references and definitions for the opened map will be populated in the <subjectdef> and <enumerationref> windows. **Note:** You can also remove a subject scheme map from the current edit session as long as it is not being used.

To do this	Perform these steps
Attach (or detach) a subject scheme to the active document or DITA map	1. Open **Reuse** > **Show Subject Scheme Manager**. 2. Select a subject scheme map from the **subjectScheme** dropdown list. The references and definitions for the opened map will be populated in the <subjectdef> and <enumerationref> windows. **Note:** If you need to add a subject scheme map, see the instructions above. 3. Select **Active Document** or **Active DITA Map** from the drop down list at the bottom left of the window. 4. Click **Attach** (or **Detach**).
Inspect opened documents to display context info (keyspace, subjectScheme) attached to the document	1. Click **Inspect**. 2. In the **Inspect Opened Documents** window, use the up and down arrows to navigate through the open documents.
View subject definitions	1. Open a subject scheme map. 2. Place the cursor in a <subjectdef> element within an <enumerationdef> element. 3. In the Attribute Inspector, click the **ellipsis (...)** button for the keyref element.

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 44: 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 45: Editing documents

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

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

Table 46: 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 47: Inserting, deleting, and moving text and markup

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

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

Table 48: List formatting

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

Table 49: 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 50: 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 51: Working with selections in a document

Action	Shortcut
One character to the right	Shift + Right arrow

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

Table 52: 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 53: Choosing menu commands

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

Table 54: Moving between panes, documents, and dialogs

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

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

Table 55: 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

Table 56: Working with the Map Editor

Action	Shortcut
Create a new map by choosing a template	Ctrl+N or CTRL+T
Open target-topic	Enter or Double-click
View scrolls down the open map in Map Editor	Space bar
Select the next or previous topic in the map	Down arrow, Up arrow
View hidden subtopics under the highlighted topic	Right arrow
Hide visible subtopics under the highlighted topic	Left arrow

Quick navigation tool

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

Finding and executing XMetaL commands

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

The following features will help users quickly navigate in XMetaL:

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

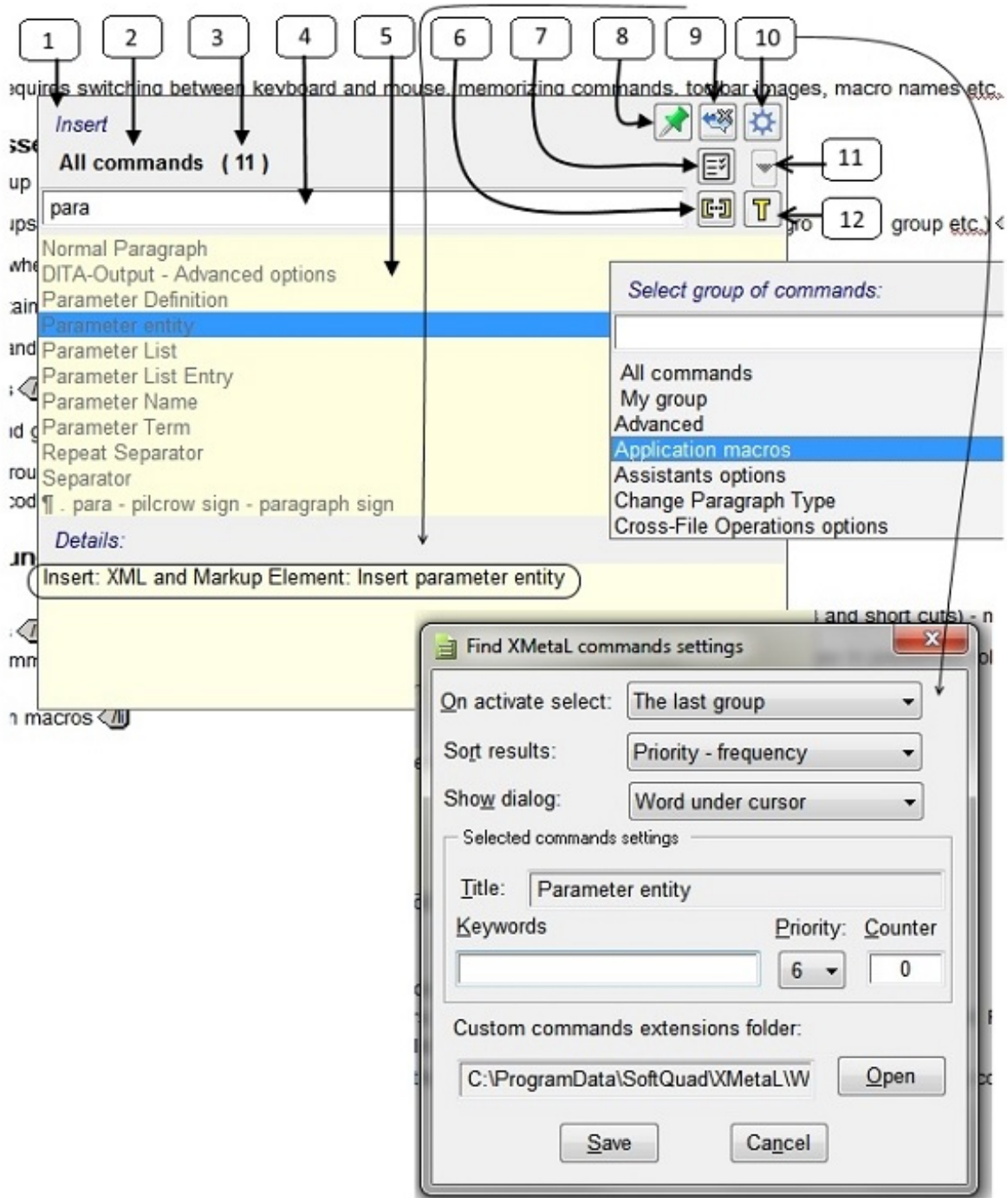
The following commands, macros, documents and applications can be found:

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

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

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

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



# on image	Shortcut or key	Description
1		Name of subgroup command (if available)
2		Name of active group of commands
3		Number of available filtered commands in the group
4	Ctrl+F (or Ctrl+Up when in commands list)	Search edit box
5	Down or Ctrl+Down	When focus is on the search box, set the focus to the selected command in the list. If Ctrl, select first item in the list
6	Ctrl+Space	Switch search type; either "word contains" or "word starts with"
7	Ctrl+> or Ctrl+<	Switch between "All commands" and "Selected command" groups
8	Ctrl+Insert	Add/delete command to/from "My group commands"
9	Ctrl+I	Show/hide command description. The description starts with a group titles chain.
10	Ctrl+P	Activate the user preferences dialog
11	Ctrl+G	Activate popup menu with the list of command groups
12	Ctrl+D	Switch search type "in titles and keywords" or "in titles, keywords and command descriptions"
	Ctrl+U	Show/Hide search box text
	Enter	Run selected command
	Shift+Enter	If selected command is "Favorite Folder" or "Favorite Library", then activate XMetaL explorer folder and select this folder
	Ctrl+Shift+<	Selected parent group of the active group
	Delete	If My group of commands is selected, then remove it from the group
	• 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.

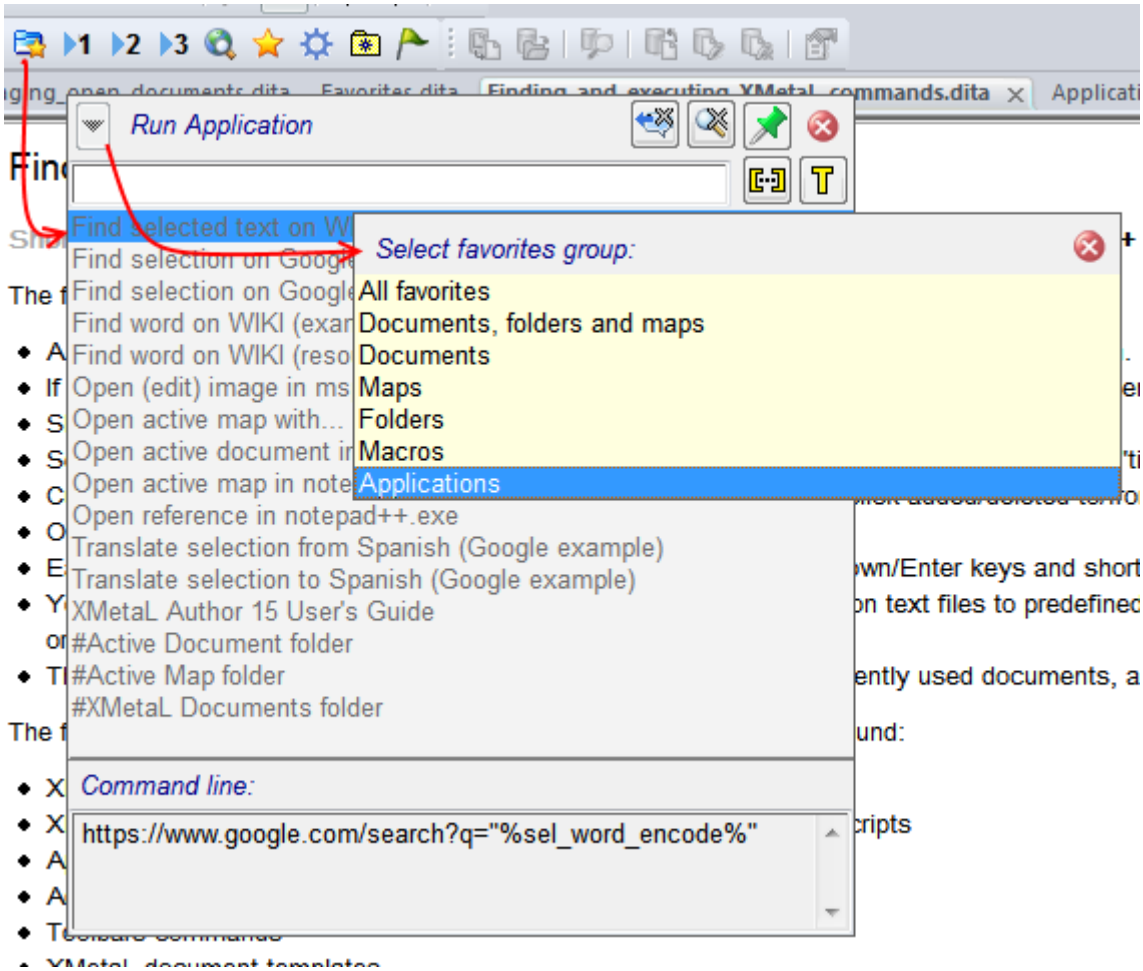
- If you frequently use some of the commands, go to Preferences and change the command priority (default is "6"), "1" is highest and the command will appear either close to the top or bottom of the list depending on the set value.
- if you search for your favorite folder, type the "[" character in the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

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

Viewing and customizing favorites

Viewing and adding favorites

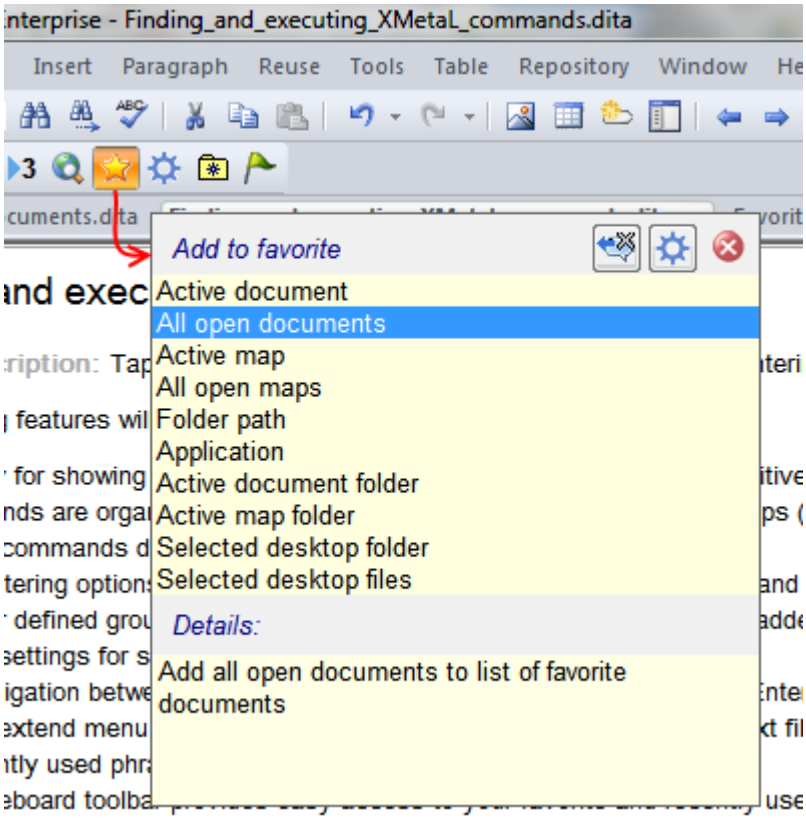
Tapping the  icon in the Whiteboard toolbar or using the **Ctrl+Shift+?** hot key opens a dialog where you can access favorite actions. In this dialog, you can apply your favorite and recently used actions in XMetaL.



