Antenna House 'pdf5' plugin

User's Guide

For DITA Open Toolkit

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Preface

About Antenna House I18n Index Library

Originally this 'pdf5' plugin was created for Antenna House I18n Index Library. I18n Index library is a Java library that makes index pages in the various languages used by the DocBook, DITA to XSL-FO stylesheet.

However this plugin implements most of DITA 1.1 features, it is denoted to public domain under the Common Public License v1.0. So there are two kinds of 'pdf5' plugin. One is bundled with Antenna House I18n Index Library product and the other is released separately. The former contains I18n Index Library but the latter does not contains the library.

For more information about I18n Index Library, refer to http://www.antennahouse.com/product/i18nindexlib_V2.1/index.html for details.

'pdf5' plugin features

This plugin has following features.

Newly created XSLT2.0 stylesheets for DITA to XSL-FO transformation

This plugin contains DITA to XSL-FO stylesheets. These stylesheets are written in XSLT 2.0. As current DITA Open Toolkit 1.5 adopts Saxon-B9.1 as XSLT processor, you can use powerful XSLT 2.0 features in making stylesheets.

Supports most of DITA 1.1 elements and attributes for XSL-FO output

The contained stylesheets implements most of DITA 1.1 elements and attributes for XSL-FO output. For instance these stylesheets have following features:

- In addition to <indexlist> element, <figurelist>, <tablelist> elements have been implemented.
- The id attribute generation method is refined. All id attributes under the body elements are generated as [topic's id]+[element's id]. This method enables to keep uniqueness of id over the ditamap. The topic's id is generated using original id and Antenna House Formatter extension attribute for PDF. This makes it possible to link topic from another PDF.
- Supports DITA indexterm features. Multiple level nested <indexterm> elements, multiple <index-see>,<index-see-also> elements, <index-sort-as> element and range index (indexterm/@start, @end attribute) are implemented. About the range index, if the indexterm/@start has no corresponding indexterm/@end element, this stylesheet automatically close the indexterm range according to the DITA specification.
- Implements character base <syntaxdiagram> element and related elements.
- Supports %display-atts; attributes. The %display-atts; attributes contains scale, frame, expanse attributes. You can use these attributes for <fig>, <pre>, <lines>,

<codeblock>, <syntaxdiagram>, <properties>, <msgblock>, <simpletable>, <choicetable>, <screen> and <imagemap> elements.

Independent style definition

All of the style are defined in the external file called style definition file in the "config" folder. This style definition file is created for each language-code. Default style definition file, English and CJK style files are bundled in this plugin. You can change the output document style only editing this style definition file without changing the stylesheets.

Easy stylesheet customization

If you want to customize the stylesheet algorithms, add the customization stylesheets in the "customize" folder and include it in dita2fo_custom.xsl. As customization folder is integrated into one folder, you can easily add the customized stylesheet.

■ Limitations

If this plugin is not bundled with Antenna House I18n Index Library product, the language support for making index is very limited. The supported language are xml:lang="en", "jp" only. If you want to use other language indexing features, please consider to purchase Antenna House I18n Index Library.

In this plugin the ant build file is made to use Antenna House Formatter (XSL Formatter) to convert XSL-FO to PDF. However if you want to use another Formatter, it is possible to rewrite `pdf5\build.xml` to support another one. As this stylesheet uses XSL 1.1 features the target formatter should support XSL 1.1. Please add changes to build file on your responsibility.

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Chapter 1. Plugin Installation

This section describes the plugin installation for the DITA Open Toolkit.

