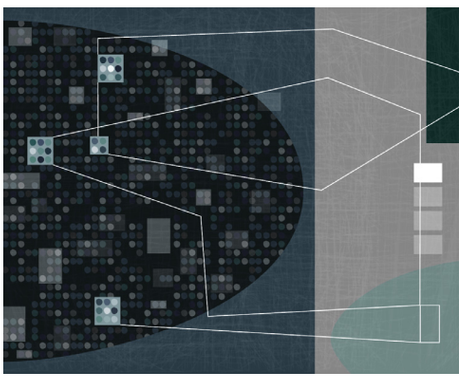
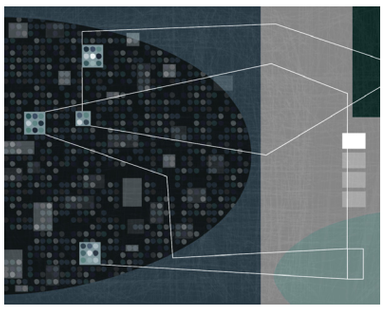


MiramoPDF™ 1.6

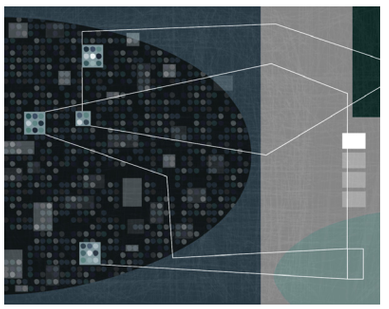
DITA-OT plugin Getting Started Guide

Datazone Ltd, Kenmare, Kerry, Ireland | +353 64 66 289 64. | www.miramo.com | miramo@datazone.com



MiramoPDF™

Table of Contents



MiramoPDF™

Introduction

Thank you for your interest in the Miramo DITA Open Toolkit (OT) plugin, **com.miramo.mmpdf**, which provides a simple method for generating high-quality PDFs from DITA on Windows system using **MiramoPDF**, where formatting is controlled via a GUI template design tool, **MiramoDesigner**.

This Getting Started guide provides the information you need to get up and running publishing your DITA content, fast.

The plugin maps DITA to the MiramoXML model, then applies template-controlled formatting using **MiramoPDF**. It is designed to be easily integrated with your chosen XML authoring tool or content management system, or run with the standalone DITA-OT using a simple command line interface described in "Command line interface" on page 18.

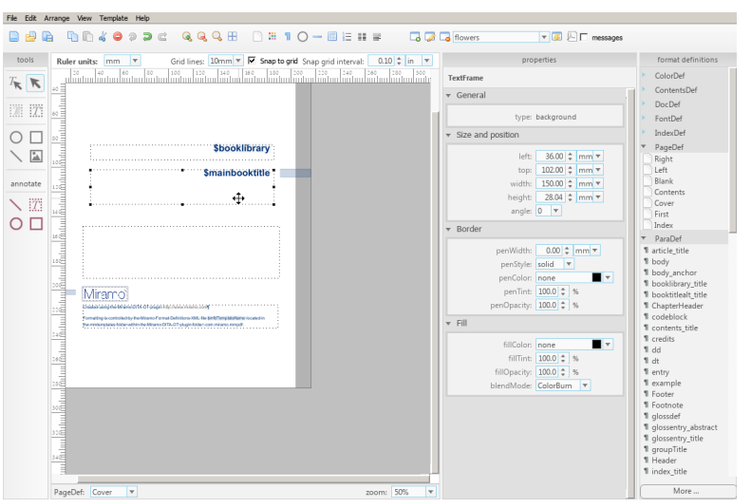
See Appendices for information on Installing and integrating the plugin with oXygen, and Integrating with XMetaL.

The **com.miramo.mmpdf** plugin is designed to cover standard formatting requirements for DITA document content out of the box, but for bespoke requirements it may be customized to suit your needs - for information see "Customization" on page 27.

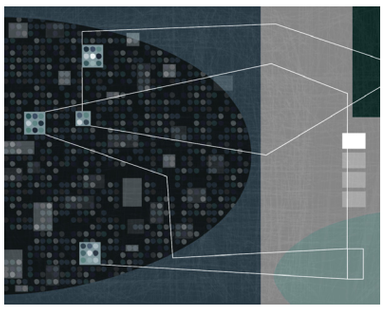
If you would like more information about **server versions** of Miramo, or if you need to publish non-DITA structured data, or would like to produce different output formats (FrameMaker, ePub, Kindle, HTML5 ...) please contact us (email miramo@datazone.com, phone +353 64 66 28964), and/or visit our website: http://www.miramo.com.

GUI template controlled formatting

The appearance of the output PDF is controlled by a **Miramo Format Definitions** (MFD) template - *the separation of form and content*. Templates are created and modified using **MiramoDesigner** (*MiramoDesigner.exe*), the GUI template design tool component of MiramoPDF.



The default template (*default.mfd*) supplied with the plugin provides a single-column layout for rendering MiramoXML to PDF. Here is an example: flowers_ default.pdf



Installing

The MiramoPDF DITA-OT plugin **com.miramo.mmpdf** is designed to be seamlessly integrated with any CMS or XML authoring tool such as oXygen or XMetaL, Alternatively it may be used with a standalone DITA-OT installation via the command line interface. This chapter gives an overview of installing or upgrading the plugin.

System requirements

Before installing the Miramo DITA-OT plugin the following software must be installed and working on the target system:

- *DITA-OT* version 2.1 or above
- **MiramoPDF** or MiramoEnterprise vs 1.5 or above

MiramoPDF Personal and Desktop editions run on the following operating systems:

- Windows 7 Professional (64 bit only)
- Windows 8.1 (64 bit only)
- Windows 10

MiramoPDF Server and Miramo Enterprise editions are available to run on Windows Server operating systems - contact us for more information.

Installing the Miramo DITA-OT plugin for the first time

These instructions relate to installing and integrating the Miramo DITA-OT plugin into an existing DITA-OT installation folder for the first time. For information on upgrading the plugin see "Upgrading the Miramo DITA-OT plugin" on page 4.

To integrate with your XML authoring tool or DITA CMS, follow the instructions given by your vendor. See Appendices for information on Installing and integrating the plugin with oXygen, and Integrating with XMetaL.

See "Files and folders" on page 3 for a list of files and folders installed in the DITA-OT **plugins/com.miramo.mmpdf** folder.

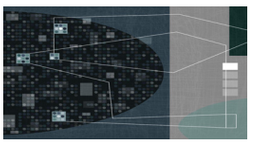
Installing from the setup.exe

Double-click on the **MiramoDITA-OTplugin<*vs*>setup.exe** and navigate to the DITA-OT install root folder, which contains the 'integrator.xml' file. The MiramoDITA-OT plugin source (including samples, command scripts and templates) will be located in the *[dita-ot install dir]/*plugins/com.miramo.mmpdf folder, for example:

C:\program files (x86)\dita-ot-3.3\plugins\com.miramo.mmpdf

The **MiramoDITA-OTplugin<*vs*>setup.exe** will run the DITA-OT integrator and will append the com.miramo.mmpdf folder to the PATH environment variable. The plugin is now ready to use.

See www.dita-ot.org for more information on installing and integrating DITA-OT plugins.



Installing

Files and folders

The **com.miramo.mmpdf** plugin includes the following files and folders, located in the DITA-OT installation folder selected during installation:

***<dita-ot-installdir>*/plugins/com.miramo.mmpdf/**
Source for **com.miramo.mmpdf** plugin:

cfg/
XSL stylesheet placeholders and language specific localization strings. **Do not change the contents of this folder** - see "Customizing the com.miramo.mmpdf plugin" on page 27 for information on generating a custom plugin based on **com.miramo.mmpdf** and "mmpdf:localization-strings.dir" on page 10

com.example.my-mmpdf/
Contains source files for making a specialization of the com.miramo.mmpdf plugin. See "Customizing the com.miramo.mmpdf plugin" on page 27 for more details.

docs/Miramo_DITA-OT_GettingStarted.pdf
This document

images/
Images used by the com.miramo.mmpdf plugin

integration/oxygen/MiramoPDF.scenarios
The oXygen transformation scenario for producing a PDF from the currently edited DITA file. Import into your oXygen tool using Options->import transformations

integration/xmetal/*
Files needed for integrating with XMetaL.

logos/
Images and logos used by the com.miramo.mmpdf plugin

mmtemplates/
Miramo Format Definitions default template for DITA publishing:
Miramo Format Definitions templates are XML files which can be edited using the MiramoPDF GUI template design tool, **MiramoDesigner**.

default.mfd
default template used for publishing DITA content out of the box

samples/flowers/
The oXygen DITA flowers sample

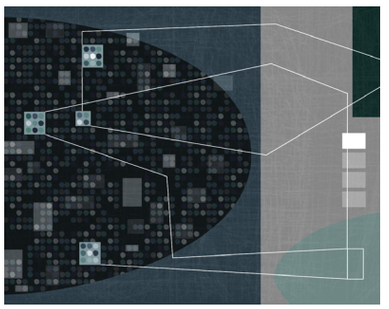
samples/taskbook/
A modified version of the DITA-OT taskbook (IT book) sample

xsl/
XSL stylesheets for mapping DITA to MiramoXML

dita2mm.cmd
Command script for preprocessing a DITA input file to MiramoXML, ready for rendering to PDF. Called by:

dita2mmpdf.cmd
Command script for running the flowers demo, or for producing a PDF from a specified DITA map.

build_dita2mmpdf.xml
XML file which contains the **ant** targets for performing topicmerge and translating the DITA content to MiramoXML (Miramo Simple Markup, which represents the document content), and for rendering that document content to PDF using the format definitions in the MFD template.



MiramoPDF™

Upgrading

Upgrading the Miramo DITA-OT plugin

Double-click on the **MiramoDITA-OTplugin<*vs*>setup.exe** and navigate to the DITA-OT install root folder. If the target DITA-OT folder already contains an instance of the Miramo DITA-OT plugin **com.miramo.mmpdf**, the installer will automatically uninstall the existing plugin from the com.miramo.mmpdf plugin folder. Existing configuration files and XSL stylesheets in the com.miramo.mmpdf folder will be overwritten.