In the 'favorites' dialog, all actions are easy to find and run using hot-keys via context sensitive search and filtering groups. All controls have tooltips containing the associated hot-keys.

To do this	Click this
Hide or show the command line or full path	
Hide or show the search field	
Pin or unpin the dialog to stay open after performing the action	
In the search, the entered word is contained in the name of the action	
In the search, the entered word is at the beginning of the name of the action	
Apply the search only to the title name of the action	
Apply the search to both the title and the details of the action	

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

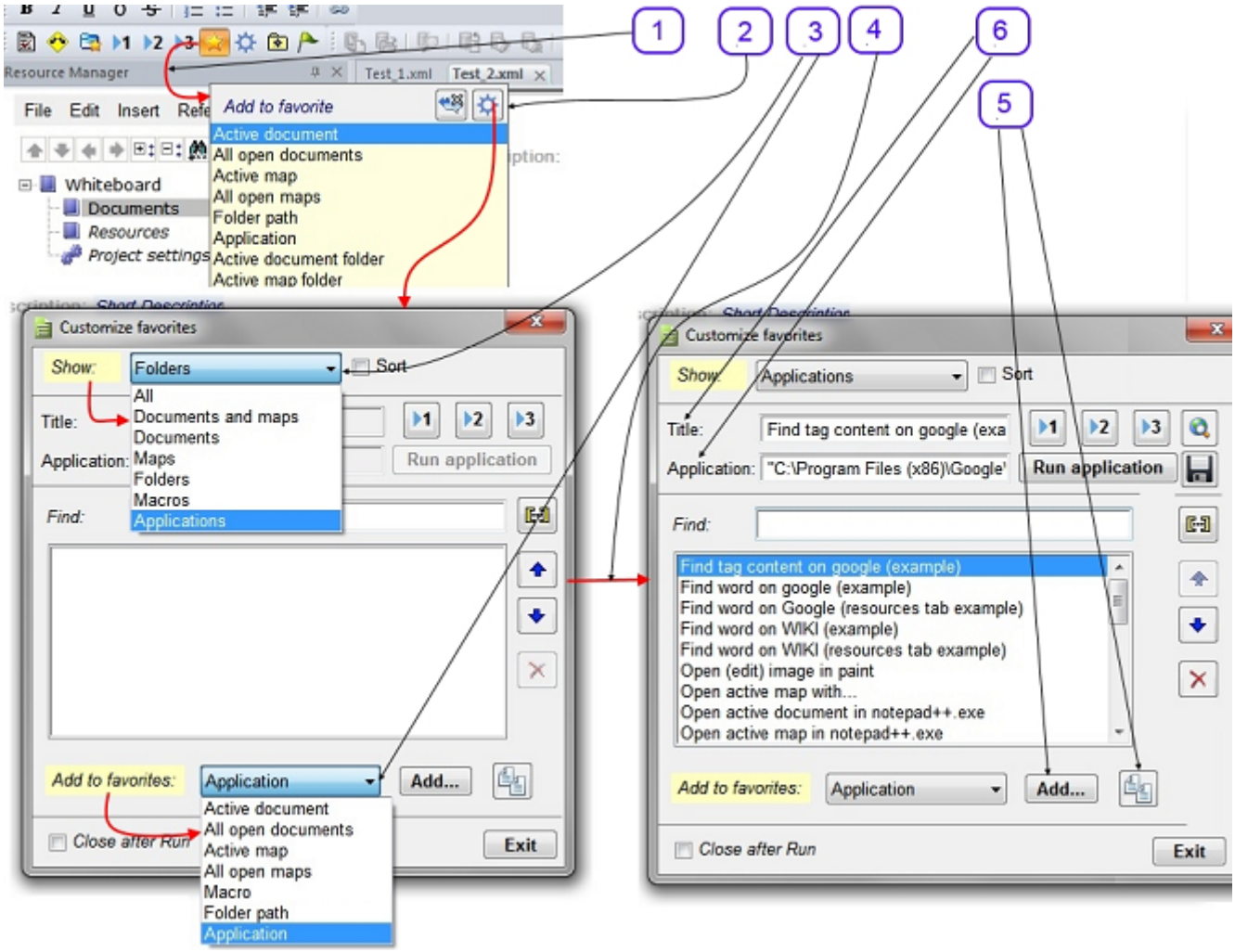


Customizing favorite applications

You can select a Windows application that can be run from the command line, assign title to it, and specify command-line parameters. The title will appear in the list of commands in "Run application" group. The command line will appear in the command details. Based on the active map or document and document selection, there is a list of predefined command-line keywords that XMetaL resolves in the command line.

- Word currently under the cursor
- Selected text
- The text content of a tag currently under the cursor
- Specific attribute value of an element under the cursor
- Active document path
- Active map path

Favorite applications can be customized in the **Customize Favorites** dialog.



Here are some tips and guidelines for customizing favorites:

- In the **Title** edit box, when you change existing title, you must press **Enter** to complete/update application settings
- In the **Application** edit box, the command line works the same as for the title. Be careful with *application path* as it will executed as is. So if you have a space in the path, use double quotes around it.
- You can use the  (Duplicate) button as an easy way to duplicate a selected application that is close to what you want and change the parameters or application.

XMetaL resolves the following parameters:

- %sel_tag_encode% - active document - tag content where cursor – escaped for use in browsers
- %sel_word_encode% - active document – word under cursor – escaped for use in browsers
- %WEB_TAB% - use IE application on XMetaL desktop resource manager
- "%REFATTR_ %" active document attribute(s) of element where cursor is – example "%REFATTR_FileRef;href;fileref%"
- %REFATTR_NOID_ %" - the same - except id part starting with (“#...”) is removed when it presents, %REFATTR_NOID_href;URL;Linkend;conref;FileRef;fileref;src;xlink:href%"
- %DOC% - full path to active document

- %MAP% - full path to active map

Four customizable quick access buttons in the Whiteboard toolbar ( ,  ,  and ) can be assigned any favorite action as needed. The buttons' tooltips display the title of the assigned action. The predefined hot-keys for the buttons are Ctrl+1, Ctrl+2, Ctrl+3 and Ctrl+4.

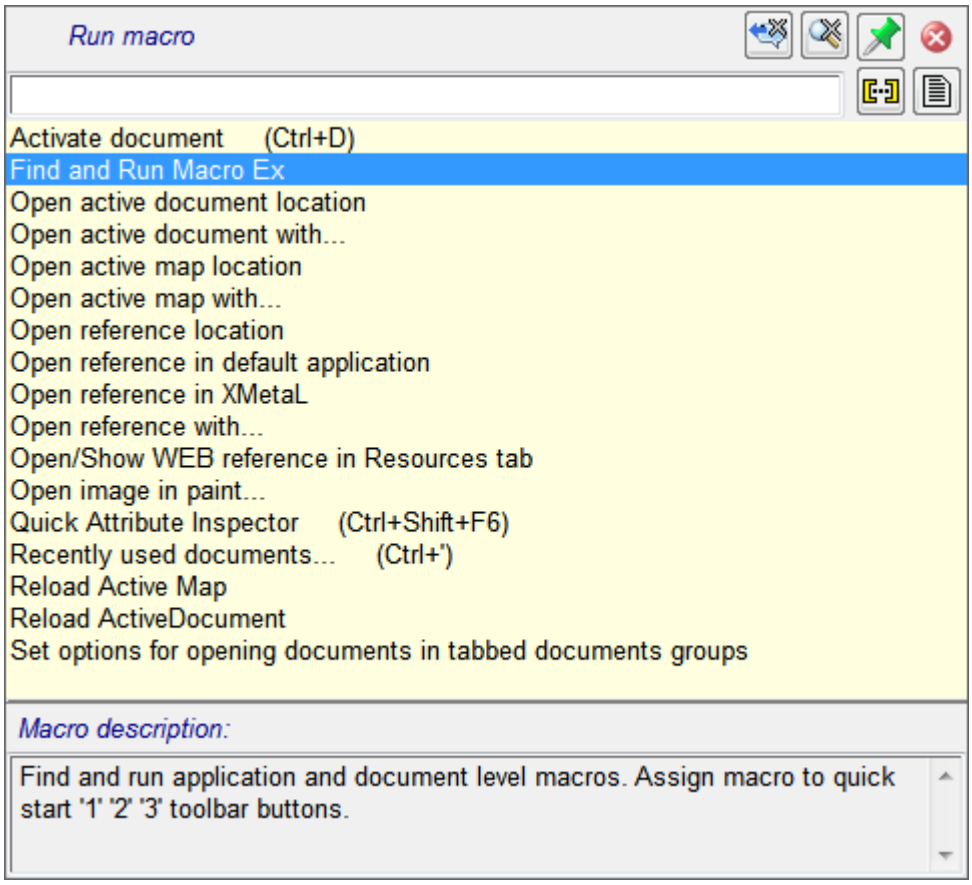
For more customizing the buttons:

- Select the item you want to relate to one of the buttons. The selected function is displayed in the **Title** field.
- Click the button to which you want to relate the function. The function is now set for the selected button.
- Click **Run Application** to test the function in the Title field.

Application utilities

Tapping the  icon in the Whiteboard toolbar opens a dialog where you can run XMetaL macros.