■ The plugin zip file

The plugin zip file contains this PDF and following file and folders.

```
+---index-data
|    |
|    +--- sample_en.ditamap, sample_ja.ditamap
|    |
|    +---topics-en, topics-ja
|          |
|          +--- DITA instance and image files
+---notices
|    |
|    +--- OASIS.txt, PSMI.txt, CommonPublicLicense-v10.html
|
+---pdf5
|    |
|    +--- config
|    |     |
|    |     +--- default_style.xml, en_style.xml, ja_style.xml,
|    |          ko_style.xml, zh-CN_style.xml, zh-TW_style.xml
|    |
|    +--- customization
|    |     |
|    |     +--- dita2fo_custom.xsl
|    |
|    +--- xsl
|    |     |
|    |     +--- dita2fo_xxxx.xsl (stylesheet files)
|    |
|    +--- build.xml, integrator.xml, plugin.xml
|
+---test-result
|    |
|    +--- sample_en_pdf5.pdf, sample_ja_pdf5.pdf
|
+--- ahf_setting.xml, run_en.bat, run_ja.bat, readme.txt
```

To install the plugin into DITA Open Toolkit, follow the next instruction.

■ Downloading DITA Open Toolkit

You can download DITA Open Toolkit 1.5 from the following URL.

https://sourceforge.net/projects/dita-ot/files/

There are many kind of archives. The "full_easy_install" version is handy because it contains all needed jar files.

After downloading archive file, unzip it to the appropriate folder. From now this folder is called simply `[DITA-OT]` for convenience.

Updating DITA Open Toolkit batch file

There is a batch file called `startcmd.bat` under the `[DITA-OT]` folder. Add the following two set command before the **start** command line.

```
REM AH Formatter, XSL Formatter home and setting file
REM set AHF_DIR=C:\Program Files\Antenna\XSLFormatterV43
set AHF_DIR=C:\Program Files\AntennaHouse\AHFormatterV51
set AHF_OPT=%DITA_DIR%ahf_setting.xml

start "DITA-OT" cmd.exe
```

The 'AHF_DIR' environment variable should be changed according to your AH Formatter (XSL Formatter) version. The ahf_setting.xml is sample option setting file for Formatter. It exists in the archive root folder. Please copy it to the `[DITA-OT]` folder.

Installing 'pdf5' Plugin

Follow the next instructions.

1. Copy pdf5 folder to `[DITA-OT]\demo` folder.
2. Copy index-data folder to `[DITA-OT]\samples` folder.
3. Copy all of the batch file in the root folder to `[DITA-OT]` folder.
4. Make `[DITA-OT]\out` folder.
5. From Explorer click `[DITA-OT]\startcmd.bat` file. The command window titled "DITA-OT" opens.
6. From command window enter the following command. This command integrates 'pdf5' plugin into DITA Open Toolkit.

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

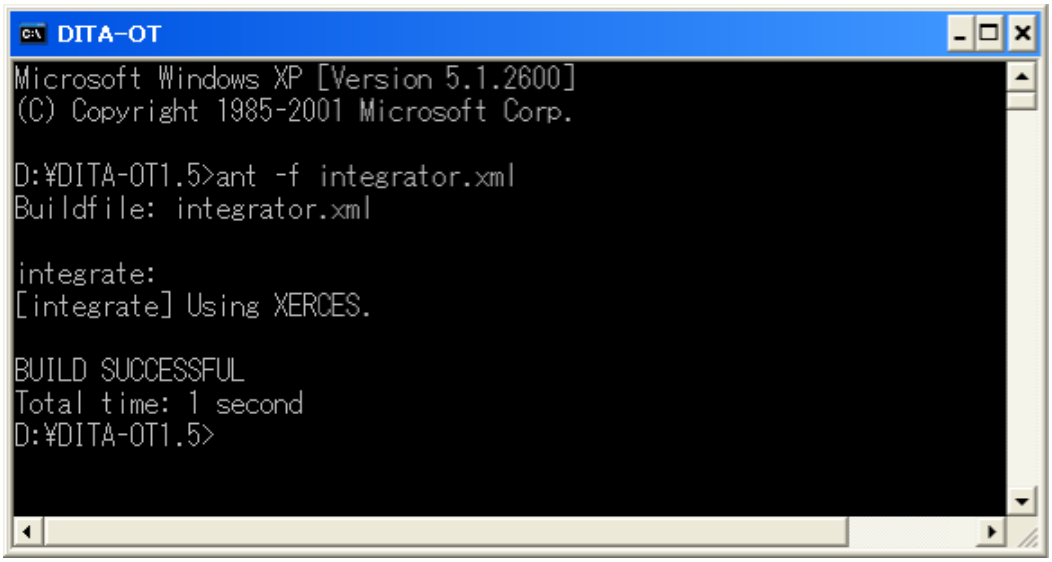

Figure 1-1 Integrating pdf5 plugin into DITA Open Toolkit

7. Close the command window.

■ Testing 'pdf5' Plugin

This plugin contains test data for plugin. Follow the next instructions.