If you have made changes to the '**default.mfd**' template file located in the **com.miramo.mmpdf\mmtemplates** folder, the installer will make a backup copy of the '**default.mfd**' to '**default-pre*<vs>*mfd**', where <vs> is the version being installed for example **160p10**. Any other MFD files located in the **mmtemplates** folder will be left unchanged.

IMPORTANT: Once the installation has completed, upgrade any existing MFD files (including the renamed 'default.mfd' if present) by following the instructions given below.

Upgrading existing MFD files

Several new features and improvements have been introduced in version 1.6 of the MiramoPDF DITA-OT plugin, some of which have implications for upgrading existing MFD template files.

For example, the interparagraph spacing mode has changed since version 1.4 to remove inconsistencies. In the new version, spacing between paragraphs is exclusively controlled using @spaceAbove and @spaceBelow. If the values of these attributes is 0, there will be no space between paragraphs.

As a consequence the @spaceBelow values in ParaDef format definitions with a non-zero @leading value in MFD templates need to be adjusted to achieve the correct interparagraph spacing.

The MiramoPDF distribution includes a command line utility 'mfdupgrade.cmd' which automates the upgrade process. If you are using oXygen, a new transformation scenario 'MiramoPDF MFD upgrade' has been added to streamline the upgrade process.

Running the automated upgrade process on an MFD file '***filename***.mfd' results in a new MFD file '***filename_upgraded***.mfd'. Once you are happy with the results of the upgrade, this may be used in place of the original MFD file (but it is recommended that you make a backup copy first).

Using the 'mfdupgrade' command line tool

The 'mfdupgrade.cmd' script is installed in **c:\program files\Miramo\MiramoPDF** which is added to the PATH environment variable by the installer.

To upgrade your MFD file, start a new DOS command window and enter the following commands:

```
cd "foldercontainingMFDfile"
mfdupgrade template.mfd
```

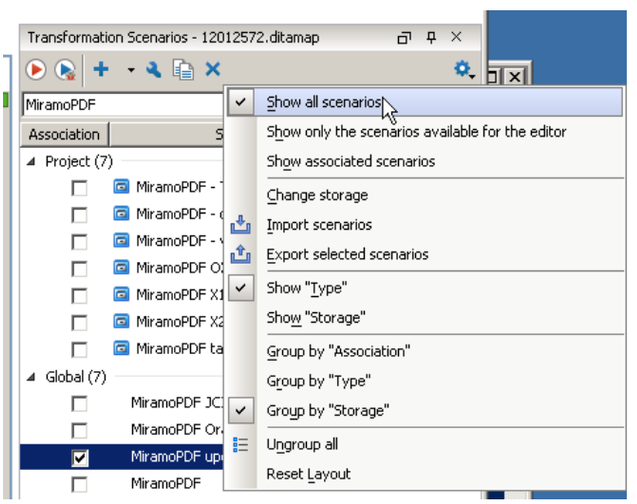
The system will produce a log file 'mfdupgrade.log' in the current folder, and will automatically open the new ***template_upgraded***.mfd using MiramoDesigner.

Upgrading

The MM_DITA_DIR environment variable is set to the location of the com.miramo.mmpdf plugin folder during installation of the DITA-OT plugin. The mfdupgrade utility copies any missing or updated Format Definitions from the DITA-OT plugin default template 'default.mfd' located in **%MM_DITA_DIR%/plugins/com.miramo.mmpdf/mmtemplates**

Upgrading oXygen Transformation scenarios

Before importing the transformation scenarios, open the Transformation Scenarios window and ensure that the 'show all transformations' is set:



Remove any existing 'MiramoPDF' transformation scenarios (pre Oxygen vs 21 only), then reimport the 'MiramoPDF.scenarios' from the <dita-ot>plugins/com.miramo.mmpdf/integration/oxygen folder (see Appendix 1 'Integrating with oXygen' of the 'Getting Started' guide for more information).

Using the oXygen 'MiramoPDF MFD upgrade' transformation

To use the MiramoPDF MFD upgrade scenario:

- open the target MFD template as an XML file in oXygen editor
- apply the MiramoPDF MFD upgrade transformation

This creates a new MFD file 'template_upgraded.mfd' and opens it using MiramoDesigner. The console window will display diagnostic information describing the changes made.

Upgrading existing plugin customizations

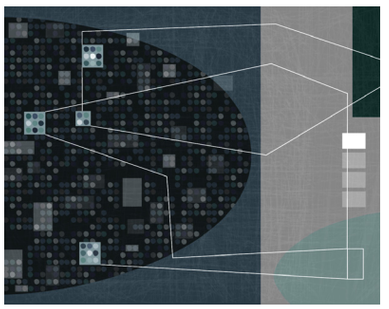
The MiramoPDF DITA-OT plugin customization structure has been significantly reworked in version 1.6, so the recommended upgrade procedure for upgrading from earlier versions is to create a new customization from scratch using the instructions given in "Creating a new com.example.my-mmpdf plugin" on page 27, then reapply any changes you have made to the 'cfg/custom.xsl' to the new plugin folder.

For upgrading from version 1.6 and above, when installing a new version of the MiramoPDF DITA-OT plugin it may be necessary to update the 'build.xml' file for all existing customizations, so that parameters passed to the <xslt> target (eg '**my-mmpdf.merged2miramoxml**') which maps from merged DITA to MiramoXML match those in the com.example.mmpdf/build.xml file to take advantage of any new 'ant' build parameters.

Upgrading

An example of the <param> values given in version 1.6 **com.example.my-mmpdf** is shown below. As new build parameters are introduced, the list of *<param> values* passed to the custom XSL stylesheet will need to be updated to reflect the new parameters:

```
      <xslt in="${topic.merged.file}" out="${miramoxml.file}"
style="${dita.plugin.com.example.my-mmpdf.dir}/xsl/dita2miramo.xsl">
          <xmlcatalog refid="dita.catalog"/>
          <param name="transtype" expression="${transtype}"/>
          <param name="images.dir" expression="${mmpdf:images.dir}"/>
          <param name="images.suffix" expression="${mmpdf:images.suffix}"/>
          <param name="defaultImageUnits"
expression="${mmpdf:defaultImageUnits}"/>
          <param name="showStatus" expression="${mmpdf:showStatus}"/>
          <param name="includeCover" expression="${mmpdf:includeCover}"/>
          <param name="includeTOC" expression="${mmpdf:includeTOC}"/>
          <param name="includeIndex" expression="${mmpdf:includeIndex}"/>
          <param name="metadataprecedence"
expression="${mmpdf:metadataprecedence}"/>
          <param name="defaultCellVerticalAlignment"
expression="${mmpdf:defaultCellVerticalAlignment}"/>
          <param name="defaultImageAlignment"
expression="${mmpdf:defaultImageAlignment}"/>
          <param name="args.rellinks" expression="${args.rellinks}"/>
          <param name="args.draft" expression="${args.draft}"/>
          <param name="formatSectionTitleAsTopicTitle"
expression="${mmpdf:formatSectionTitleAsTopicTitle}"/>
          <param name="mfd.file.path" expression="${mfd.file.path}"/>
          <param name="tableBorders" expression="${mmpdf:tableBorders}"/>
          <param name="localization-strings.dir"
expression="${mmpdf:localization-strings.dir}"/>
      </xslt>
```



MiramoPDF™

Publishing to PDF

This chapter covers using the MiramoPDF DITA-OT plugin and the GUI template designer, MiramoDesigner, to produce custom PDFs from DITA content. It includes information on using MiramoDesigner to customize a Miramo Format Definitions (MFD) template together with information on using ant build parameters and @outputclass attributes to customize the appearance of PDF output.

The plugin includes a default MFD template which can be used to publish DITA out of the box, either via your CMS, or using the **MiramoPDF** output transformation (oXygen) or deliverable (XMetaL), or via a simple command line interface. If the default template suits your needs, you can skip to "Ant build parameters" on page 9. For information on using the command line interface see "Command line interface" on page 18.

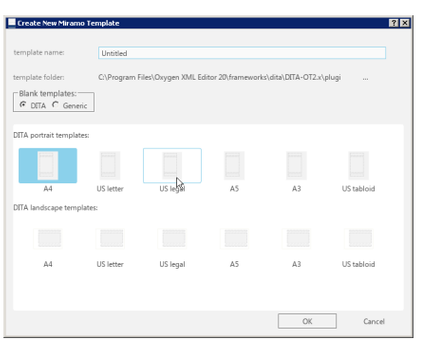
Workflow for developing customized PDFs

The workflow for developing a GUI template for customized PDFs is as follows:

1. Create a new DITA template (MFD) in the com.miramo.mmpdf/mmtemplates folder
2. Publish DITA content using the new MFD file with PDF tooltips enabled [showProperties=Y]
3. Review the PDF tooltips and decide which format definitions you would like to change
4. Use MiramoDesigner to modify the format definitions in the MFD template
5. Repeat steps 2 to 5 until you're happy with the output
6. Publish to production PDF with tooltips disabled [showProperties=N]

Creating a new MFD file

Start MiramoDesigner and either browse to the default.mfd located in com.miramo.mmpdf/mmtemplates, or click 'New template' and choose the DITA template page size which suits best:



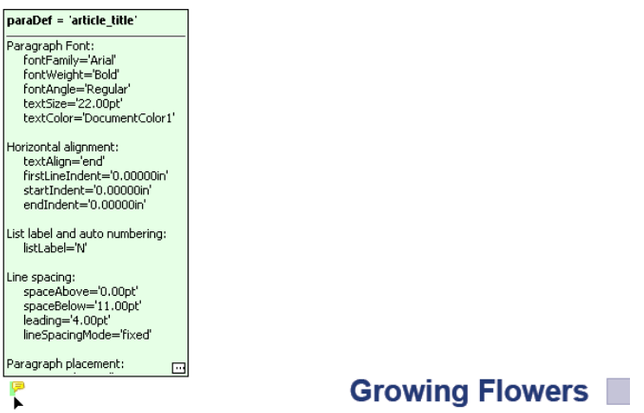
Use File->SaveAs to save your MFD file to the com.miramo.mmpdf/mmtemplates folder under a new name, eg myTemplate.mfd.