To do this	Click this
Hide or show the command line or macro description	
Hide or show the search field	
Pin or unpin the dialog to stay open after performing the action	
In the search, the entered word is contained in the name of the action	
In the search, the entered word is at the beginning of the name of the action	
Apply the search only to the title name of the action	
Apply the search to both the title and the details of the action	



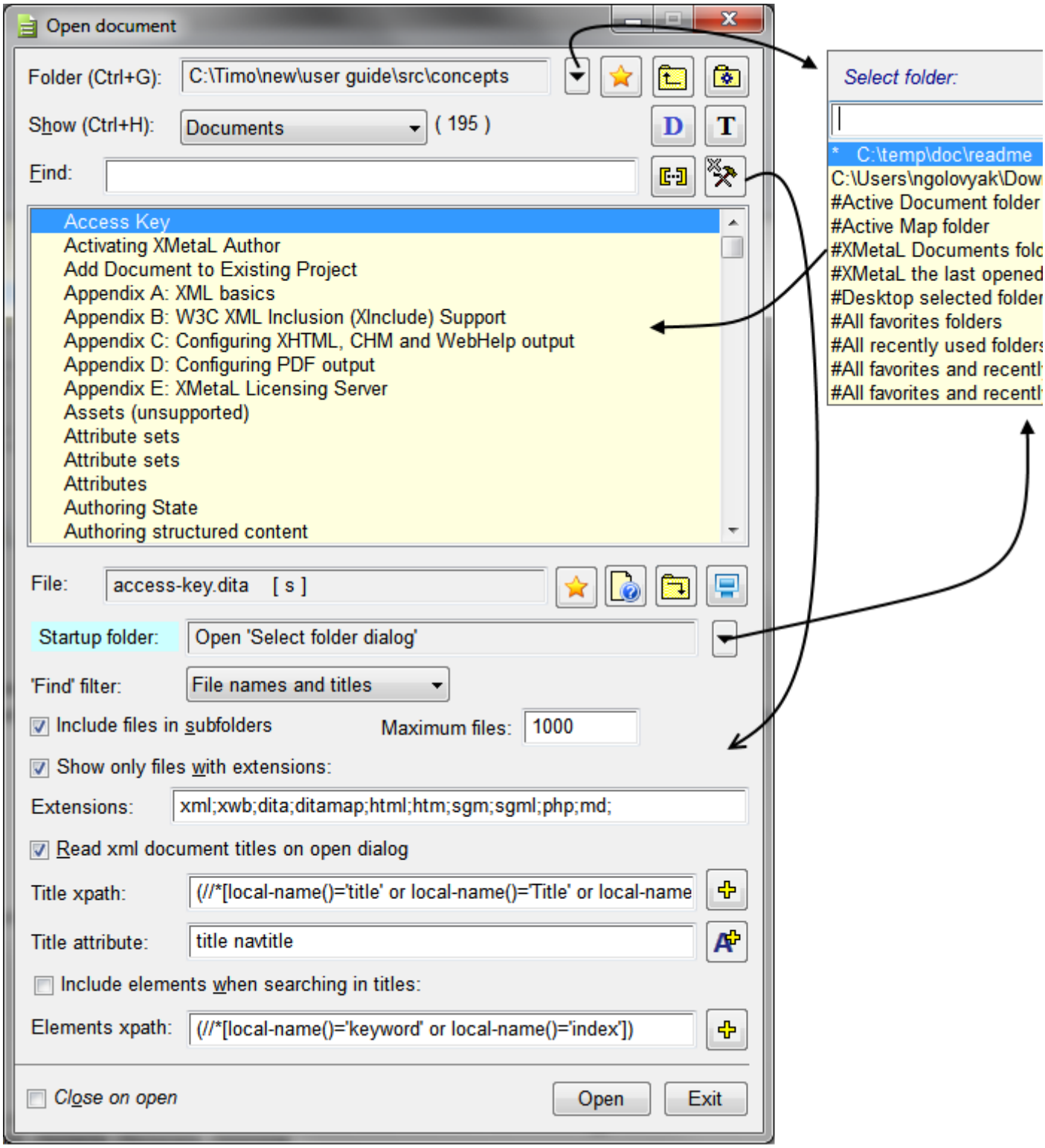
Document Ex commands

The following document Ex features can be accessed by tapping the button in the Whiteboard toolbar.

Find document Ex feature

The Find feature allows you to:

- view a file's name and a document's titles in favorite, predefined and recently used folders as well as Windows libraries,
- find and open documents in favorite, predefined and recently used folders as well as Windows libraries by title, file name or content of specific XML document elements, and
- add and remove favorite folders.



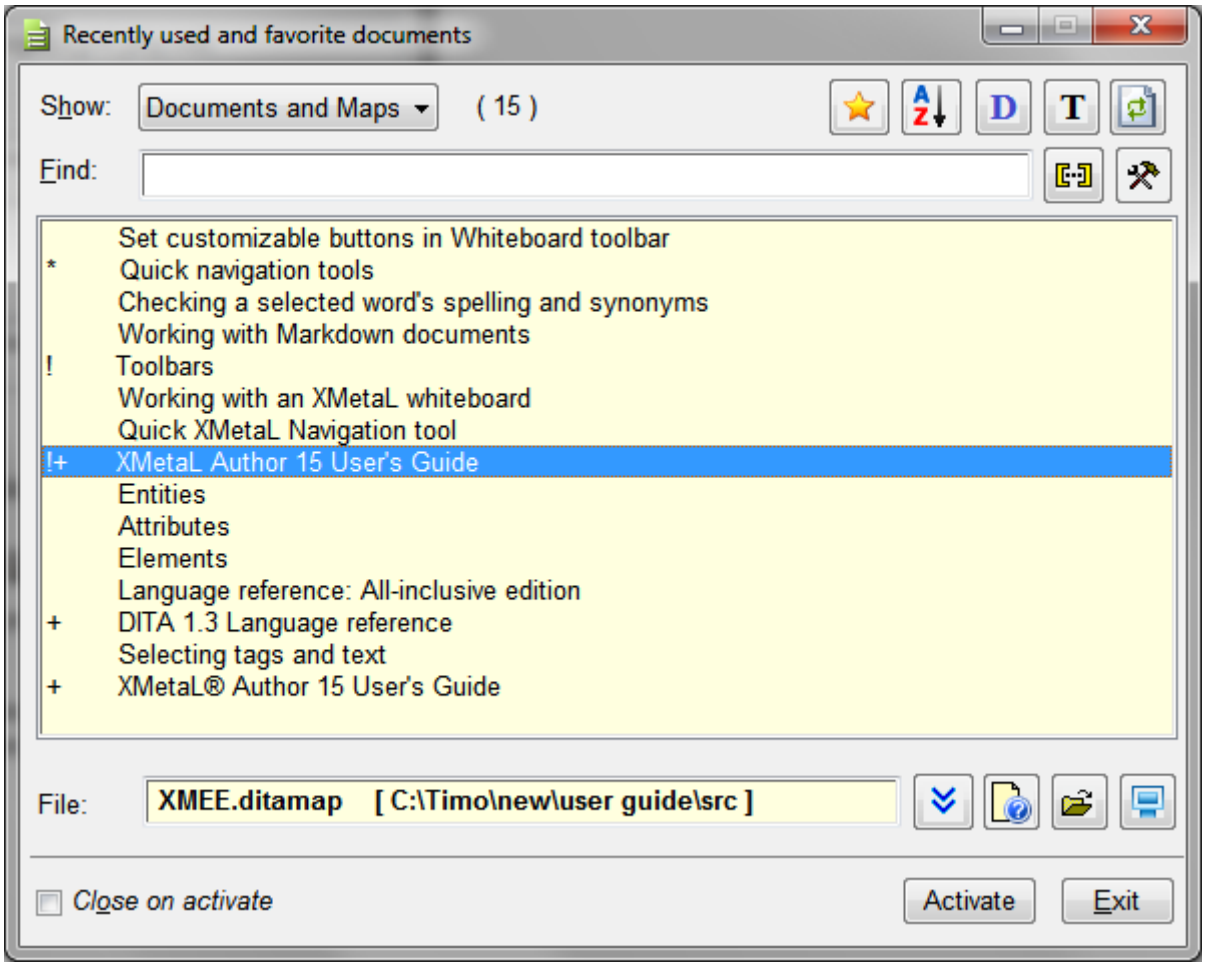
Recently Used documents Ex feature

It is invoked by Ctrl+' or selecting "#All favorites and recently used files" in "Open Document dialog.

The list of favorite and recently used documents allows you to:

- view documents titles of recently used and favorite documents,

- find and open documents by title, file name or content of specific XML document elements, and
- add and remove favorite documents.

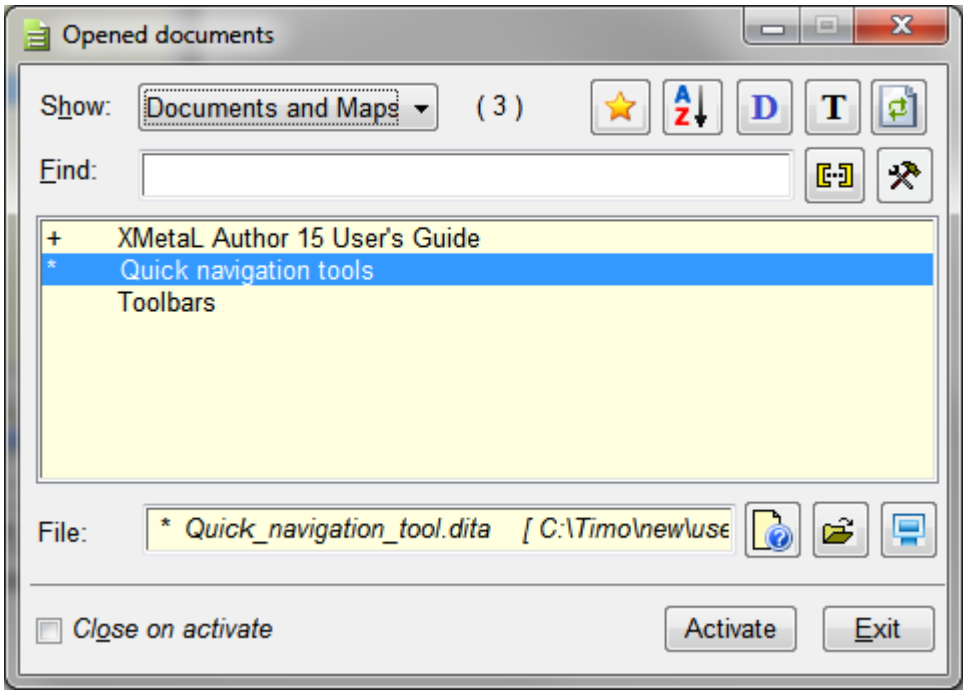


Opened documents Ex feature

It is invoked by Ctrl+D.

This feature allows you to:

- view documents titles of all opened documents,
- open document to select, close, open in 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.


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

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 by e-mail at *supportxmetal@justsystems.com* or by telephone at one of the numbers listed at *http://xmetal.com/content-about-contact-us/*.

Appendix A: XML basics

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

Separation of content and format

XML elements describe the role the information plays in a document, not how it is to be formatted. Consuming applications such as Web browsers receive instructions from a style sheet on how to render the markup. XML elements can also be transformed via XSLT (Extensible Stylesheet Language Transformations) into elements that are recognized by a consuming application. For example, an XML `<title>` element can be transformed into the HTML `<h1>` element for rendering in a specific size and typeface.

XML declaration

All XML documents start with a processing instruction (the *XML declaration*) that indicates that the file is an XML file and which version of XML is used. Some XML declarations also specify a character encoding. The recommended encoding for XML documents is UTF-8. Here is an example:

```
<?xml version="1.0"
encoding="UTF-8"?>
```

References

You are encouraged to consult the many available printed and online references. These include the following:

- *The Extensible Markup Language (XML) 1.0 (Fourth Edition)* (a W3C Recommendation), available at www.w3.org/TR/REC-xml
- *The XML Handbook* by Charles Goldfarb and Paul Prescod, at www.xmlhandbook.com
- *The Annotated XML Specification* by Tim Bray, at www.xml.com/axml/testaxml.htm
- XML-related publications, events, and software, from the World Wide Web Consortium web site at www.w3.org/XML
- XML.com
- The SGML/XML Web Page (maintained by Robin Cover) at www.oasis-open.org/cover/sgml-xml.html provides a reference database
- *The XML Companion* by Neil Bradley is recommended for beginners (see also www.bradley.co.uk)
- *XML Specification Guide* by Ian Graham and Liam Quin is a comprehensive reference book (see also www.wiley.com/compbooks/graham-quin)
- *XML: The Annotated Specification* by Bob DuCharme is recommended for advanced users
- The Project Cool Developer Zone at http://www.devx.com/projectcool/developer/ provides references on various technologies, including XML
- *XML by Example* by Benoit Marchal is recommended for intermediate-level Web developers
- *XML Black Book* by Natanya Pitts-Moultis and Cheryl Kirk is recommended for intermediate to advanced webmasters and Web developers
- *XML Pocket Reference* by Robert Eckstein, a reference for XML, XSL, and XLL

Valid vs. well-formed documents

An XML document is *well-formed* if it is structurally correct according to the XML standard. It is *valid* if it conforms to a DTD or Schema. XML documents can be well-formed without being valid; however, all valid XML documents are well-formed by definition. SGML documents must be valid *and* well-formed.