1. From Explorer click `[DITA-OT]\startcmd.bat` file. The command window titled "DITA-OT" opens.
2. You can test `run_en.bat` batch files from this window. This batch file has no parameter.

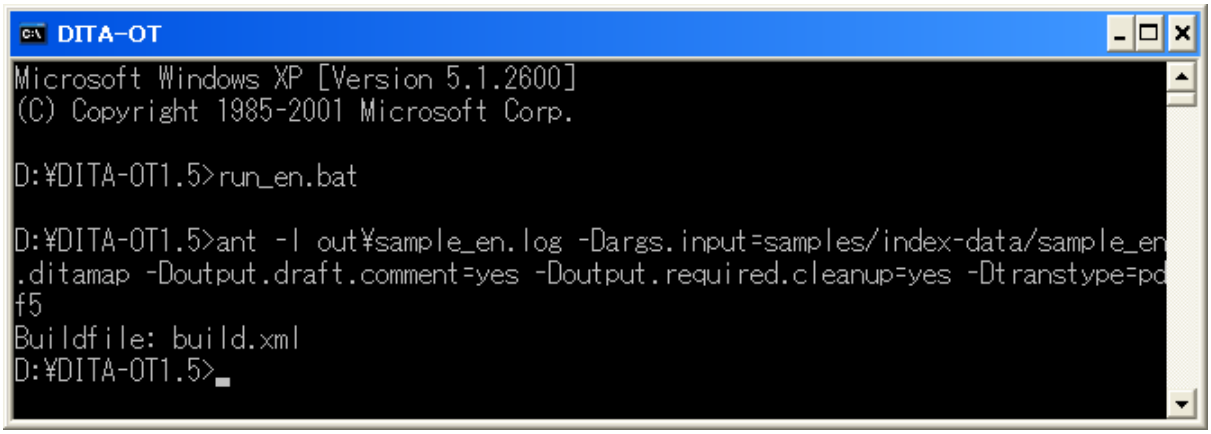

Figure 1-2 Example of running a batch file in DITA Open Toolkit

The target PDF file and log file will be generated in the `[DITA-OT]\out` folder.

3. View `[DITA-OT]\out\sample_en_pdf5.pdf` by Adobe Reader.

Chapter 2. Plugin And Stylesheet Parameters

This plugin and stylesheet has following parameters. The plugin parameter are defined in the `pdf5\build.xml` as property. The stylesheet parameter are defined as `xsl:param` in `pdf5\xsl\dita2fo_param.xsl`.

Property name in build file	Name in the stylesheet	Default value	Notes
args.input	-	-	Specify input map file name.
output.pdf	-	[map file name].pdf	Specify output PDF file name.
dita.input.valfile	-	-	Specify .ditaval file for filtering.
clean.temp	-	yes	Decide whether to clean up temporary folder.
style.def.file	PRM_STYLE_DEF_FILE	..\config\default_style.xml	Specify default style definition file.
-	PRM_ALT_STYLE_DEF_FILE	..\config\[language-code]_style.xml	This is alternative style definition file.The file name is automatically made from xml:lang attribute value of the map top element.
assume.sortas.pinyin	PRM_ASSUME_SORTAS_PINYIN	no	This parameter is only used with I18n Index Library when transforming zh-CN manual.
make.see.link	PRM_MAKE_SEE_LINK	yes	Decide whether to make link for "See" and "See Also" entry in the index page. If this parameter is 'yes', the author must make corresponding indexterm for "See" and "See Also".
include.frontmatter.to.toc	PRM_INCLUDE_FRONTMATTER_TO_TOC	no	Decide whether to include frontmatter items in the toc page. Usually items in the frontmatter does not appear in the toc.
add.numbering.title.prefix	PRM_ADD_NUMBERING_TITLE_PREFIX	yes	Decide whether to add numbering to the part, chapter and descending titles. If this parameter is 'yes', the title will be numbered as '1.1.1' style.
add.numbering.title.prefix	PRM_ADD_PART_TO_TITLE	yes	Decide whether to add 'Part' or 'Chapter' to the title when input is described using bookmap. This parameter is available when add.numbering.title.prefix=yes.