Publishing to PDF

Publishing DITA content with PDF tooltips enabled

Set the ant build parameter mmpdf:mfd.file to the name of the template (eg myTemplate.mfd) and the mmpdf:showProperties build parameter to 'Y' to include PDF tooltips in the generated output, as allowed by your CMS or authoring tool. For example, If using oXygen, make a copy of the MiramoPDF - Dev output transformation, change the mmpdf:mfd.file parameter to 'myTemplate.mfd'

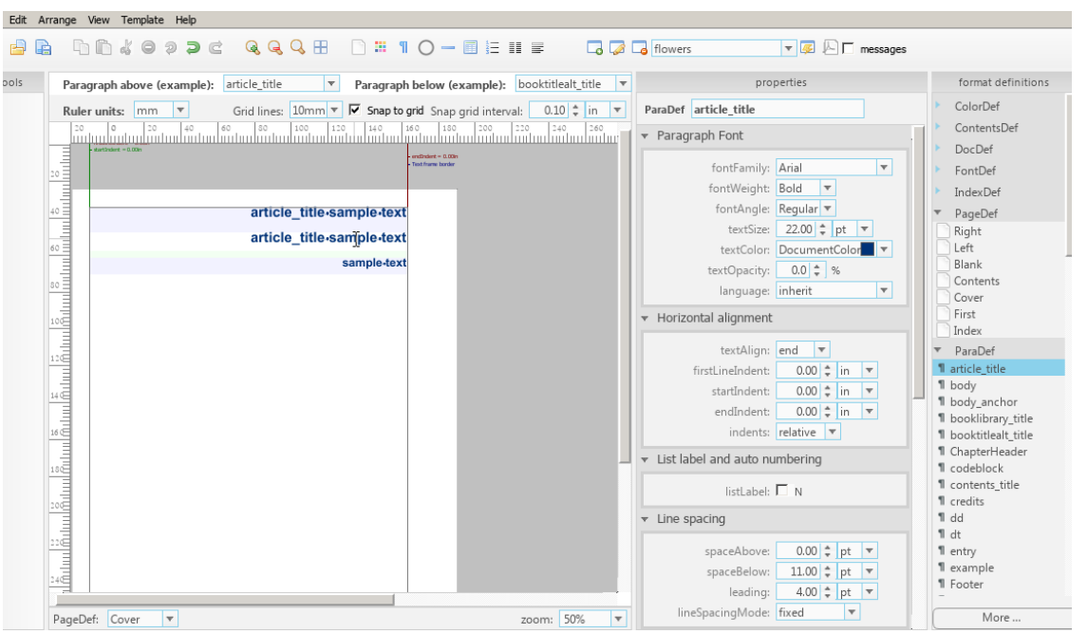
Publish your DITA content to produce a PDF with tooltips which indicate which format are applied, here's an example showing the 'article_title' <ParaDef> properties:



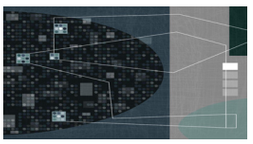
Once you have reviewed the PDF and decided which format definitions require updating you're ready to edit the MiramoDesigner template and republish.

Editting the MFD template using MiramoDesigner

Here is a screenshot of the main **MiramoDesigner** window, showing the properties of the *article_title* paragraph, which can be altered as required.



See videos on the *MiramoPDF YouTube channel* for tutorials on using MiramoDesigner.



Publishing to PDF

Ant build parameters

The table below gives a list of the ant build parameters supported by the MiramoPDF DITA-OT plugin, which may be used to configure aspects of the PDF publishing process..

ant parameter	Default value	Description
args.draft	no	Set to 'yes' to include draft comments as 'comment' paragraphs in the PDF. If @author is specified the comment is wrapped in the correspondingly named FontDef (ignored unless FontDef is defined in the MFD file)
args.filter	*none*	Specifies a filter file to be used to include, exclude, or flag content, as part of the DITA-OT preprocessing
args.input	*required*	Path to the source content being published.
args.rellinks	*none*	Specifies which links to include in the output. Values are: "none" (default) – no links are included. "all" – all links are included. "noparent" - no parent links included "nofamily" – parent, child, next, and previous links are not included.
clean.temp	yes	Specifies whether to remove temporary intermediate files from ${dita.temp.dir} May be useful for debugging. Allowed values: yes, no
dita.dir	dita install folder	Absolute path to the DITA Open Toolkit that is being used.
dita.temp.dir	mmtmp	Specifies temporary folder for intermediate files
output.dir	folder containing DITA source	Path to folder containing output PDF ${pdf.file}
pdf.file	input file with file extension replaced by **.pdf**	Name of PDF file to be created in ${output.dir}
transtype	mmpdf	Name of transformation type, modify only if using a customization of the com.miramo.mmpdf plugin
mmpdf:copyImagesToOutput	Y	Set to N to prevent copying images to ${output.dir}. Setting to Y (default) may be required by certain CMSs
mmpdf:cropMarks	N	Set to Y to include crop marks in the PDF output

Table 1: ant build parameters used by the Miramo DITA-OT plugin

Publishing to PDF

ant parameter	Default value	Description
mmpdf:cwd	system current folder	Current working folder for the **mmComposer** process - sometimes useful for resolving relative file URLs
mmpdf:images.dir	${dita.dir}\plugins\com.miramo.mmpdf\images	Location of image files used for notes and hazards
mmpdf:defaultCellVerticalAlignment	middle	Set default vertical alignment of table cell contents. Override with <entry> @valign attribute.
mmpdf:formatSectionTitleAsTopicTitle	Y	Set to N to format section title elements as section_title* paragraphs, set to Y to format section title elements as topic_title* paragraphs
mmpdf:includeCover	See "Cover pages" on page 13	Set to N to suppress cover generation
mmpdf:includeBackCover	See "Cover pages" on page 13	Set to Y to include back cover for DITA map or bookmap
mmpdf:includeTOC	See "Table of Contents (TOC)s" on page 13	Set to N to suppress TOC generation
mmpdf:includeIndex	See "Indexes" on page 13	Set to N to suppress Index generation
mmpdf:jobID		**MiramoEnterprise only**: unique identifier for queued job as viewed in mmVisor
mmpdf:localization-strings.dir	${plugin.dir}/cfg/strings	Location of strings folder containing langlist.xml and *.xml language files
mmpdf:mfd.dir	${dita.dir}\plugins\com.miramo.mmpdf\mmtemplates	Folder containing ${mfd.file} template
mmpdf:tableBorders	fromDITA	Set table border properties: **fromDITA** (support @frame, @colsep and @rowsep) or **fromTblDef** (use TblDef rulings). See "Table borders and rulings" on page 13 for more information.
mmpdf:mfd.file	default.mfd	Name of MiramoDesigner MFD template file used to control output formatting, located in ${dita.dir}\plugins\com.miramo.mmpdf\mmtemplates, or value specified by mfd.dir parameter.
mmpdf:metadataprecedence	map	Default behavior is for book <metadata> <data> element values to override <topic> <data> elements of the same name. Set to 'topic' to allow topic metadata to override book metadata
mmpdf:processGroup	1	**MiramoEnterprise only**: Name or number of MiramoEnterprise processing group as viewed in mmVisor

Table 1: ant build parameters used by the Miramo DITA-OT plugin

ant parameter	Default value	Description
mmpdf:showProperties	Y	If this property is set to **Y**, the PDF output file will contain PDF tooltips describing paragraph, font and table formats. Set to **N** for production. Note that PDF tooltips may not be visible in non-Adobe PDF viewers.
mmpdf:showStatus	N	If this property is set to **Y**, the @status attribute value 'new', 'deleted' or 'changed' will be mapped to the FontDef 'new', 'deleted' or 'changed' (the 'new' FontDef might be set to set text to Green, for example)

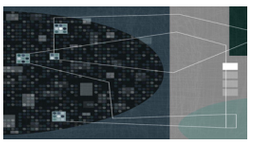
Table 1: ant build parameters used by the Miramo DITA-OT plugin

Controlling formatting using DITA @outputclass values

The Miramo DITA-OT plugin allows page layouts, covers, TOC and Index generation to be controlled using one or more space separated 'mmpdf:' @outputclass values, as described in the table below:

@outputclass value	DITA elements	Description
mmpdf:span	title, p, note	spans title across all columns in multi-column document
mmpdf:pageBreak	title, p, note	breaks page before title/p/note paragraph
mmpdf:columnBreak *(alias for break-before)*	title, p, note	force title/p/note paragraph to top of next column (or page, for single-column documents)
mmpdf:fontDef:*name*	ph	apply fontDef *name* to this phrase
mmpdf:paraDef:*name*	title, p, note, ol, ul	override default paraDef with paraDef *name* for rendering generated paragraph. For , elements, use named paraDef for child list items
mmpdf:listName:*name*	,	specify basename for generating listItem paragraph names. default: orderedlistitem ( ) or unorderedlistitem( )
mmpdf:tblDef:*name*	fig, table, simpletable, reltable, hazardstatement	use tblDef *name* for rendering table, figure or hazardstatement
mmpdf:topRule:*name* mmpdf:bottomRule:*name* mmpdf:startRule:*name* mmpdf:endRule:*name*	fig, table, simpletable, reltable, hazardstatement, row, strow, entry, stentry	set top, bottom, start or end rule to ruleDef *name*. If applied to a <fig>, <table>, <simpletable>, <reltable> or <hazardstatement>, the ruling applies to the outside edges of the table If applied to a <row> or <strow> element, the ruling establishes the default start/end/top/bottom ruling for all contained table cells. If applied to a <entry> or <stentry> element, the ruling applies to the edges of the table cell.