There are several aspects to well-formedness:

- The document must have only one top-level element that contains all other elements.
- All elements (with the exception of the top-level element) must be nested, that is, if an element's start tag occurs inside an element, then its end tag must occur inside the same element.
- An attribute name cannot occur twice in the same tag.
- All characters must be in the character set defined by the XML standard (that is, Unicode).
- Entities must not be defined recursively.

DTDs and Schemas

DTDs and Schemas define the information that can be contained in a document and facilitate the exchange of similarly defined information between systems. Although XML files can exist as well-formed, stand-alone documents, most are associated with either a document type definition (DTD) or an XML Schema. SGML files must be associated with a DTD.

Document type definitions

Document type definitions contain declarations that describe document structure using a formal notation. They define the names of elements and attributes and the document hierarchy.

DTDs specify which elements can or must be contained in a document and their allowable sequence and combinations. They are *often* separate files with the extension '.dtd', but declarations can also be included wholly within the XML or SGML document itself as part of the document type declaration.

A DTD can consist of one or many files. Some DTDs use parameter entities to "call in" blocks of declarations that exist in other files.

XML Schemas

XML Schemas are similar to DTDs in that they describe a document structure, but they are written in XML. They also provide flexibility in defining complex data types. Schemas are supported in XML only.

A Schema is *always* a separate file with the extension '.xsd'.

Document type declarations

Document type declarations associate XML documents with a DTD. They consist of an external identifier, an internal subset, or combination of the two.

Here is an example of a document type declaration:

```
<!DOCTYPE BOOK
PUBLIC "-//XYZ Corporation//Book v1.0//EN" "book.dtd">
```

The *document type name* follows the DOCTYPE keyword (in this case, 'BOOK'). By default, this is the top-level element in the DTD.

A document that refers to a DTD or Schema is referred to as a *document instance*.

External identifiers

The document type declaration can include an *external identifier* that specifies an external DTD file.

External identifiers consist of either of the following:

- The SYSTEM keyword followed by a system identifier
- The PUBLIC keyword followed by a public identifier followed by a system identifier

The system identifier can be a filename or URL and is generally the filename of the DTD (for example, 'book.dtd'). The public identifier is an arbitrary identifier that is agreed upon by the various organizations that use the DTD (for example, '-//XYZ Corporation//Book v1.0//EN'). If the external identifier starts with SYSTEM, there cannot be a public identifier.

Here are two document type declarations that refer to the same DTD:

```
<!DOCTYPE BOOK SYSTEM "book.dtd">
```

```
<!DOCTYPE BOOK PUBLIC "-//XYZ Corporation//Book v1.0//EN"
"book.dtd">
```

Another form of external identifier is available *for SGML documents only*, in which the PUBLIC keyword is followed by a public identifier, but no system identifier. Here is an example:

```
<!DOCTYPE BOOK PUBLIC "-//XYZ Corporation//Book
v1.0//EN">
```

Public identifiers can be mapped to system identifiers using a catalog file.

Internal subset

An *internal subset* is an optional part of the document type declaration that contains additional declarations.

The internal subset follows the external identifier (if there is one) and is enclosed in square brackets. Here is an example of an internal subset:

```
<!DOCTYPE Article SYSTEM
"journalist.dtd" [ <!ENTITY Title "The History of the XYZ Corporation">
... ]>
```

Declarations in the subset are read *before* declarations in the external DTD file; therefore, they override any external declarations of the same name. Attribute list declarations specifying different attributes of the same element are combined, but if the same attribute is specified in both places, the specification in the internal subset takes precedence.

A document type declaration can omit the external identifier. In this case, the document's DTD is internal (contained completely in the internal subset). Here is an example:

```
<?xml
version="1.0" standalone="yes"?> <!DOCTYPE Article [ <!Element Article
(Title, Sect1+)> <!Element Title (#pcdata)> <!Element Sect1
(Title,Para+)> <!Element Para (#pcdata)> <!Attlist Article Id ID
#IMPLIED> ]> <Article> ... </Article>
```

Elements

An element is a markup construct that consists of tags and content. Tags are written using angle brackets (‘<’ and ‘>’) and contain element names. Elements are named according to their function in the document. For example, the `<section>` element describes a section. Elements can include attributes, text, or other elements. The elements available in your document and the sequence in which they must appear is defined in a DTD or Schema.

Since documents are formatted differently by each rendering agent (for example, a browser), you may prefer to think of elements as standing for parts of the document’s structure (for example, heading, paragraph, list item) without thinking explicitly about how they are formatted.

In DTDs, an elements are defined using the ELEMENT keyword. The following sample defines `topic`, `title`, and `para` elements:

```
<!ENTITY % typemods "b|i|u|pre|tt"> <!ELEMENT
topic (title, para+) > <!ELEMENT title (#PCDATA) > <!ELEMENT para
(#PCDATA|%typemods;)* >
```

Here is a corresponding document instance:

```
<!DOCTYPE topic SYSTEM "topic.dtd"> <topic>
<title>My sample topic</title> <para>The first
paragraph.</para> <para>The second paragraph.</para>
</topic>
```

In XML, element names are case-sensitive. The following samples represent different elements:

```
<Topic>...</Topic>
<topic>...</topic>
```

The following markup is illegal:

```
<Topic>...</topic>
```

Empty elements

Elements can also be defined as empty. These elements cannot have any text content. Here is a sample definition of an empty element in a DTD:

```
<!ELEMENT newpage EMPTY >
```

Empty elements appear differently in XML and SGML.

```
<!-- an empty
element in XML --> <newpage/>
```

```
<!-- an empty
element in SGML --> <newpage>
```

Attributes

Attributes consist of name/value pairs that are used to provide more information about an element. Attribute values are not part of an element’s content. The DTD or Schema specifies attribute names and allowed values.

In DTDs, attributes are defined within attribute lists, which are declared using the ATTLIST keyword. In the following example, an attribute list defines an `audience` attribute for the `topic` element:

```
<!ENTITY % typemods "b|i|u|pre|tt"> <!ELEMENT topic (title,
para+) > <!ATTLIST topic audience CDATA #IMPLIED > <!ELEMENT title
(#PCDATA) > <!ELEMENT para (#PCDATA|%typemods;)* >
```

Attribute names are separated from the element name by a space, and values are enclosed in quotation marks. Here is a corresponding document instance:

```
<!DOCTYPE topic SYSTEM "topic.dtd"> <topic
audience="administrators"> <title>My sample topic</title>
<para>The first paragraph.</para> <para>The second
paragraph.</para> </topic>
```

In XML, attributes and their values are case-sensitive. The following samples represent different attributes and values:

```
version="beginner" Version="beginner"
version="Beginner" Version="Beginner"
```

Data types and default values

Here are some commonly used attribute data types:

- CDATA describes a sequence of characters from the document character set and may include character entities.
- ID/IDREF are identifiers. The value of an `ID` attribute is used to identify an element and must be unique. The value of an `IDREF` attribute must be the value of an `ID` attribute somewhere in the document.
- NUMBER tokens must contain at least one digit (0-9).

Attributes can also be defined as a name token group that restricts the possible values to a list.

Default values for attributes are defined by the default value parameter. Here are some commonly used parameters:

- REQUIRED means that a value must be specified.
- IMPLIED means that specifying a value is optional.
- FIXED describes a fixed value for an attribute. The value cannot be modified.

Entities

An *entity* is a named body of data that you can refer to from within your document. An *entity declaration* names the body of data and its replacement text or file reference. Entities are declared within the DTD or your document's internal subset. You can refer to the declaration from within your document using an *entity reference*. When the document is displayed in a rendering agent, the entity reference is replaced by the text or file that the entity represents. Entities are an important mechanism for supporting content reuse and data management. In XML, entity names are case-sensitive.

Text entities

Text entities specify replacement text within the entity declaration itself. This type of entity is useful for "boilerplate" text or for terms that may change, such as product names or version numbers. For example, in the following user manual, the name of the product is declared as 'Z2000' in the `prodname` entity. For

subsequent model numbers, you need only change the replacement text to have the change reflected throughout the document.

```
<!DOCTYPE manual
SYSTEM "manual.dtd" [ <!ENTITY prodname "Z2000"> ]> <manual>
<chapter> <title>Installing the &prodname;</title>
<p>The &prodname; is easy to install.</p> </chapter>
</manual>
```

External entities

External entities refer to text and markup that exists within an external file. In SGML, external entities include a system identifier or a public identifier or both. XML requires a system identifier, and a public identifier is optional. Here are some examples:

```
<!ENTITY copyright SYSTEM "copyright.txt" --
a copyright notice containing a block of text -->
```

```
<!ENTITY section SYSTEM "section.xml" -- a
section containing text and markup -->
```

Graphic entities

Graphic entities are used to refer to image, video, sound, or other multimedia files. These entities are not parsed and they must specify a notation. Notations specify how the file is encoded. Here is an example of an unparsed entity declaration and corresponding reference:

```
<!DOCTYPE chapter [ <!NOTATION JPEG
SYSTEM "Joint Photographic Experts Group"> <!ENTITY dogpic SYSTEM
"lassie.jpg" NDATA JPEG> ]> <chapter>
<title>Dogs</title> <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;
```

Related Links

Internal subset on page 194

An *internal subset* is an optional part of the document type declaration that contains additional declarations.

CDATA sections

A CDATA (character data) section is a type of marked section that is used to prevent content from being interpreted as markup. A *marked section* is a markup construct that designates content for special processing.

For example, the following document includes an sample code that contains markup characters (‘<’ and ‘>’). In this case, you do not want these characters to be interpreted as markup, so you enclose them in a CDATA section.

```
<?xml version="1.0" encoding="UTF-8"?> <technote>
<title>Audience attribute</title> <para>The audience
attribute describes the intended audience. It is defined for the TOPIC element.
Here is an example: <![CDATA[<topic audience="administrators" />]]>
</para> </technote>
```

Note: SGML files can have several types of marked sections, but XML files can have only CDATA sections.

Comments

Comments contain additional information about the text or markup. They are ignored during processing. Comments can contain text only.

The following sample XML document includes a sample comment.

```
<?xml version="1.0" encoding="UTF-8"?> <!--
here is a comment in an XML document --> <topic> <title>My
sample topic</title> <para>The first paragraph.</para>
<para>The second paragraph.</para> </topic>
```

Comments in DTDs have a special syntax.

```
<!ELEMENT para
(#PCDATA|%typemods;)* -- here is a comment in a DTD -->
```

Processing instructions

Processing instructions contain instructions for applications.

The following processing instruction identifies the document as an XML 1.0 document that uses Unicode encoding.

```
<?xml version="1.0"
encoding="UTF-8"?>
```

Appendix B: W3C XML Inclusion (XInclude) Support

XInclude allows you to create larger XML documents from smaller documents without needing to manually duplicate content.