Property name in build file	Name in the stylesheet	Default value	Notes
add.thumbnail.index	PRM_ADD_THUMBNAIL_INDEX	yes	Decide whether to make thumbnail index to the right side of the odd page.
xml.lang	PRM_LANG	Map top element's xml:lang.	Specify different xml:lang value for the map.
output.draft.comment	PRM_OUTPUT_DRAFT_COMMENT	no	Decide whether to output <draft-comment> element content.
output.required.cleanup	PRM_OUTPUT_REQUIRED_CLEANUP	no	Decide whether to output <required-cleanup> element content.
gen_unique.id	PRM_GEN_UNIQUE_ID	yes	Decide whether to genarate unique id. About the unique id refer to Preface for details.
format.dl.as.block	PRM_FORMAT_DL_AS_BLOCK	yes	Decide whether to format <dl> as block. If this parameter is 'no', <dl> is formatted using table.*1
online.pdf	PRM_ONLINE_PDF	yes	If this parameter is 'yes', the stylesheet does not make redundant blank pages for cover, toc, part, chapter and index pages. If this parameter is 'no', the stylesheet forces to the cover, toc, part, chapter and index pages end with even page. As a result the blank page will be inserted before the start page if previous end with odd page.
apply.toc.attr	PRM_APPLY_TOC_ATTR	yes	Decide whether to honor toc='no' attribute or not. *2
use.i18n.index.lib	-	no	Decide whether to use I18n Index Library. The default value depends on the plugin release. If this plugin is bundled in I18n Index Library, the default value is yes. If not, the default value is no.

Table 2-1 Plugin and stylesheet parameters

NOTES

*1 Traditionally <dl> is formatted as block. However DITA introduced title element <dlhead>. If you use dl/dlhead element, it is better to format it using table.

*2 In the DITA Version 1.1 Architectural Specification p.25, the toc attribute is described to control navigation output. This will be applied for HTML or other output. However current other DITA to XSL-FO stylesheet honors this attribute. This parameter controls that stylesheet should honor toc attribute or not.

Chapter 3. Command-line format and parameter

After starting command window by clicking `[DITA-OT]\startcmd.bat`, you can enter the following format command-line to invoke this plugin.

```
ant -l [logfile path] -Dtranstype=pdf5 -D[property]=[value] ...
```

Figure 3-1 Ant command-line formats

The [property] is described in the previous section as "Property name in build file". They are almost defined in `pdf5\build.xml`. The file `[DITA-OT]\run_en.bat` is a good sample of this command-line.

⚠ Caution

You cannot use Java command-line `java -jar lib/dost.jar ...` to invoke this plugin. This is because java command-line does not recognize parameters defined for this plugin.

Chapter 4. Plugin process flow

This plugin has four steps to produce PDF from DITA Open Toolkit generated middle file. The simplified diagram is as follows.