Table 2: DITA @outputclass values



Publishing to PDF

@outputclass value	DITA elements	Description
mmpdf:maximumHeight:*dim*	row, strow	set maximum row height
mmpdf:minimumHeight:*dim*	row, strow	set minimum row height
mmpdf:colorDef:*name*	entry, stentry	use colorDef *name* for table cell fill
mmpdf:fillOpacity:*percent*	entry, stentry	use fillOpacity *percent* for cell fill color (ignored unless mmpdf:colorDef:*name* used) default: 100%
mmpdf:fillTint:*percent*	entry, stentry	use fillTint *percent* for cell fill color (ignored unless mmpdf:colorDef:*name* used) default: 100%
mmpdf:withNext:*bool*	title, p, note	set withNext to 'Y' or 'N' to set the paragraph keep with next property
mmpdf:withPrevious:*bool*	title, p, note	set withPrevious to 'Y' or 'N' to set the paragraph keep with previous property
mmpdf:xRefDef:*name*	xref	Use XRefDef *name* for this cross reference
mmpdf:section:*name*	map, bookmap, title, topic, topicref, chapter, appendix, booktitle, table	start new section using SectionDef 'name'. SectionDef is defined in the MFD template or using **<SectionDef sectionDef="name"../>** and starts a new page layout sequence
mmpdf:coverSection:*name*	map, bookmap	Use sectionDef 'name' for cover and subsequent pages. Ignored if mmpdf:includeCover is set to N. default: coverSection
mmpdf:backCoverSection:*name*	map, bookmap	Apply sectionDef 'name' to end of PDF. Ignored unless mmpdf:includeBackCover is set to Y. default: backCoverSection
mmpdf:contentsSection:*name*	map, bookmap	Use sectionDef *name* for TOC and subsequent pages. Ignored if mmpdf:includeTOC is set to N. default value: contentsSection
mmpdf:indexSection:*name*	map, bookmap	Use sectionDef *name* for Index and subsequent pages. Ignored if mmpdf:includeIndex is set to N, or document contains no indexterms. default: indexSection

Table 2: DITA @outputclass values

Mapping DITA elements to PDF document objects

This section covers some general rules for the default mapping of DITA elements to PDF document objects and format definitions. To override aspects of the default mapping which can't be achieved using ant build parameters, MFD template changes or @outputclass values, it may be necessary to create a customized plugin - see "Customizing the com.miramo.mmpdf plugin" on page 27 for more information.

Publishing to PDF

Cover pages

By default, front cover pages are included under the following conditions:

map: map element has @title attribute or child **<title>** element

bookmap: bookmap element contains child **<booktitle>** element

The front cover is added as a result of applying the coverSection SectionDef from the specified MFD file. To suppress cover generation in the above cases, set **mmpdf:includeCover=N**

Back cover pages may be added to the PDF generated from a map or bookmap if and only if the ant build parameter **mmpdf:includeBackCover** is set to **Y**. In this case the **backCoverSection** SectionDef is applied to the end of the generated PDF.

Table of Contents (TOC)s

By default, TOCs are included under the following condition:

bookmap: bookmap element contains a <booklists> <toc> element, for example:

```
<frontmatter>
        <booklists>
            <toc/>
        </booklists>
```

To suppress TOC generation in the above case, set **mmpdf:includeTOC=N**

Indexes

By default, Indexes are included under the following conditions:

DITA source contains one or more **<indexterm>** elements

bookmap: bookmap element contains a <booklists> <indexlist> element, for example:

```
<backmatter>
        <booklists>
            <indexlist/>
        </booklists>
```

To suppress index generation in the above cases, set **mmpdf:includeIndex=N**

Table borders and rulings

The mmpdf:tableBorders ant build parameter value controls whether table rulings are controlled by the MFD template (mmpdf:tableBorders = 'fromTblDef') or whether they can be overridden via the DITA @frame, @colsep and @rulesep parameters (mmpdf:tableBorders = 'fromDITA') as illustrated in the tables below. The appearance of the 'all', 'none', 'topbot', 'sides', 'top', 'bottom' and 'Very Thin' is controlled by the MFD template <RuleDef> settings.

@frame attribute value	topRule	bottomRule	startRule	endRule
all	all	all	all	all
none	none	none	none	none
topbot	topbot	topbot	none	none
sides	none	none	sides	sides
top	top	none	none	none

Table 3: <table> @frame attribute to MiramoXML <Tbl> RuleDef mapping [mmpdf:tableBorders = fromDITA]

@frame attribute value	topRule	bottomRule	startRule	endRule
bottom	none	bottom	none	none

Table 3: <table> @frame attribute to MiramoXML <Tbl> RuleDef mapping [mmpdf:tableBorders = fromDITA]

If the mmpdf:tableBorders ant build parameter value is set to 'fromDITA' (default) the following rules apply for mapping inner table rulings:

	columnRule	rowRule
@colsep = "0"	none	from <TblDef>
@colsep = "1"	Very Thin	from <TblDef>
@rowsep = "0"	from <TblDef>	none
@rowsep = "1"	from <TblDef>	Very Thin

Table 4: <tgroup> @colsep, @rowsep attributes to MiramoXML <Tbl> RuleDef mapping [mmpdf:tableBorders = fromDITA]

Additional @outputclass values such as mmpdf:topRule:name may be specified to override top, bottom, start and end rulings on a table, row, or entry (cell), regardless of the value set for mmpdf:tableBorders, or the value of the @frame, @colsep or @rowsep attributes.

See "Controlling formatting using DITA @outputclass values" on page 11 for further information.

Metadata elements to <VarDef> mapping

Metadata elements in the DITA are mapped to MiramoXML <VarDef> elements which are used to populate **MiramoDesigner** variable placeholders inserted in background (running header footer) text frames in the MFD template. The variables listed in Table 5 are available in the default template and are populated from metadata elements, if present and not empty.

In addition, certain DITA metadata elements are mapped to MiramoXML <MetaData> elements which are used to populate PDF metadata.

For example, the following DITA <author> element:

```
<author>Howe Tuduit</author>
```

is mapped to this <MiramoXML>:

```
<VarDef varDef="author">Howe Tuduit</VarDef>
<MetaData name="creator">Howe Tuduit</MetaData>
```

PDF metadata may be viewed using a tool such as Adobe Acrobat, or interrogated by third-party software. See *Table 6:DITA to PDF xmp metadata mapping* on page 15, and See "Adobe Acrobat PDF properties populated from DITA elements" on page 16.

Metadata <data> or <othermeta> elements may be used to extend the set of variables and/or PDF metadata:

- **<data>** elements are mapped to a **<VarDef>** whose name is mapped from the <data> element @name attribute.
- a **<data>** element with @outputclass attribute set to 'mmpdf:metadata:*name*' may be used to map to a MiramoXML **<MetaData>** element, which is used to populate PDF metadata.

author	featnum
booklibrary	mainbooktitle
brand	prognum
booktitlealt	prodinfo
category	prodname
component	platform
copyrholder	series
copyryear	vrmlist (space separated list of versions)
emailaddress	vrmversion, vrmrelease, vrmmodification

Table 5: MiramoDesigner metadata variables

See See "Adobe Acrobat PDF properties populated from DITA elements" on page 16 for a screenshot illustrating the PDF document properties populated from the taskbook.ditamap supplied in the samples/taskbook folder.

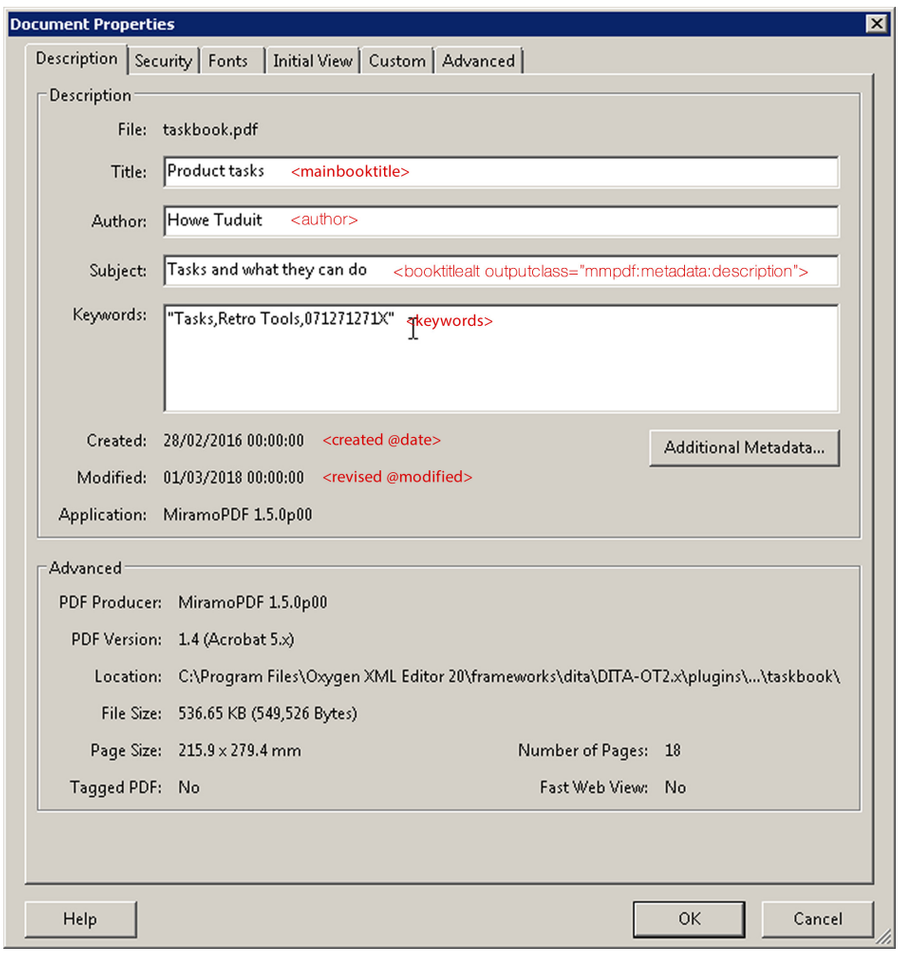
DITA source element/attribute	MiramoXML <MetaData> @name	PDF xmp metadata element
author	creator	dc:creator
keyword	keywords	pdf:Keywords dc:subject
bookmap/@title bookmap/title bookmap/mainbooktitle map/@title map/title	title	dc:title
created/@date	createdDate *YYYY-MM-DD*	xmp:CreateDate
revised/@modified	modifiedDate *YYYY-MM-DD*	xmp:ModifyDate
copyright/copyrholder copyryear/@year	rights	dc:rights

Table 6: DITA to PDF xmp metadata mapping

Publishing to PDF

Adobe Acrobat PDF properties populated from DITA elements

Below is an annotated screenshot illustrating the mapping from DITA markup to PDF document properties, as viewed using Adobe Acrobat:



DITA equation domain (<mathml>) support

The plugin supports the following DITA math elements:

equation-block

Use the <equation-block> element to represent an equation that is presented as a separate block within a text flow. Block equations can be numbered. **<equation-block>** elements are wrapped in an 'equation-block' FontDef.

equation-figure

Use the <equation-figure> element to represent an equation that functions as form of figure or display. Display equations are intended to be numbered when numbering is desired. **<equation-figure>** equations are wrapped in a 'equation-figure' table, which allows for different numbering sequences for equation titles.

equation-inline

Use the <equation-inline> element to represent an equation that is presented inline within a paragraph or similar context. Inline equations are not intended to be numbered. **<equation-inline>** equations are wrapped in an 'equation-inline' FontDef.