With XInclude, you can assemble multiple XML instances into a larger XML document through inclusion. This allows for easier editing using smaller files, improved distributed authoring, and reuse of content.

In XMetaL, XInclude support is turned off by default. For information on enabling XInclude, see the XMetaL Developer Customization Guide.

About W3C XInclude Support 1.0 (Second Edition)

W3C XInclude Support 1.0 (Second Edition) introduces a generic mechanism for merging XML documents for use by applications that need such a facility. The syntax leverages existing XML constructs - elements, attributes, and URI references. For more information on W3C XInclude Version 1.0 (Second Edition), go to *http://www.w3.org/TR/xinclude/*

XInclude Customization Features

Depending on your customization of XMetaL Author, you may be able to update, show, hide and/or open XIncluded target content.

- Updating XIncludes will import that target content and process it in accordance to the W3C XML Inclusion specification. Any processing errors are listed within the XML Inclusion log pane. The target content's physical location can be either on the local file system or within your CMS (provided you have an XMetaL Connector).
- Showing XIncludes allows you to view the target content inline with the rest of your document. When includes are shown inline, they are in read-only but you are permitted to make selections and copy the content.

Note: Showing includes does not automatically update the includes if you have made changes to the target content.

- Hiding XIncludes allows you to edit the include element's attributes or fallback element.
- Opening XIncludes opens the files that contain the target of an xinclude's link.

XML inclusion log

The XML inclusion log is a list of XML inclusion link errors. The XML inclusion log is displayed in the Link Errors pane of the XMetaL Author user interface. Clicking on a link error displays the error in the main pane.

Limitations and Variations

The XML Inclusion support has the following limitations:

- For parse="xml", included target markup must be defined by the top-level source document's schema or DTD. Furthermore, appearance in Tags On/Normal view is determined by the top-level source document's customization (i.e., CSS and CTM settings).
- XPointer has the following limitations:
  - The xptr-xpointer scheme is built on the XMetaL xpath capability and supports whatever XMetaL supports for xpath.
  - The xptr-xpointer scheme does not support additional functionality described in 4.2 Additions to XPath Terms and Concepts of *http://www.w3.org/TR/xptr-xpointer/*.

- Limited support for range-to:
  - Supports node-to-node (inclusive) range only (subsequent steps can remove start/end node).
  - If the start point returns a node set, the last node in the node set is used as start point.
  - If the end point returns a node set, the first node in the node set is used as end point.
  - Start point and end point must be siblings.
  - The system handles form: /..../range-to(Expr)/....
  - The system does NOT handle form: /...../range-to(Expr)Predicate*/.... However, there is a partial workaround: /...../range- to(Expr)/self::node()[Predicate]/....,

    Note: The above workaround cannot handle cases related to positions, e.g., 2nd node within the range.

- parse="text" is wrapped with a CDATA section for inline display within your editor. The CDATA tags are removed when you exporting the content.

Appendix C: Configuring XHTML, CHM and WebHelp output

You can use XMetaL to produce XHTML and Microsoft HTML Help (CHM) output using the DITA Open Toolkit.

The toolkit allows you to customize the appearance of your HTML, CHM and WebHelp deliverables using Cascading Style Sheets (CSS). You can also specify custom headers and footers in separate HTML files. You can save these and other settings in an XMetaL deliverable type.

CSS files	Specify the appearance of HTML pages, including fonts, colors, margins, and padding. XMetaL Author includes default CSS files.
Headers and footers	Specify the header and footer content of every HTML page. You can create headers and footers in separate HTML files. The content of these is copied into your HTML output.
XMetaL deliverable types	You specify custom CSS files and headers and footers within a deliverable type. XMetaL comes with a default set of deliverable types, which are named according to their output format (for example, 'Multiple HTML files').

Before you begin, you must have the following:

- XMetaL Author 5.5 (or later) DITA Edition or XMetaL Author 5.5 (or later) Enterprise Edition
- A basic understanding of HTML and CSS
- A DITA topic or map file

Default CSS files

The following CSS file determines the base styling for your XHTML and CHM output:

- `C:\Program Files\Common Files\XMetaL Shared\DITA_OT\resource\commonltr.css`. This file includes selectors and styles for left-to-right output.
- `C:\Program Files\Common Files\XMetaL Shared\DITA_OT\resource\commonrtl.css`. This file includes selectors and styles for right-to-left output.

These files are copied to the per-user folder that is created when you generate output, in the following location:

- In Windows Vista or Windows 7 and 8: *%APPDATA%\SoftQuad\XMetaL Shared\DITA_OT\resource*

From now on, whenever you generate output, XMetaL uses the copy of the DITA OT from the per-user folder. The copy of the DITA OT in the Program Files folder is used in the following cases:

- If you delete the copy of the DITA OT in the per-user folder, the next time you generate output, XMetaL will copy the DITA OT from the Program Files folder to the per-user folder.
- If a different user who has not used XMetaL's Generate Output feature on this computer logs in and generates output, XMetaL will copy the DITA OT from the Program Files folder to the per-user folder for that user.

All HTML output files refer to this per-user file. You can copy and edit this file to create custom styling for your output. You specify your custom CSS files through the **Edit Deliverable Type** dialog box.

Custom configuration folder

It is recommended that you store your custom configuration files (the CSS and header and footer files you create) in a separate folder within the 'XMetaL Shared' folder. Name the folder according to the deliverable type. Here is an example for XHTML:

```
C:\Program Files\Common Files\XMetaL Shared\xhtml_custom
```

From now on, we will refer to this directory as '`[XMetaL Shared]\xhtml_custom`'.

Creating custom CSS files

You can customize the appearance of your XHTML and CHM output files using custom CSS files. Begin by copying the default CSS files.

The default CSS files contain selectors and style specifications for your output including:

- Titles
- Lists
- Tables
- Paragraph text
- Notes

In the default CSS file, the `.notetitle` class selector (that is used to style note titles) is specified as bold.

```
<!-- file:
C:\Program Files\Common Files\XMetaL Shared\DITA_OT\resource\commonltr.css
--> .notetitle { font-weight: bold; }
```

To change styles, first copy the default CSS file to your custom configuration folder and rename it (for example, to 'custom.css'). You can then edit the style specifications as required, or add new selectors. For example, to change note titles to bold and red for XHTML output, you can specify the following:

```
<!--
file: [XMetaL Shared]\xhtml_custom\custom.css --> .notetitle { font-weight:
bold; color: red;}
```

Note: In your custom CSS file, you need to include only the selectors you are changing or adding. You can delete the remaining selectors.

Once you have created your CSS file, you need to specify it in the **Edit Deliverable Type** dialog box. You also need to add the 'copycss' parameter so that your custom CSS file is copied to the output folder every time you generate output.

Headers and footers

You can create headers and footers for your XHTML and CHM output using separate header and footer files.

Header and footer content is created using HTML elements. The header and footer files need contain only a single `<div>` element and child elements.

Tip: You can refer to the `<div>` class selector in your custom CSS files to provide custom styling for your headers and footers. Use an `id` attribute on `<div>` elements to make styling with CSS easier.

Your header and footer files are saved in your custom configuration folder.

The following is an example of a custom header file:

```
<!-- file: [XMetaL Shared]\xhtml_custom\custom-hdr.html
--> <div id="custom-header"> <h3>Acme Industries Help</h3>
</div>
```

The following is an example of a custom footer file:

```
<!-- file: [XMetaL Shared]\xhtml_custom\custom-ftr.html
--> <div id="custom-footer"> <p
class="copyright-notice">Copyright &#169; 2007 Acme Industries. All
rights reserved.</p> </div>
```

Note: Use numerical entities for symbols (‘©’ for the copyright symbol in the above example).

Once you have created your CSS file, you need to specify it in a deliverable type. When you do this, the content of the header and footer files is copied into the HTML output files.

Deliverable types and parameters

You specify your custom CSS, header, and footer files in a deliverable type. XMetaL saves the settings you use for generating output as parameters.

You specify parameters through the **Edit Deliverable Type** dialog. The manner in which you specify parameters depends on the output format:

- For XHTML output, you specify parameters by selecting files in ‘Stylesheets’ area of the **General** tab.
- For CHM output, you specify parameters in the ‘Other output parameters’ box in the **Advanced** tab using the syntax indicated.

Note: For both deliverable types, you need to specify the ‘copycss’ parameter in the **Advanced** tab.

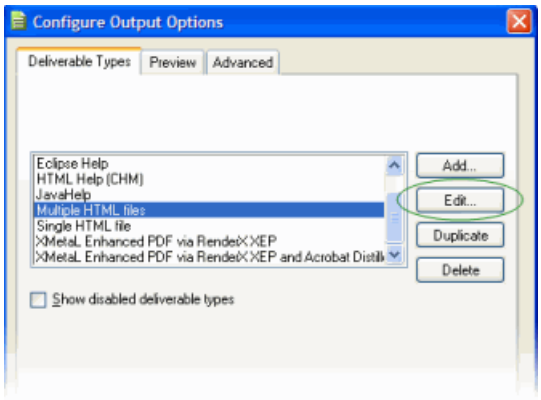
Table 57: Deliverable type parameters

File	Parameter	Description
Specific CSS	css	Your custom CSS file.
Page header	hdr	The file containing your custom header. The contents of this file are placed immediately after the <body> tag in the HTML output files.
Page footer	ftr	The file containing your custom footer content. The contents of this file are placed immediately before the </body> tag in the HTML output files.

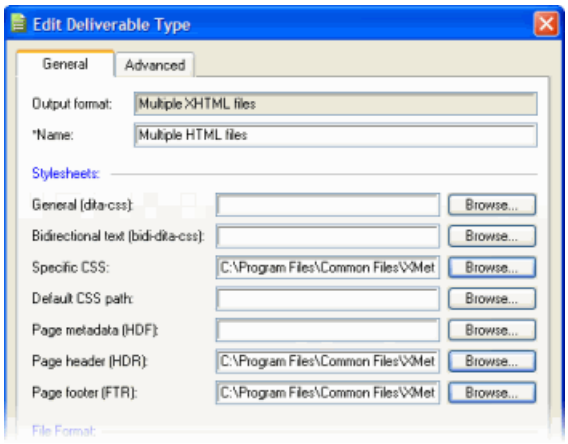
Save settings in an XHTML deliverable type

Once you have created your custom CSS and header and footer files, you can specify them in an XHTML deliverable type.

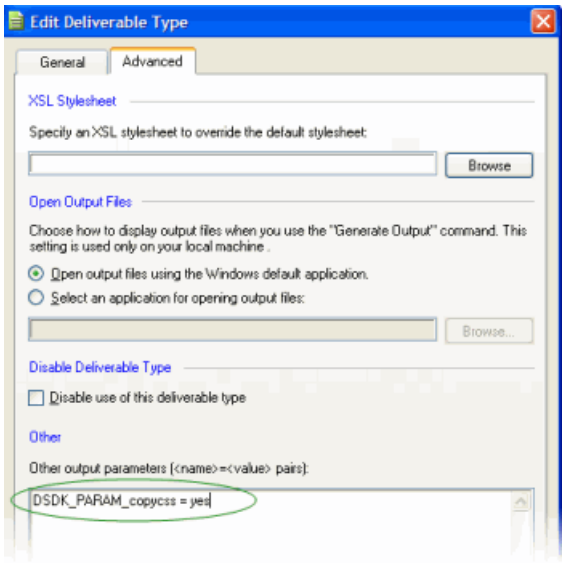
1. Click **Tools** > **Options** > **DITA Output**.
2. Select the **Multiple HTML files** deliverable type, and then click **Edit**.