Publishing to PDF

'equation-inline' and 'equation-block' FontDefs may be used to set default font characteristics (font family, pointsize and text color) for <mathml> equations.

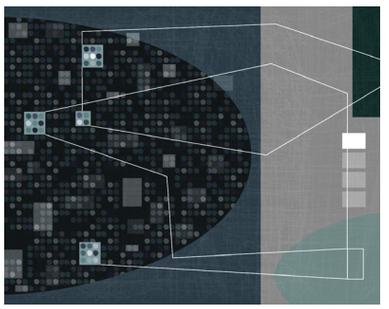
Further information or help

See the Miramo mmComposer Reference Guide for more information about the MiramoXML simple markup: click here to view

See the MiramoDesigner videos on the Miramo Datazone YouTube channel for more information about MiramoDesigner: click here to view

Check our website: http://www.miramo.com or phone us on +353 64 66 28964.

And you are always welcome to email miramo@datazone.com with comments, criticisms and questions - your feedback would be much appreciated.



Command line interface

This chapter covers using the MiramoPDF DITA-OT plugin via a simple command line interface or ant, suitable for use with a standalong DITA-OT installation.

Running the demo

Start a console window, or powershell window and enter:

dita2mmpdf -dev

If your PATH environment variable is set correctly this will run the *dita2mmpdf.cmd* script in the *[dita-ot install dir][dita-ot install dir]/plugins/com.miramo.mmpdf* folder.

** NOTE that the first time you run the demo it may take several minutes as mmComposer builds its internal font cache

This calls the **dita2mm** script to perform a topic merge on the flowers.ditamap, and to produce an intermediate flowers_miramo.xml file. The resulting XML is processed to PDF by Miramo.

When Miramo has finished creating the PDF you should see a message like this in the console window:

```
mmComposer: 1 : Completed with 0 errors and 0 warnings.
PDF file <com.miramo.mmpdf>\samples\flowers\flowers.pdf created
Finished.
```

Creating a PDF using *dita2mmpdf*

The dita2mmpdf script has the following usage:

```
dita2mmpdf [-dev] [-ditaval file.ditaval] [ditafile [template.mfd
  [pdffile]]]
```

Using a different template and/or DITAVAL filter

To run the flowers sample through using a different 'twocol.mfd' template (*not supplied*) which you have created in the mmtemplates folder , use this command from the plugins/com.miramo.mmpdf subfolder in the DITA-OT install folder:

```
dita2mmpdf samples/flowers/flowers.ditamap twocol.mfd
```

This will create the file samples/flowers/flowers.pdf (the PDF file defaults to the basename of the DITA file, with a *.pdf* extension) using the 'twocol.mfd' template (*not supplied*). To create a differently named PDF, specify it as the last argument to dita2mmpdf, for example:

```
dita2mmpdf samples/flowers/flowers.ditamap twocol.mfd ff.pdf
```

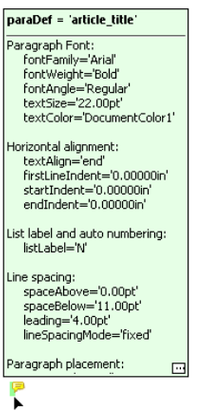
To apply a DITAVAL filter 'print.ditaval' (*not supplied*) use the -ditaval command line option, eg:

```
dita2mmpdf -ditaval print.ditaval samples/taskbook.ditamap
```

Using the -dev option to display formatting properties in the output PDF

The PDF files created using **dita2mmpdf** can be set to contain tooltips which give formatting information for paragraph tags (green), font tags (red), and table tags (blue). Here is an example showing the **article_title** paragraph in the flowers.pdf file produced using the default template:

Command line interface



The tooltips are shown if the **-dev** command line option is supplied to the dita2mmpdf.cmd. (The dita2mmpdf -dev option sets the MiramoPDF command line option '-showProperties Y'). By default tooltips are not shown.

Using a different DITA input file

To run the DITA file through to a pdf with the same basename as the DITA file, use:

```
dita2mmpdf <path_to_ditafile>
```

Or add the appropriate template file and output PDF name, eg:

```
dita2mmpdf sample.dita mytemplate.mfd mysample.pdf
```

In this case 'mytemplate.mfd' must exist in the plugins/com.miramo.mmpdf/mmtemplates folder.

Creating a PDF using the *dita* command

You can use either the dita command-line tool or **ant** to transform DITA content to PDF using the Miramo DITA-OT plugin:

```
dita -f mmpdf -i <path_to_ditafile> [options]
```

The above assumes that folder containing dita.bat is included in the PATH environment variable, for example using the following powershell command:

```
$env:PATH += ";$env:MM_DITA_DIR/bin"
```

Here is an example of using the 'dita' -f mmpdf command line tool to publish flowers.ditamap to a PDF in the default output folder, './out':

```
dita -f mmpdf -i flowers.ditamap
```

Any of the "Ant build parameters" on page 9 may be specified, for example to include PDF tooltip properties in the output PDF, and to write to pdf file 'myflowers.pdf' in the current folder:

```
dita -f mmpdf -i flowers.ditamap "-Dmmpdf:showProperties=Y"
  "-Dpdf.file=myflowers.pdf"
```

See *dita command arguments and options* on *http://www.dita-ot.org* for more information., and *Ant build parameters* on page 9 for a list of supported parameter values.

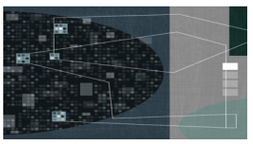
Using *ant* to build the dita2mmpdf target

Alternatively you can use **ant** to build the 'dita2mmpdf' target using the following syntax (powershell):

```
ant -f "$env:MM_DITA_DIR/build.xml" ["-Dparam=value" "..."] dita2mmpdf
```

The above assumes that folder containing ant.bat is included in the PATH environment variable, for example using the following powershell command:

```
$env:PATH += ";$env:MM_DITA_DIR/bin" # powershell
```



Command line interface

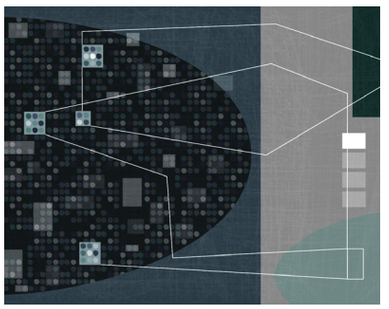
Here is an example creating flowers.pdf from the samples/flowers folder by running this command from the powershell:

```
cd "env:MM_DITA_DIR"
ant -f "$env:MM_DITA_DIR/build.xml" "-Dargs.input=samples/flowers/
  flowers.ditamap" "-Dmmpdf:showProperties=Y" "-Dpdf.file=flowers.pdf"
  dita2mmpdf
```

Here is another example, where the test.ditamap is located in "c:\users\Joanne\documents", and the MFD file is called 'test.mfd' and is located in c:\Users\Joanne\documents:

```
cd c:\Users\Joanne\documents
ant -f "$env:MM_DITA_DIR/build.xml" "-Dargs.input=samples/flowers/
  flowers.ditamap" "-Dmmpdf:showProperties=Y" "-Dmmpdf:mfd.file=test.mfd"
  "-Dmmpdf:mfd.dir=c:\Users\Joanne\documents" "-Dpdf.file=flowers.pdf"
  dita2mmpdf
```

See "Ant build parameters" on page 9 for a list of parameters supported by the MiramoPDF DITA-OT plugin.



Multilingual publishing

Multilingual publishing

Multilingual publishing presents challenges when deciding whether to use a single MFD template to control the appearance of multilingual documents, or to use one MFD file per document language: both approaches have advantages and disadvantages.

The Miramo DITA-OT plugin handles multilingual publishing through language specific variables (see "Language specific variables" on page 22), localization text configuration (see "" on page 29) and configuring the mapping of xml:lang attribute values to MiramoXML (see "Configuring supported xml:lang values: langlist.xml" on page 25).

Here are some points to consider when creating MiramoDesigner templates for use within a multilingual publishing system:

How many MFD or template files will I need?

The choice of font used for publishing is a key consideration for multilingual publishing: no single font supports all unicode characters, and some languages (eg Traditional vs Simplified Chinese) require different fonts, as the same unicode number may be rendered as a radically different glyph in the different languages.

For example, here is the same phrase published in Simplified Chinese, Traditional Chinese and Japanese:

Simplified Chinese 朝辞白帝彩云间

Traditional Chinese 朝辭白帝彩雲間

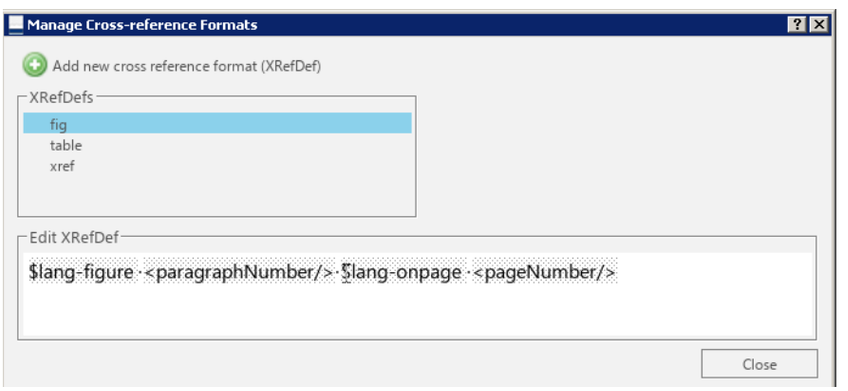
Japanese 朝に辞す白帝彩雲の間

Generally, it is usually appropriate to use one MFD template for 'latin' languages (eg Italian, French, English, Spanish, Dutch) and a separate MFD template file for each other language which would require a different base font (eg Simplified Chinese, Arabic, Hebrew).

Multilingual publishing

Language specific variables

Language specific variables may be used to create cross-reference formats, running headers and footers and figure/table numbering appropriate for multilingual publishing. For example, here is a language independent cross-reference format:



The language specific variables above (eg $lang-figure, $lang-onpage) are mapped to the appropriate language text, depending on the @xml:lang value specified for the DITA document or chapter.

The following are some of the variables available in the default template which are populated from language specific strings in plugin folder cfg/strings/*.xml.

MiramoDesigner variable name	Language specific text (english)
lang-appendix	Appendix
lang-contents	Contents
lang-figure	Figure
lang-index	Index
lang-onpage	on page
lang-page	page
lang-table	Table
lang-related	Related Links

Table 1: Examples of MiramoDesigner language specific variables

For a complete list of language specific variables available by default, see the language files in the com.miramo.mmpdf/cfg/strings/*.xml.

> **IMPORTANT:** do not change the localization strings in the original **com.miramo.mmpdf/cfg/strings/*.xml** files, as these changes will be overwritten if you upgrade. Always make changes to a copy of the strings folder, either by manually copying the folder to a new location outside the com.miramo.mmpdf and setting the ant build parameter 'localization-strings.dir' (see page 10) to the new folder, or add a new custom plugin (See "Creating a new com.example.my-mmpdf plugin" on page 27) and change the strings in the cfg/strings folder within the new plugin.

Multilingual publishing

Changing localization text

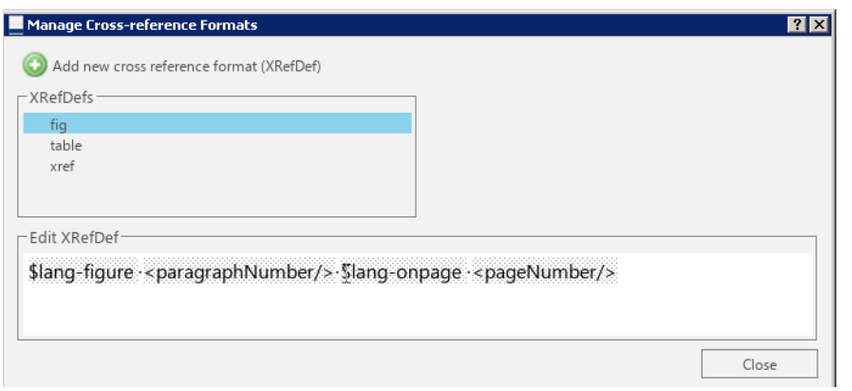
By default, localization text strings are located in the plugin folder's **cfg/strings/*.xml** files. If you wish to keep a copy of the strings folder elsewhere, copy the folder and set the mmpdf:localization-strings.dir ant build parameter to the new location.

> **IMPORTANT: do not change** the localization text in the original **com.miramo.mmpdf/cfg/strings** folder, the changes will be overwritten if you upgrade.

Each language specific .xml file contains a set of <str> elements, each of which maps to a MiramoXML language dependent <VarDef> whose name is prefixed with '**lang-**'.

Every MiramoDesigner DITA template contains a set of language independent placeholder variables (<VarDef>s), which can be inserted into background text frames, or used as a building block, for example within a cross-reference (<XRefDef>) format definition. Here is a screenshot of a language specific variable 'lang-contents' which has been inserted into the header of a Contents PageDef:

Below is a language independent Cross Reference format which uses the lang-figure and lang-onpage <VarDefs>:



When the DITA is rendered to PDF, the placeholder variable will be replaced by the language specific string taken from the appropriate cfg/strings/*language*.xml, determined by the xml:lang setting applicable to the current document or chapter.

Example: extract from the 'cfg/strings/fr.xml' file

For example, here is an extract from the start of the default 'fr.xml' supplied with the com.example.my-mmpdf plugin:

```
<strings xml:lang="fr">
<str id="lang-fig">Illustration </str>
<str id="lang-table">Tableau </str>
<str id="lang-chapter">Chapitre </str>
<str id="lang-appendix">Annexe </str>
<str id="lang-page">la page</str>
<str id="lang-optional">Facultatif :</str>
<str id="lang-required">Obligatoire :</str>
<str id="lang-onpage"> à la page </str>
<str id="lang-prereq" dita-ot-id="task_prereq"/>
<str id="lang-postreq" dita-ot-id="task_postreq"/>
<str id="lang-example" dita-ot-id="task_example"/>
...
```

This file is used to populate a set of MiramoDesigner language independent <VarDef>s as follows:

Multilingual publishing

If present, @dita-ot-id specifies the DITA-OT language variable or string id to look up, defined in:

plugin:org.dita.base:xsl/common/strings-*.xml

plugin:org.dita.pdf2/cfg/common/vars/*.xml

If there is no @dita-ot-id attribute, the value is taken from the <str> element contents.

Changing existing language variables

To change the value used to populate a <VarDef> which retrieves the value of a DITA-OT language string, remove the @dita-ot-id attribute and add the required text to the <str> element. For example, to suppress the standard note separator ':' which is added as a label suffix for <note> paragraphs, change from:

```
<str id="lang-note-separator" dita-ot-id="#note-separator"/>
```

to:

```
<str id="lang-note-separator"/>
```

Here is another example where the standard text used to label a <prereq> paragraph is changed from the default DITA-OT string 'Avant de commencer' to 'Avant:' change from:

```
<str id="lang-prereq">Avant de commencer </str>
```

to:

```
<str id="lang-prereq">Avant: </str>
```

Be sure to run the DITA-OT integration tool to apply the changes: See "Running the DITA-OT integration tool" on page 27

Creating and using a new language variable

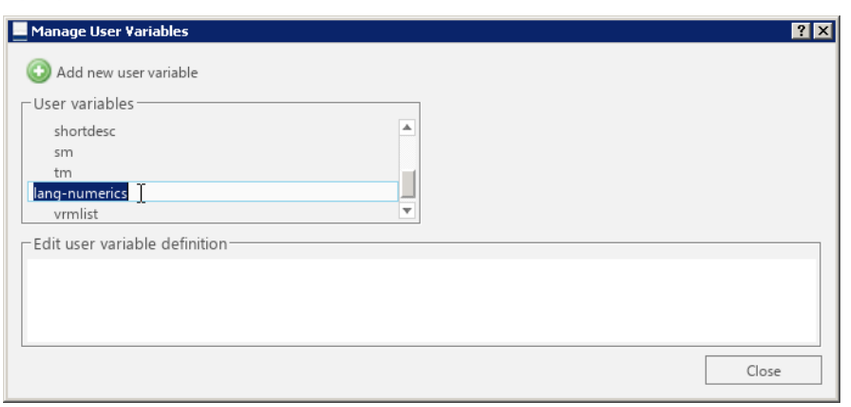
First, add new entry for the new <VarDef> to each of the language.xml files you support for publishing your DITA content.

Here are two examples added to the language file 'nl.xml' (Dutch language). The first exposes the DITA-OT language string **Numerics** into a <VarDef> named 'lang-numerics', the second creates a new <VarDef> named 'lang-languagename':

```
<strings xml:lang="nl">
<str id="lang-numerics" dita-ot-id="Numerics"/>
<str id="lang-languagename">Nederlands</str>
```

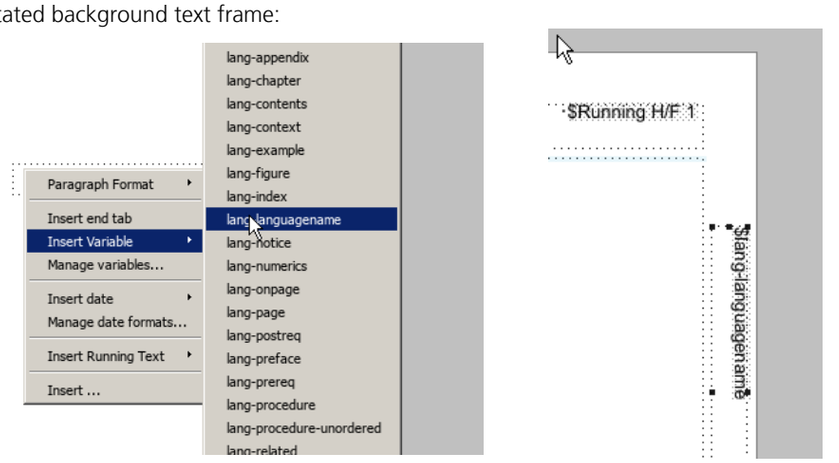
Next, create matching empty placeholder <VarDef>s '**lang-numerics**' and '**lang-languagename**' in your MFD template:

Click on 'More' at the bottom of the Format Definitions pane and click on 'VarDef' to bring up the 'Manage Variables' dialog, then click on the 'Add new user variable' button to add the new lang-numerics and lang-languagename placeholder variables:



Multilingual publishing

These placeholder variables can now be inserted in background text frames. Double-click on a background text frame to locate the insertion point, then right-click to bring up the context menu, choose 'Insert variable' and click on 'lang-languagename'. The screenshot on the right shows the $lang-languagename placeholder in a rotated background text frame:



Configuring supported xml:lang values: langlist.xml

The **com.miramo.mmpdf/cfg/strings/langlist.xml** file controls the mapping of xml:lang values specified in DITA markup, and configures the filename containing localization text. The 'cfg/strings/*.xml' contain language specific strings used to construct language specific variables eg 'lang-table' and 'lang-page' which may be inserted in the MFD template. See "Changing localization text" on page 23 for information on changing existing language specific variables, and/or adding new ones.