3. In the **General** tab, specify the stylesheets for Specific CSS, Page header, and Page footer by clicking the **Browse** button and browsing for the stylesheets.



4. Click the **Advanced** tab, and then enter the ‘copycss’ parameter in the **Other output parameters** box as specified below.



Note: Parameters for this deliverable type use Java syntax.

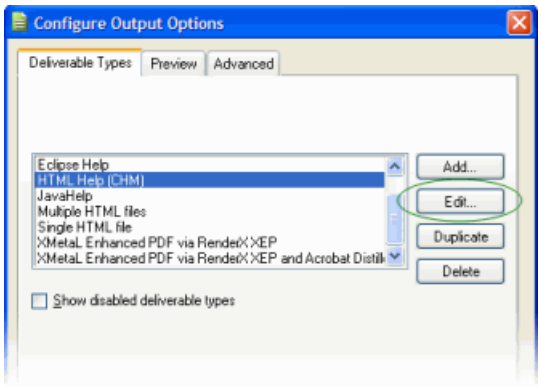
5. Click **OK** to close the **Edit Deliverable Type** and **Options** dialog boxes.

You are now ready to generate output using the new deliverable type.

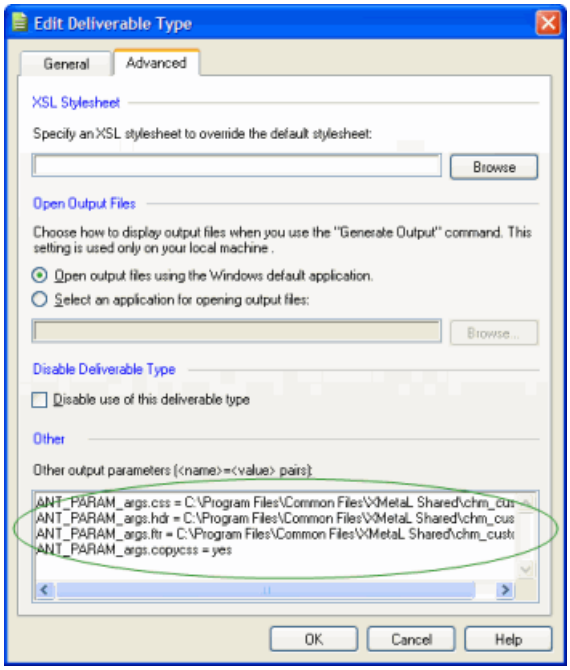
Save settings in a CHM deliverable type

Once you have created your custom CSS and header and footer files, you can specify them in an HTML Help (CHM) deliverable type.

1. Click **Tools** > **Options** > **DITA Output**.
2. Select the **HTML Help (CHM)** deliverable type, and then click **Edit**.



3. Click the **Advanced** tab, and then enter the parameters indicated below in the **Other output parameters** text box.



Note: Parameters for this deliverable type use Ant syntax. The paths specify the custom configuration folder for CHM output.

4. Click **OK** to close the **Edit Deliverable Type** and **Options** dialog boxes.

You are now ready to generate output using the new deliverable type.

Appendix D: Configuring PDF output

You can use XMetaL in conjunction with the DITA Open Toolkit to produce PDF output from your DITA topics and maps. To produce PDF, XMetaL first transforms DITA-based content into an FO file (XML with formatting objects) and then sends it to an FO processor, which renders it as PDF.

The toolkit allows you to customize your PDF output through a catalog-based custom configuration framework. No modification of the toolkit is necessary.

Custom configuration files determine the appearance of your PDF output, including:

- Page layouts
- Front matter
- Headers and footers
- Page body content
- Notes
- Fonts

Before you begin

Before you begin, you must have the following:

- An understanding of XML, XSLT, and XSL-FO
- A DITA topic or map file
- Document design specifications
- Font files (if you are using fonts that are not included in the Windows operating system)

Procedure overview

The process of making a custom configuration consists of adding configuration files to a customization directory and making changes to the catalog file in that directory. The changes you make override the settings in the default catalog file. For more information, refer to README.txt in the customization folder.

The changes you make using the method described here affect the default toolkit processing, also referred to as the ‘Idiom plug-in’ or ‘Idiom FO 1.1’ in the DITA Open Toolkit documentation. This processing uses the DITA OT ‘pdf2’ transtype. Changes that you make to the default pdf2 processing affect *all* deliverable types that use the ‘Book via RenderX’ output format.

The XMetaL Enhanced output formats are a customization of the default toolkit processing. These output formats use the XMetaL ‘pdf3’ transtype. You can make changes to them in the following ways:

- By modifying the XMetaL pdf3 transtype
- By setting parameters

If you choose to modify the XMetaL pdf3 transtype, you edit the files in the following folder:

```
...\SoftQuad\XMetaL\Shared\DITA_OT\plugins\com.xmetal.xmfo\Customization
```

Changes that you make to the default pdf3 processing using either method affect *all* deliverable types that use the ‘XMetaL Enhanced’ output formats.

Custom configuration framework

The framework consists of a set of components that are stored in a custom configuration file or folder.

XMetaL stores the DITA OT in the following location:

- In Vista or Windows 7 and 8: *%APPDATA%\SoftQuad\XMetaL\Shared\DITA_OT\plugins\com.xmetal.xmfo*

From now on, we will refer to this copied folder as '`[FO]`'.

The set of files you create for your custom configuration must be located in the following folder:

`...\SoftQuad\XMetaL\Shared\DITA_OT\plugins\com.xmetal.xmfo\Customization`

From now on, we will refer to this folder as '`[FO_CUSTOM]`'.

Table 58: Configuration files

Component	Default file/folder	Custom configuration file/folder
Catalog file	[FO]\cfg\catalog.xml	[FO_CUSTOM]\catalog.xml
Attribute sets	[FO]\cfg\fo\attrs*.xsl	[FO_CUSTOM]\fo\attrs\custom.xsl
Artwork	[FO]\cfg\common\artwork	[FO_CUSTOM]\common\artwork
Font mappings	[FO]\cfg\fo\font-mappings.xml	[FO_CUSTOM]\fo\font-mappings.xml
Page layouts	[FO]\cfg\fo\layout-masters.xml	[FO_CUSTOM]\fo\layout-masters.xml
XSLT style sheets	[FO]\xsl\fo*.xsl	[FO_CUSTOM]\fo\xsl\custom.xsl
Variables	[FO]\cfg\common\vars*.xml	[FO_CUSTOM]\common\vars*.xml
Index configurations	[FO]\cfg\common\index*.xml	[FO_CUSTOM]\common\index*.xml

A custom configuration contains the following components:

Catalog file — The catalog file points to the other files in your custom configuration.

Attribute sets — Attribute sets contain formatting information such as fonts, colors, margins, padding, and borders. There are attribute sets for almost every DITA element. They are similar in concept to Cascading Style Sheets (CSS). Two excellent resources are *http://www.dpawson.co.uk/xsl/sect3* as well as *Mapping of elements to the permitted properties*

Artwork — This folder includes images for your customization, such as those used in headers and footers. The accepted image formats are JPEG, GIF or PNG. PDF images can also be used. The default resolution is 120 dpi. See *http://www.renderx.com/reference.html#Graphic_Formats* for more information.

Fonts — Font files contain font mapping information.

Page layouts — Page layouts describe page characteristics such as dimensions, regions, and margins.

XSLT style sheets — XSLT style sheets contain templates that typically create formatting objects. They are frequently used in conjunction with variables.

Variables — Variables define strings for use in headers, footers, and generated content.

Index configurations Index configurations control the display of the index, including sort order.

Page layouts

Page layouts describe the design and order of pages in your document. They also define page regions and their size and placement.

The DITA Open Toolkit defines page layouts using the following mechanisms:

- Attribute sets
- Page masters
- XSL templates

Attribute sets

The DITA Open Toolkit uses attribute sets to control the display of regions within pages.

For example, the attribute set ‘topic.title’ specifies padding, margins and border styles for topic titles.

```
<!-- file: [FO]\cfg\fo\attrs\commons-attr.xsl
--> <xsl:attribute-set name="topic.title"> <xsl:attribute
name="font-family">Sans</xsl:attribute> <xsl:attribute
name="border-bottom">3pt solid black</xsl:attribute> <xsl:attribute
name="margin-top">0pc</xsl:attribute> <xsl:attribute
name="margin-bottom">1.4pc</xsl:attribute> <xsl:attribute
name="font-size">18pt</xsl:attribute> <xsl:attribute
name="font-weight">bold</xsl:attribute> <xsl:attribute
name="padding-top">1.4pc</xsl:attribute> <xsl:attribute
name="keep-with-next.within-column">always</xsl:attribute>
</xsl:attribute-set>
```

Custom attribute set processing

You can change the default page layout in your custom configuration. For example, you may want to create a title page that reflects the graphic standards of your company. Title pages typically contain the document title, product name, and corporate graphics. The following example adds a background image to the title page.

```
<!-- file:
[FO_CUSTOM]\fo\attrs\custom.xsl --> <!-- overrides __frontmatter
attribute set from [FO]\cfg\fo\attrs\front-matter-attr.xsl -->
<xsl:attribute-set name="__frontmatter"> <xsl:attribute
name="text-align">left</xsl:attribute> <xsl:attribute
name="color">#000</xsl:attribute> <xsl:attribute
name="background-image">url(Customization/OpenTopic/common/artwork/bg_image.jpg)</xsl:attribute>
<xsl:attribute name="background-repeat">no-repeat</xsl:attribute>
<xsl:attribute name="background-position">left top</xsl:attribute>
<xsl:attribute name="padding">30mm 0 0 0</xsl:attribute>
</xsl:attribute-set>
```

Note: The source file for the background image file must be located in the artwork folder for your custom configuration. The (source) path is:

`[FO_CUSTOM]\common\artwork`

The path to the background image in the `xsl:attribute` is the relative path required by the DITA Open Toolkit. This (destination) path is the path to the folder that is created during PDF processing:

`[output directory]\pdf_out\Customization\OpenTopic\common\artwork`

Page masters

Each document has a page sequence master that defines where page masters occur in a document. Page masters describe basic page layouts, such as margins and columns. Each page of a document is rendered by one of the page masters specified in the page sequence master.

The following is the default page master that is used to create the title page. This page master describes a page with a header and footer.

```
<!-- file:
[FO]\cfg\fo\layout-masters.xml --> <fo:simple-page-master
master-name="front-matter-first" page-width="8.5in" page-height="11in">
<fo:region-body margin-top="1.25in" margin-bottom="1in" margin-left="1.5in"
margin-right="0.5in"/> <fo:region-before extent="1.25in"
display-align="before" region-name="even-frontmatter-header"/>
<fo:region-after extent="1in" display-align="after"
region-name="even-frontmatter-footer"/>
</fo:simple-page-master>
```

Custom page master processing

You can change the default page master definitions in your custom configuration. For example, the following custom page master modifies the default title page layout:

- The page orientation is now landscape (11 inches wide x 8.5 inches high)
- All margins are set to 0.5 inches

```
<!-- file: [FO_CUSTOM]\fo\layout-masters.xml
--> <fo:simple-page-master master-name="front-matter-first"
page-width="11in" page-height="8.5in"> <fo:region-body margin-top="0.5in"
margin-bottom="0.5in" margin-left="0.5in" margin-right="0.5in"/>
<fo:region-before extent="0.5in" display-align="before"
region-name="even-frontmatter-header"/> <fo:region-after extent="0.5in"
display-align="after" region-name="even-frontmatter-footer"/>
</fo:simple-page-master>
```

Headers and footers

Headers and footers typically include information such as page numbers, document titles, and product names.