> **IMPORTANT:** Do not change any of the files in the com.miramo.mmpdf/cfg folder as these will be overwritten when upgrading the plugin. See "Customizing the com.miramo.mmpdf plugin" on page 27 for information on how to customize language specific variables.

Here are some extracts from the default com.miramo.mmpdf/cfg/strings/langlist.xml file, starting at line 169. See comments for an explanation of attribute values:

```
<!--
  <!-- MiramoPDF plugin config starts here: add or remove entries below

  Each xml:lang value below includes the following attributes:
   filename
         specifies file containing language specific strings

   rtl
         set to "true" for RTL languages such as Arabic (ar) and Hebrew (he)

   requiresFontSwitch
        set to 'true' if language requires a switch to a different (non-latin
        script) font for example, if a phrase with @xml:lang='zh-cn'
        (simplified chinese) is encountered within a DITA document with
        @xml:lang='us-en', this would require a switch to a different fontDef:
        lang-zh-cn

   miramoLanguage
        MiramoXML @language attribute value: controls font script, text
        direction and hyphenation characteristics

  -->
   <lang xml:lang="en-us" filename="en.xml" miramoLanguage="usEnglish"/>
```

Multilingual publishing

```
<lang xml:lang="ar" filename="ar.xml" rtl="true" requiresFontSwitch="true"
miramoLanguage="Arabic"/>
<lang xml:lang="ar-eg" filename="ar.xml" rtl="true"
requiresFontSwitch="true" miramoLanguage="Arabic"/>
<lang xml:lang="ar-ae" filename="ar.xml" rtl="true"
requiresFontSwitch="true" miramoLanguage="Arabic"/>
<lang xml:lang="be" filename="be.xml"/>
<lang xml:lang="be-by" filename="be.xml"/>
<lang xml:lang="bg" filename="bg.xml" miramoLanguage="Bulgarian"/>
<lang xml:lang="bg-bg" filename="bg.xml" miramoLanguage="Bulgarian"/>
<lang xml:lang="bs" filename="bs.xml" miramoLanguage="Bosnian"/>
<lang xml:lang="bs-ba" filename="bs.xml" miramoLanguage="Bosnian"/>
...
```

To add a support for a new xml:lang value, first create a new localization strings file by copying an existing file and modify the language strings as required. Then add a new entry to the langlist.xml file.,with the filename attribute set to the location of the new language file. Be sure to run the DITA-OT integrator to register your changes.

@xml:lang to MiramoXML mapping

The DITA-OT processes @xml:lang values encountered in the inputstream as follows:

When the DITA-OT plugin encounters an @xml:lang attribute value which differs from the document @xml:lang value, it checks the langlist.xml file to see if a font switch is required (**@requiresFontSwitch="true"**); if so, it applies the FontDef named 'lang-*lower-case(@xml:lang)*' - for example, if an Traditional Chinese table like this is encountered in a us-en (US english, default) document:

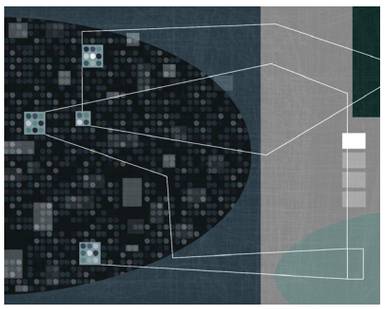
```
<table xml:lang="zh-TW">
```

it is mapped to this MiramoXML:

```
<Tbl language="TraditionalChinese"><!-- language attribute determines
   hyphenation-->
```

and all the paragraphs within the <table> contents of the <table> are formatted with the FontDef named 'lang-zh-tw'.

Similiarly, if a <b> (bold) or <i> (italic) element is encountered within the context of an @xml:lang value which differs from the document @xml:lang, it is mapped to a FontDef named 'b-*lower-case(@xml:lang)*' or 'i-*lower-case(@xml:lang)*' - for example, b-zh-tw or i-ar. However, if the language context of the <b> or <i> element is the same as the document language context, the mapping is to FontDef 'b' or 'i', as usual.



Customization

Customizing the com.miramo.mmpdf plugin

The **com.miramo.mmpdf** plugin is intended to cover most formatting requirements, but in some cases it may be necessary to create a custom plugin which overrides or adds to some of the features supported by the standard plugin. Changing localization text should never be achieved by modifying strings within **com.miramo.mmpdf**, otherwise changes will be overwritten by the next plugin update.

This chapter describes how to create a customization of the **com.miramo.mmpdf** plugin in a way which isolates the changes and makes it easier to migrate the customization to new toolkit or **com.miramo.mmpdf** versions. It also includes a simple example of working with a new plug-in (com.example.my-mmpdf) to creates a new transformation type my-mmpdf which includes changes to localization text, default parameter values and to the DITA to MiramoXML transformation.

Creating a new com.example.my-mmpdf plugin

The com.miramo.mmpdf folder includes a sub-folder called **com.example.my-mmpdf**, and creates a transformation type 'my-mmpdf'. See "Creating a company specific plugin" on page 28 for information on creating a company specific plugin with a differently named plugin and transformation type.

To create a new custom plugin 'com.example.my-mmpdf', start by copying this folder to the DITA-OT plugins folder so it is at the same level as the original **com.miramo.mmpdf** folder.

Running the DITA-OT integration tool

Next, install the new com.example.my-mmpdf plugin by running the DITA-OT ant integration tool as enabled by your CMS or authoring tool, or using one of the commands below. For oXygen, see "Running the DITA-OT integrator [oXygen]" on page ii.

For standalone DITA-OT installations, use:

```
ant -f integrator.xml
```

or use the **dita** command:

```
dita-ot-dir/bin/dita --install
```

This will create a new transformation type 'my-mmpdf' which you can use in place of the 'mmpdf' transfomation type. It will also add a new ant target 'dita2my-mmpdf'.

The next stage is to modify the files in the plugins/com.example.my-mmpdf folder.

com.example.my-mmpdf files and folders

The com.example.my-mmpdf plugin includes the following files and folders:

<*dita-ot-installdir*>/plugins/com.example.my-mmpdf
Source for my-mmpdf plugin:

plugin.xml
Configuration file for the com.example.my-mmpdf plugin which creates a new transformation type 'my-mmpdf'.

conductor.xml
Imports local build.xml

Customization

build.xml
Contains the dita2my-mmpdf target, applied by the 'my-mmpdf' transformation type.

xsl/dita2miramo.xsl
Top level stylesheet - modify this file to set default values for xslt parameters

cfg/strings/langlist.xml
Language configuration file including a list of files containing localization strings

cfg/strings/*.xml
Miramo specific localization strings, supplied in addition to the standard DITA-OT localization strings (including those in pdf2)

cfg/xsl/custom.xsl
Modify this file to add xsl stylesheet template match modifications; included by xsl/dita2miramo.xsl

cfg/xsl/functionstubs.xsl
Modify this file to add to or override templates and functions with extension points defined in the com.miramo.mmpdf/xsl/utilities.xsl. Included by cfg/xsl/custom.xsl

Setting default parameter values

Modify the <xsl:param> and <xsl:variable> definitions in custom xsl/dita2miramo.xsl as required. For example, to set all non-inline graphics to be centered rather than start-aligned by default, include this:

```
  <!-- Default left/right alignment of images within text column or text frame.
Allowed values: start center end -->
  <xsl:variable name="defaultImageAlignment">center</xsl:variable>
```

Modifying the dita2mmpdf default transformation

Edit the 'cfg/xsl/custom.xsl' stylesheet to add <xsl:template>s to achieve the required mapping from DITA elements and attributes to MiramoXML elements and attributes. (See the mmComposer reference guide for a detailed description of the MiramoXML file format).

<xsl:template>s added here may either override or add to the <xsl:template>s defined in the default DITA to MiramoXML stylesheets, map2miramo.xsl and topic2miramo.xsl. Here is a simple example where if the <p> @outputclass value is specified, it is used as the <ParaDef> format name. If the @outputclass value is empty, the default template match is applied using <xsl:apply-imports/>.

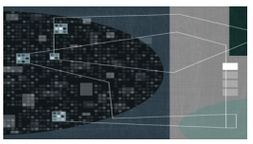
```
<xsl:template match="*[contains(@class,' topic/p ')]">
  <xsl:choose>
    <xsl:when test="string-length(@outputclass) != 0">
        <xsl:call-template name="makePara"><xsl:with-param
name="paraDefName"><xsl:value-of select="@outputclass"/></xsl:with-param></
xsl:call-template>
    </xsl:when>
    <xsl:otherwise>
      <xsl:apply-imports/>
    </xsl:otherwise>
</xsl:choose>
</xsl:template>
```

Creating a company specific plugin

In some cases it may be necessary to create one or more new plugins with a different names, targets, and transformation types.

For example, company ABC Corp might need to create two specializations, **com.abc.mmpdf1** and **com.abc.mmpdf2**, which create transformation types **mmpdf1** and **mmpdf2** respectively.

To do this, copy the plugins/com.miramo.mmpdf/com.example.my-mmpdf folder to plugins/com.abc.mmpdf1 and plugins/com.abc.mmpdf2.



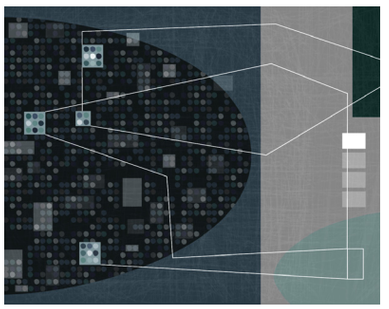
Customization

Then edit the following files in each of the two new folders com.abc.mmpdf1, com.abc.mmpdf2:

```
plugin.xml
conductor.xml
build.xml
```

- Replace all occurrences of ‘com.example.my-mmpdf’ with com.abc.mmpdf1 or com.abc.mmpdf2
- Replace all occurrences of ‘my-mmpdf’ with ‘mmpdf1’ or ‘mmpdf2’
- Modify xsl/dita2miramo.xsl, cfg/xsl/custom.xsl, cfg/strings/langlist.xml, cfg/strings/*.xml as required
- Run the DITA-OT integration process

The ant targets ‘dita2mmpdf1’ and ‘dita2mmpdf2’ will now be available, along with the transformation types ‘mmpdf1’ and ‘mmpdf2’.