The DITA Open Toolkit defines headers and footers using the following mechanisms:

- *Attribute sets* on page 210
- *Variables* on page 211
- *XSL templates* on page 212

Attribute sets

The DITA Open Toolkit uses attribute sets to control the display of content within headers and footers.

For example, the following attribute sets (‘__body__odd__footer ’ and ‘ __body__odd__footer__pagenum’) specify styles for the footer content on odd-numbered pages of the document body.

```
<!-- file:
[FO]\cfg\fo\attrs\static-content-attr.xsl --> <xsl:attribute-set
name="__body__odd__footer"> <xsl:attribute
name="text-align">right</xsl:attribute> <xsl:attribute
name="margin-right">10pt</xsl:attribute> <xsl:attribute
name="margin-bottom">10pt</xsl:attribute> </xsl:attribute-set>
```

```
<xsl:attribute-set name="__body__odd__footer__pagenum"> <xsl:attribute
name="font-weight">bold</xsl:attribute>
</xsl:attribute-set>
```

Custom attribute set processing

You can change the default styling of headers and footers in your custom configuration. For example, the following attribute sets style the footer text in italics and the page number as normal text, colored red.

```
<!-- file: [FO_CUSTOM]\fo\attrs\custom.xsl -->
<xsl:attribute-set name="__body__odd__footer"> <xsl:attribute
name="text-align">right</xsl:attribute> <xsl:attribute
name="margin-right">10pt</xsl:attribute> <xsl:attribute
name="margin-bottom">10pt</xsl:attribute> <xsl:attribute
name="font-style">italic</xsl:attribute> </xsl:attribute-set>
<xsl:attribute-set name="__body__odd__footer__pagenum"> <xsl:attribute
name="font-weight">bold</xsl:attribute> <xsl:attribute
name="color">red</xsl:attribute> <xsl:attribute
name="font-style">normal</xsl:attribute>
</xsl:attribute-set>
```

Variables

You can use variables to manage strings in headers and footers, indexes, tables of contents, and other generated content. Header and footer variables work together with header and footer XSL templates. Variables can be localized, and additional variable files are named according to locale as defined in ISO 639- 1 and ISO 316, for example, ‘en_US’.

The following are the default variables used by the toolkit to produce header content for odd-numbered and even-numbered body pages. The even-numbered header contains the product name followed by a running header and page number; the odd-numbered header contains the same items in reverse order.

The values of the `<param>` elements are supplied to the *insertVariable* XSL template when it is called to process the *Body odd header* and *Body even header* variables (see *XSL templates* on page 212).

```
<!-- file: [FO]\cfg\common\vars\en_US.xml --> <!-- The
header that appears on odd-numbered pages. --> <variable id="Body odd
header"> <param ref-name="prodname"/> | <param
ref-name="heading"/> | <param ref-name="pagenum"/>
</variable> <!-- The header that appears on even-numbered pages.
--> <variable id="Body even header"> <param
ref-name="pagenum"/> | <param
ref-name="prodname"/> | <param ref-name="heading"/>
</variable>
```

Custom variables processing

The following example contains variables that override the default headers for odd-numbered and even-numbered pages. The even-numbered header contains the page number followed by the product revision code; the odd-numbered header contains the running header followed by the page number.

The *Body even header* variable requires a `param` element called *prodrev*. (See *XSL templates* on page 212 for sample XSL.)

```
<!-- file: [FO_CUSTOM]\common\vars\en_US.xml-->
<!-- The header that appears on odd-numbered pages. --> <variable
id="Body odd header"> <param
ref-name="heading"/> | <param ref-name="pagenum"/>
</variable> <!-- The header that appears on even-numbered pages.
--> <variable id="Body even header"> <param
ref-name="pagenum"/> | <param ref-name="prodrev"/>
</variable>
```

XSL templates

The DITA Open Toolkit includes a set of XSL templates that are used by other components for inserting and formatting content.

Using the default variable definition for headers of even-numbered body pages, the following template is used by the *body-even* page master to insert the product name, heading, and page number variables. Formatting occurs as a result of the '__body__even__header' attribute set.

```
<!-- file:
[FO]\xsl\fo\static-content.xsl --> <xsl:template
name="insertBodyEvenHeader"> <fo:static-content
flow-name="even-body-header"> <fo:block
xsl:use-attribute-sets="__body__even__header"> <xsl:call-template
name="insertVariable"> <xsl:with-param name="theVariableID" select="'Body
even header'"/> <xsl:with-param name="theParameters"> <prodname>
<xsl:value-of select="$productName"/> </prodname> <heading>
<fo:inline xsl:use-attribute-sets="__body__even__header__heading">
<fo:retrieve-marker retrieve-class-name="current-header"/>
</fo:inline> </heading> <pagenum> <fo:inline
xsl:use-attribute-sets="__body__even__header__pagenum">
<fo:page-number/> </fo:inline> </pagenum>
</xsl:with-param> </xsl:call-template> </fo:block>
</fo:static-content> </xsl:template>
```

The *insertVariable* template call passes two parameters: *theVariableID* and *theParameters*.

theVariableID	The name of the variable in the locale file (e.g., [FO]\cfg\common\vars\en_US.xml)
theParameters	A set of parameters used by the locale variable. In the above example, the locale variable is *Body even header*, which uses the parameters *pagenum*, *prodname*, and *heading*:

```
<!-- file: [FO]\cfg\common\vars\en_US.xml
--> <!-- The header that appears on even-numbered pages. -->
<variable id="Body even header"> <param
ref-name="pagenum"/> | <param
ref-name="prodname"/> | <param ref-name="heading"/>
</variable>
```

Custom XSL template processing

You can change the default toolkit processing by creating your own XSL templates that you can use together with custom variable definitions.

The following example demonstrates how to create a custom header for even-numbered body pages. The custom header will have the page number and the document revision code.

To customize the header content, you need to create an XSL template, along with any variables the template will use. The value of the variable in this example, 'Body even header', is computed by two other parameters, *pagenum* and *docrev*. These parameters are passed when we call the *insertVariable* template from the *insertBodyEvenHeader* template.

The *pagenum* parameter is merely the FO markup required to insert a page number. The *docrev* parameter makes use of the *docRevision* variable (see excerpt from `[FO_CUSTOM]\fo\xsl\custom.xsl` below).

```
<!-- file:
[FO_CUSTOM]\common\vars\en_US.xml--> <!-- The header that appears on
even-numbered pages. --> <variable id="Body even header"> <param
```

```
ref-name="pagenum"/> | <param ref-name="docrev"/>
</variable>
```

```
<!-- file:
[FO_CUSTOM]\fo\xsl\custom.xsl --> <!-- revision code -->
<xsl:variable name="docRevision"> <xsl:variable name="mapDocRevision"
select="$map/@rev"/> <xsl:variable name="bkinfoDocRevision"
select="/*[contains(@class, ' map/map ')]/@rev"/> <xsl:choose>
<xsl:when test="$mapDocRevision"> <xsl:value-of
select="$mapDocRevision"/> </xsl:when> <xsl:when
test="$bkinfoDocRevision"> <xsl:value-of select="$bkinfoDocRevision"/>
</xsl:when> <xsl:otherwise> <xsl:value-of
select="/descendant::*[contains(@class, ' topic/topic ')][1]/@rev"/>
</xsl:otherwise> </xsl:choose> </xsl:variable> <!--
insertBodyEvenHeader (uses $docRevision) --> <xsl:template
name="insertBodyEvenHeader"> <fo:static-content
flow-name="even-body-header"> <fo:block
xsl:use-attribute-sets="__body__even__header"> <xsl:call-template
name="insertVariable"> <xsl:with-param name="theVariableID" select="'Body
even header'"/> <xsl:with-param name="theParameters"> <docrev>
<xsl:value-of select="$docRevision" /> </docrev> <pagenum>
<fo:inline xsl:use-attribute-sets="__body__even__header__pagenum">
<fo:page-number/> </fo:inline> </pagenum>
</xsl:with-param> </xsl:call-template> </fo:block>
</fo:static-content> </xsl:template>
```

Note: For XSL templates that reference formatting objects (FO) markup, make sure to have the `fo:` namespace in the `xsl:stylesheet` element:

```
<!-- file: [FO_CUSTOM]\fo\xsl\custom.xsl --> <?xml
version='1.0'?> <xsl:stylesheet
xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
xmlns:fo="http://www.w3.org/1999/XSL/Format" version="1.1">
```

Page body content

Most page body content is formatted by attribute sets, which are named on a per-element basis.

The following examples include some of the attribute sets that are used to format page body content.

Note: The __fo__root attribute set styles for the overall document. Elements that do not have an attribute set inherit from this set.

Note: Definition lists (`<dl>` elements) are rendered as `<fo:table>` elements, so their attributes are included in the table below.

Table 59: Default content attribute sets

Component	Attribute sets	Default file (in [FO]\cfg\fo\attrs)
Headings	topic.title, topic.topic.title	commons-attr.xsl
	topic.title__content, topic.topic.title__content	
	section.title, example.title, fig.title	
Body text	topic	commons-attr.xsl
	body__toplevel, body__secondLevel	

Component	Attribute sets	Default file (in [FO]\cfg\fo\attrs)
	body	
	section	
	p	
	__fo__root	
Tables	table.title	tables-attr.xsl
	__tableframe__top, __tableframe__bottom	
	thead.row.entry, thead.row.entry__content	
	dl	
	dlentry.dt, dlentry.dt__content	
	dlentry.dd, dlentry.dd__content	
Notes	note	commons-attr.xsl
	note__label	
	note__table	
	note__image__entry	
Lists	ul, ul.li, ul.li__label, ul.li__label__content, etc.	lists-attr.xsl
	ol, ol.li, ol.li__label, ol.li__label__content , etc.	
	steps-unordered, steps-unordered.step, etc.	
	steps, steps.step, steps.step__label, etc.	

For example, the following excerpt from [FO]\cfg\fo\attrs\tables-attr.xsl shows the default styles for table headings:

```
<!-- file:
[FO]\cfg\fo\attrs\tables-attr.xsl --> <xsl:attribute-set
name="thead.row.entry"> <!--head cell--> <xsl:attribute
name="background-color">antiquewhite</xsl:attribute>
</xsl:attribute-set> <xsl:attribute-set
name="thead.row.entry__content"> <!--head cell contents-->
<xsl:attribute name="margin">3pt 3pt 3pt 3pt</xsl:attribute>
<xsl:attribute name="font-weight">bold</xsl:attribute>
</xsl:attribute-set>
```

Custom processing

To customize styles:

1. Locate the relevant default attribute set (see the table above).
2. Copy the attribute set to `[FO_CUSTOM]\fo\attrs\custom.xsl`.
3. Modify / add attributes as required.

In the following example, the background color for table headers is set to black. Table heading text is also customized.

```
<!-- file: [FO_CUSTOM]\fo\attrs\custom.xsl -->
<xsl:attribute-set name="thead.row.entry"> <!--head cell-->
<xsl:attribute name="background-color">black</xsl:attribute>
</xsl:attribute-set> <xsl:attribute-set
name="thead.row.entry__content"> <!--head cell contents-->
<xsl:attribute name="color">white</xsl:attribute> <xsl:attribute
name="margin">3pt 3pt 3pt 3pt</xsl:attribute> <xsl:attribute
```

```
name="font-weight">bold</xsl:attribute>
</xsl:attribute-set>
```

Notes

By default, notes are preceded by text and an image, which are stored as variables. Variables are defined for each note type.