MiramoPDF™

Integrating with oXygen

Installing and integrating the plugin with oXygen

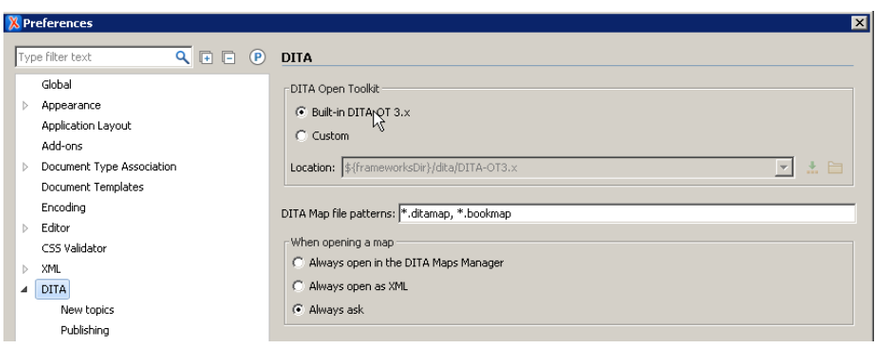
Installing from the setup.exe (recommended)

Double-click on the **MiramoDITA-OTplugin<*vs*>setup.exe** and navigate to the DITA-OT install root folder.

For oXygen (version 18 or above), the built-in DITA-OT folder is located in *[oxygen_install_dir]/* frameworks/dita/DITA-OT3.x/plugins/com.miramo.mmpdf, for example:

c:/program files/Oxygen XML Editor 21/frameworks/dita/DITA-OT3.x/plugins/com.miramo.mmpdf

This corresponds to the oXygen DITA Open Toolkit 'Built-in DITA-OT 3.x' location preference shown here (options->preferences->DITA):



Note that if you choose a different folder you will have to set the **dita.dir** variable in the MiramoPDF transformation scenarios, or change the oXygen DITA-OT configured install folder in the preferences.

The MiramoDITA-OT plugin source (including samples, command scripts and templates) will be located in the *[dita-ot install dir]*/plugins/com.miramo.mmpdf folder, for example:

[oxygen_install_dir]/frameworks/dita/DITA-OT3.x/plugins/com.miramo.mmpdf

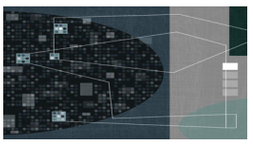
The **MiramoDITA-OTplugin<*vs*>setup.exe** will run the DITA-OT integrator and will append the com.miramo.mmpdf folder to the PATH environment variable.

Installing from the ZIP file (advanced)

Extract the **MiramoDITA-OTplugin<*vs*>**.zip file into the DITA-OT plugins folder.

For oXygen, the built-in DITA-OT plugins folder is located in *[oxygen_install_dir]*/frameworks/dita/DITA-OT3.x/plugins/com.miramo.mmpdf, for example:

C:\program files\Oxygen XML Editor 21\frameworks\dita\DITA-OT3.x\plugins



Integrating with oXygen

Running the DITA-OT integrator [oXygen]

Start your preferred oXygen product, open a DITA file or map in the editor window and run the predefined transformation scenario called **Run DITA OT Integrator:** execute it from the Document->Transformation->Apply Transformation Scenario(s) dialog box. If the integrator is not visible, select the Show all scenarios option that is available in the Settings drop-down menu.

Files and folders

See "Files and folders" on page 3 for a list of files and folders which are installed in the plugins\com.miramo.mmpdf folder

Configuring oXygen

Import MiramoPDF transformation scenarios [oXygen]

Once the com.miramo.mmpdf folder is installed in the DITA-OT plugins folder, set up the MiramoPDF transformation scenario: Choose options->import transformation scenarios, then navigate to the **MiramoPDF.scenarios** file located in the com.miramo.mmpdf/integration/oxygen subfolder (by default, *[oxygen_install_dir]*/frameworks/dita/DITA-OT3.x/plugins/com.miramo.mmpdf**/integration/oxygen**).

This creates the **MiramoPDF** and **MiramoPDF dev** (with PDF tooltips) transformation scenarios, which are set up to produce a PDF from the currently edited DITA file, and which can be applied and modified as required. See "Ant build parameters" on page 9 for more information.

Make oXygen's content completion present the @outputclass values

To configure oXygen's content completion, it is necessary to copy and paste the **match** elements contained in the cc_config_miramo.xml file supplied to the DITA framework you are using.

The cc_config_miramo.xml file is located here:

[oxygen_install_dir]/frameworks/dita/DITA-OT3.x/plugins/com.miramo.mmpdf/integration/oxygen/cc_config_miramo.xml

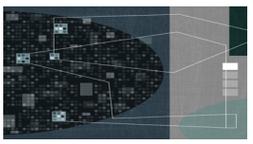
and contains entries like this:

```
<match elementName="p" attributeName="outputclass">
   <items action="append">
      <item value="mmpdf:span" annotation="Spans title across all columns in multi-column document"/>
      <item value="mmpdf:pageBreak" annotation="breaks page before title/p/note paragraph"/>
      <item value="mmpdf:columnBreak" annotation="force title/p/note paragraph to top of next column
(or page, for singlecolumn documents)"/>
      <item value="mmpdf:section:name" annotation="start new section using SectionDef 'name'.
SectionDef is defined in the MFD template"/>
    </items>
</match>
```

Inside your DITA framework there is a configuration file named cc_config.xml. If you are using the built-in DITA framework then this file is located at **[OXYGEN_INSTALL_DIR]/frameworks/dita/resources/cc_config.xml**.

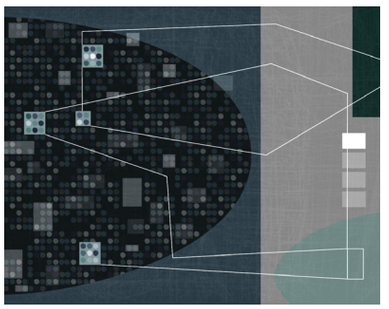
If you don't know exactly what framework you are using or where it is located then you can find out like this:

1. Go to Window->Show view and open the Properties view.
2. Open a DITA topic.
3. Look inside the Properties view at the Document type name. Now you know the name of your framework.
4. Go to Options->Preferences... on the Document Type Associations page, identify and edit the framework with the previously discovered name. The Storage field will reveal its location.



Integrating with oXygen

The <match> entries for allowing content completion for the MiramoPDF @outputclass values are located in the *[oxygen_install_dir]*/frameworks/dita/DITA-OT3.x/plugins/com.miramo.mmpdf/integration/oxygen/cc_config_miramo.xml file. Open it and copy and paste the entries inside the <config> root element in your DITA framework cc_config.xml file.



MiramoPDF™

Integrating with XMetaL

Installing and integrating the plugin with XMetaL

This section covers integration with XMetaL Author Enterprise 12 and above.

Installing from the setup.exe

Double-click on the **MiramoDITA-OTplugin<*vs*>setup.exe** and navigate to the DITA-OT install root folder.

For XMetaL Author Enterprise (version 12 or above), the built-in DITA-OT folder is located in the Windows program data directory for XMetaL for example:

C:\ProgramData\SoftQuad\XMetaL\Shared\DITA_OT2.4\

The MiramoDITA-OT plugin source (including samples, command scripts and templates) will be located in:

C:\ProgramData\SoftQuad\XMetaL\Shared\DITA_OT2.4\plugins\com.miramo.mmpdf

The **MiramoDITA-OTplugin<*vs*>setup.exe** will run the DITA-OT integrator and will append the com.miramo.mmpdf folder to the PATH environment variable.

Files and folders

See "Files and folders" on page 3 for a list of files and folders which are installed in the plugins\com.miramo.mmpdf folder

Configuring XMetaL

Create MiramoPDF 'deliverable types' in XMetaL

Once the com.miramo.mmpdf folder is installed in the DITA-OT plugins folder the next step is to set up two **MiramoPDF** deliverable types so they are available when the user selects **Generate Output**.

1. Copy the two configuration files: **print_miramo_pdf.xml and print_miramo_pdf_dev.xml** from:

   C:\ProgramData\SoftQuad\XMetaL\Shared\DITA_OT2.4\plugins\com.miramo.mmpd\integration\xmetal

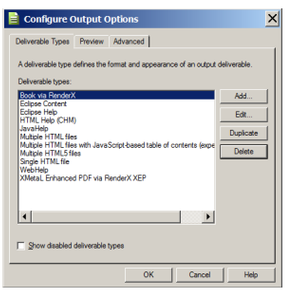
   to:

   C:\Program Files\XMetaL 12.0\Author\DITA\XACs\shared\renditions

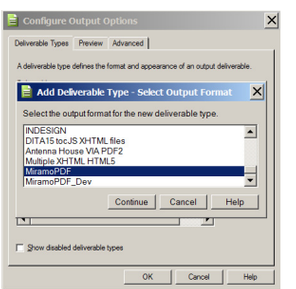
2. Start XMetaL

Integrating with XMetaL

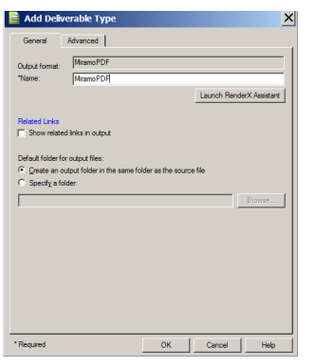
3. Tools > Configure output, click on Add.



4. The **Add Deliverable Type** dialog appears.From the list, select "**MiramoPDF**"



5. Click "Continue" (button)
6. In the "Name" field enter '**MiramoPDF'** as the name you would like to appear in the list of deliverable types in XMetaL's "Generate Output for DITA Map" dialog and click "ok".



7. Switch to the "Advanced" tab. In the "Configure output options" text box, add this line:
8. run_plugin_integrator = yes
9. Repeat steps 3 to 7: Except in step 4 select '**MiramoPDF_Dev**' and in step 6 enter '**MiramoPDF Development'** in the "Name" field.

To test the integration

10. Open a DITA map in XMetaL
11. File -> Generate Output for DITA Map ...
12. Select '**MiramoPDF'**