Notes come in a variety of types:

- Regular notes
- Caution
- Attention
- Danger

The following example shows how the note of ‘type=note’ is rendered.

```
<!-- file: [FO]\cfg\common\vars\en_US.xml --> <variable
id="Note">Note</variable> ... <variable id="note Note Image
Path">Configuration/OpenTopic/cfg/common/artwork/hand.gif</variable>
```

Custom processing

You can change how notes are rendered by specifying your own preceding text and image. The following example shows a note of ‘type=note’ with no preceding text and a custom image.

```
<!-- file:
[FO_CUSTOM]\common\vars\en_US.xml --> <variable id="Note"><!-- no
image --></variable> ... <variable id="note Note Image
Path">Configuration/OpenTopic/cfg/common/artwork/corporate_note.gif</variable>
```

For further modification of notes, you can customize the placeNoteContent XSL template. The following template uses a custom attribute set.

```
<!-- file: [FO_CUSTOM]\common\vars\en_US.xml -->
<xsl:template name="placeNoteContent"> <fo:block
xsl:use-attribute-sets="note" id="{@id}"> <fo:inline
xsl:use-attribute-sets="note__label"> <xsl:choose> <xsl:when
test="@type='note' or not(@type)"> <fo:inline
xsl:use-attribute-sets="note__label__note"> <xsl:call-template
name="insertVariable"> <xsl:with-param name="theVariableID"
select="'Note'"/> </xsl:call-template> </fo:inline>
</xsl:when> ... </xsl:choose> </fo:inline> ...
</fo:block> </xsl:template>
```

Front matter

Front matter consists of the pages at the front of a book that precede its main text, for example, the title page, copyright notice, dedication, and table of contents. You can create front matter content by setting the ‘outputclass’ attribute value on a topic.

The following template applies to topics that have the outputclass attribute value of ‘frontmatter’.

```
<!-- file:
[FO_CUSTOM\fo\xsl\custom.xsl --> <xsl:template
name="createFrontMatter"> <fo:page-sequence
master-reference="front-matter"
```

```
xsl:use-attribute-sets="__force__page__count"> ... <fo:flow
flow-name="xsl-region-body"> <xsl:apply-templates
select="//topic[@outputclass='frontmatter']" mode="frontmatter" />
</fo:flow> </fo:page-sequence> </xsl:template>
```

You also need to add a custom template.

```
<!-- file:
[FO_CUSTOM\fo\xsl\custom.xsl --> <xsl:template
match="topic[@outputclass='frontmatter']"/> <xsl:template match="*"
mode="frontmatter"> <xsl:apply-templates mode="frontmatter" />
</xsl:template>
```

Now you can control how your front matter content is processed, and more importantly, use the toolkit templates where you want the default processing. For example, you might want to include images in your front matter using the default placeImage template.

```
<!-- file: [FO_CUSTOM\fo\xsl\custom.xsl --> <xsl:template
match="image" mode="frontmatter"> <fo:block> <xsl:call-template
name="placeImage" select="." mode="" ><!--
switch to default mode --> <xsl:with-param name="imageAlign"
select="@align" /> <xsl:with-param name="href" select="@href" />
<xsl:with-param name="height" select="@height" /> <xsl:with-param
name="width" select="@width" /> </xsl:call-template> </fo:block>
</xsl:template>
```

Fonts

You can set the font family and size by specifying parameter values.

Table 60: Parameters

Name	Description
`xm.document.font-size`	The base font size for the document. This is the font size that is used by most body content (for example, paragraphs and lists). The value is set in points (pt).
`xm.body.font.family`	Sets the font body type for body text. Can be set to serif or sans-serif.
`xm.title.font.family`	Sets the font type for titles. Can be set to serif or sans-serif.

Example

The base font size is set to 10 points, the body font is serif, and the title font is sans-serif.

```
<!-- file:
[xmfo]\Customization\fo\attrs\custom.xsl --> <xsl:variable
name="xm.document.font-size">10pt</xsl:variable> <xsl:variable
name="xm.body.font-family">Serif</xsl:variable> <xsl:variable
name="xm.title.font-family">Sans</xsl:variable>
```

Appendix E: XMetaL Licensing Server

The XMetaL Licensing Server includes an user interface to allow for administration of your license server and licenses.

Installing XMetaL Licensing Server

1. Launch the installer, and click through the setup wizard, taking into account the following.
2. On the End-User License Agreement screen, select the check box to agree to the end-user license.
3. On the Destination Folder screen, select the destination folder manually or by browsing for it.

XMetaL License Server is now installed on your computer.

Using XMetaL Licensing Server Admin

The user interface consists of two tabbed views, for administration of the licensing server as well as for the contents of the user licenses+.

License Server

The license server tab includes the following items:

Floating Licenses List - displays all active and inactive, floating licenses. For each licenses the following information is displayed:

- **Product** - the XMetaL product to which the license applies
- **Maintenance End** - the date at which the product maintenance period expires
- **Quantity** - the total count of licenses of this type
- **In Use** - the total count of licenses of this type that are currently active

Administrators can perform the following actions on this list:

- **Refresh** - displays the latest list of floating licenses
- **Add Licenses** - allows you to add license files to the License Server's database
- **Remove Licenses** - allows you to remove license files from the License Server's database

Settings - allows administrators to modify the following settings:

- **Host Name** - displayed as read-only
- **Port** - displayed as read-only
- **Modify** - click this button to edit the Host Name or Port number
- **Start Service** - starts the licensing server
- **Stop Service** - stops the licensing server

  Stopping and re-starting the service is beneficial, for example, if a client has crashed while XMetaL was in use, and the license may not have been released. In this case, stopping and starting the service frees up these licenses without needing to wait for the server to do so.

User License

This view displays the user license file contents. Administrators can perform the following actions:

- **Save to File** - saves the license file to a location of your choice
- **Copy Server Address to Clipboard** - copies the URL to the clipboard, to allow for sharing of the server address

Glossary

attribute	A value that is associated with an element but is not part of the content of the element.
block element	An element whose content is preceded and followed by line breaks.
browser	A program that communicates with Web servers and is used for retrieving and displaying documents from the World Wide Web or an intranet. Most browsers use a graphical interface to provide access to text, images, audio, and video.
CALS table model	A widely used DTD for table markup, described in the U.S. Department of Defense SGML standard MIL-M-28001B. XMetaL Author supports a definition of the CALS DTD developed by the OASIS consortium and described at *www.oasis-open.org*.
cascading style sheet (CSS)	A way to specify document formatting that is supported by browsers. XMetaL uses cascading style sheets to format the document pane in Normal and Tags On views. A cascading style sheet generally consists of one or more rules that define element appearance. These style sheets are said to be cascading because several style sheets can be applied to the same document. See *www.w3.org* for more information.
catalog files	One or more files that map external identifiers for DTDs, rules files, or entities to a filename. Also called OASIS catalog files. For more information on catalog files, see *OASIS Technical Resolution 9401:1997*.
CDATA	Character data. A type of content in which any markup delimiters (such as '<' and '&') that appear are treated as ordinary characters.
CDATA section	A markup construct beginning with the characters '<![CDATA[' and ending with ']]>', inside which all content is treated as character data.
chunking	The way in which the content you see in XMetaL is organized in files when you generate output from a DITA map. You can specify chunking behaviors, for example, that split composite topics into several output files.
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.
deliverable type	Specifies an output format and additional configuration settings that you supply to the DITA Open Toolkit.
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.

local content	Contains elements, attributes, and text that you create during the authoring process and is stored within the current file.
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. A mini-template is inserted when there is no local content for an element with a content reference.
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*.
output format	Specifies the file format of an output deliverable and, in the case of PDF, a print formatter.
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.
per-user	When the Generate Output feature is used for the first time in XMetaL, the DITA OT file set is copied to the per-user folder, which is specific to your user environment.
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.
referenced content	Content that is stored outside of the referencing element, either within the same file or in another file, and is specified by the `conref` attribute.
remote file	A file on an http or Web server.
required attribute	An attribute that must be present in order for the document to be valid.
required element	An element that must be present in order for the document to be valid.
rules checking	An XMetaL feature that ensures that you do not break the required structure as you edit your document; it does this by allowing you to insert only valid elements. Rules checking is less stringent than validation in that it checks that no errors have been made, but does not check that the markup is complete.
Rules file	An XMetaL-specific alternative to a DTD. All of the files comprising a DTD are compiled into a single binary rules file. Rules files can be issued to XMetaL users who are not authorized to modify the DTD.
Schema	An XML standard for defining the structure, content, and semantics of an XML document.
SDATA entity	A type of text entity whose content is specific to a particular processing application or platform. These entities are often used to represent platform-specific characters, and codes for formatting systems (such as troff or TEX). SDATA entities are permitted only in SGML files.
selector	In a cascading style sheet, a selector is an expression, representing one or more elements, that a style property can be associated with. A selector can represent an element, several elements, an element with a specific ancestor, an element in a particular class, etc.
semantic tables	A group of elements that is not marked up with one of the supported table models (CALS and HTML) that can be formatted as a table.
SGML	Structured General Markup Language. A standard for describing the structure of a document using markup. SGML is described by the ISO 8879 standard 1986). HTML and XML are applications of SGML.
SGML declaration	An SGML declaration is a file associated with a DTD that contains information about the character set, markup delimiters, quantity settings, and special markup features that are available in documents that use that DTD.
SQDIR	The variable that is used to represent the folder in which XMetaL is installed.
standalone document	An XML document that an application can parse without referring to an external DTD. A standalone document may still require a DTD in some situations, for example, if it is being edited.
system identifier	Part of an external identifier. A system identifier is generally the filename of the file (for example, a DTD or entity set) that the external identifier refers to. In XML documents, system identifiers are required in external identifiers, and are interpreted as URLs.
tags	An element begins with a start-tag (for example, <PRE>) and ends with an end tag (for example, </PRE>).
TBR	Toolbar file. Toolbar and menu customizations are saved in TBR files.
text entity	A type of general entity that stands for one or more text characters.

Unicode	A standard for electronically encoding the characters of many of the scripts used to write the world's languages, as well as special symbols such as mathematical symbols. Unicode is the character encoding specified by XML. For more information, see *www.unicode.org*.
URL	Uniform Resource Locator. A URL is the address of a file, written in a format that can be interpreted by a Web server.
valid document	An XML or SGML document is valid if it conforms to the rules in the DTD or Schema.
W3C	World Wide Web Consortium, an industry association for the development of World Wide Web technologies. For more information, see *www.w3.org*.
WebDAV	World Wide Web Distributed Authoring and Versioning, the Internet Engineering Task Force standard for collaborative authoring on the Web. WebDAV is a set of extensions to the Hypertext Transfer Protocol (HTTP) and Secure Hypertext Transfer Protocol (HTTPS) that facilitates collaborative editing and file management between users located remotely from each other on the Internet.
well-formed document	An XML document that is structurally correct according to the XML standard. There are several aspects to well-formedness, the most important of which are: the document must have only one top-level element, and all elements must be properly nested.
whitespace	One or more space, tab, carriage return, or line feed characters, in any combination.
World Wide Web	This is a generic term for the collection of Web servers and browsers. Usually abbreviated as WWW, or simply called 'the Web'.
XML	Extensible Markup Language. An application of SGML that describes the structure and content of a document. Originally designed for displaying content over the Internet. XML is an initiative of the W3C. For more information, see *www.w3.org/XML*.
XML declaration	A processing instruction that appears at the start of an XML document. This processing instruction indicates the XML version being used, and may specify the character encoding and whether the document needs an external DTD.
XSLT	Extensible Stylesheet Language: Transformations. A language for describing how to transform an XML document into another XML document.
xs:redefine	An element that redefines simple and complex types, groups, and attribute groups from an external schema. For more information, see *http://www.w3.org/TR/xmlschema-1#modify-schema*

Index

D

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

U

V

W

X