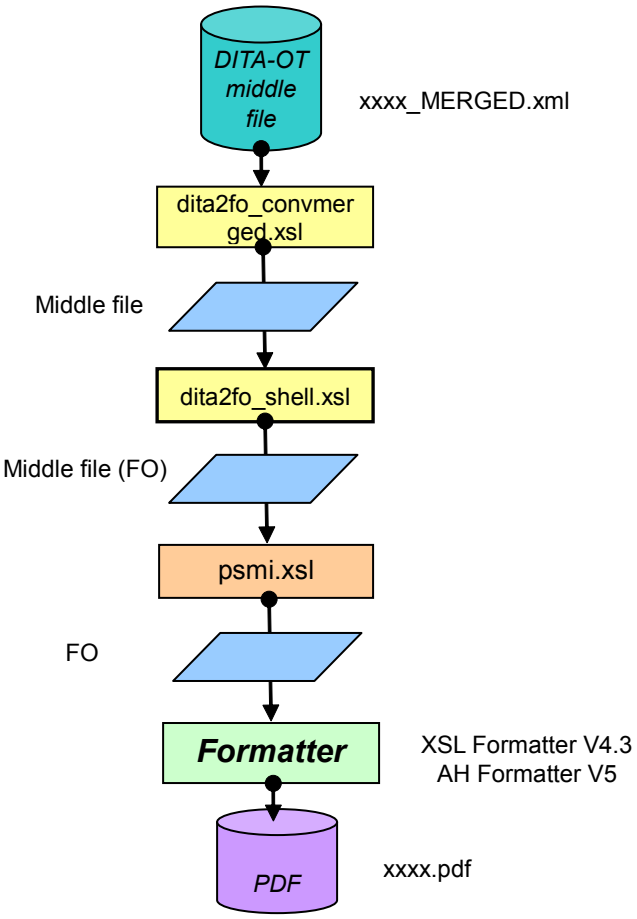

Figure 4-1 Plugin process flow

xxxx_MERGED.xml

This file is merged topic file. All of the topics referenced from the map are merged into one file. This file is located in the `[DITA-OT]\temp` folder. If you want to see this file, add `-Dclean.temp=no` to the command-line parameter.

dita2fo_convmerged.xsl

This stylesheet removes redundant elements from the input file and copy other elements to the output file.

dita2fo_shell.xsl

Main DITA to XSL-FO transformation stylesheet.

psmi.xsl

This stylesheet adjusts fo:page-sequence for index and toc page.

Formatter

Make PDF file from XSL-FO.

Chapter 5. Stylesheet Structure

The DITA to XSL-FO stylesheets has following names and contents. The stylesheet files are located at `pdf5\xsl` folder.

File Name	Contents
dita2fo_attribute.xsl	Contains %univ-atts;, %display-atts; related function. The id generation is controlled in this stylesheet.
dita2fo_backmatter.xsl	Contains backmatter control templates.
dita2fo_bodyelements.xsl	Contains body related element templates such as <p>, <note>, etc.
dita2fo_bookmark.xsl	This stylesheet makes PDF bookmark.
dita2fo_chapter.xsl	Contains <part>, <chapter> control templates.
dita2fo_common.xsl	Contains common templates and functions.
dita2fo_convmerged.xsl	This stylesheet removes redundant elements from DITA merged middle file. The redundant element contains <topicref> elements that have print='no' attributes, <topicgroup> elements.
dita2fo_cover.xsl	This stylesheet makes cover page.
dita2fo_custom.xsl	This stylesheet is prepared for customization. This stylesheet is located at `pdf5\cutomization` folder.
dita2fo_documentcheck.xsl	Contains document checking templates.
dita2fo_figurelist.xsl	This stylesheet makes figure list page.
dita2fo_footnote.xsl	This stylesheet handles post-note. This stylesheet does not use standard XSL-FO's footnote. Instead the footnotes are printed as post-note at the end of topic.
dita2fo_frontmatter.xsl	Contains backmatter control templates.
dita2fo_genatrset.xsl	This stylesheet inputs style definition XML file as inner temporary tree.
dita2fo_global.xsl	This stylesheet defines globally used variables.
dita2fo_import.xsl	This stylesheet includes other stylesheets. This stylesheet is imported in dita2fo_shell.xsl.
dita2fo_index.xsl	This stylesheet contains index pre-processing templates that does not use I18n Index Library.
dita2fo_indexcommon.xsl	This stylesheet contains index common templates and index output templates.
dita2fo_indexi18n.xsl	This stylesheet contains index pre-processing templates that use I18n Index Library.
dita2fo_indexshell.xsl	This stylesheet controls inclusion of dita2fo_index.xsl, dita2fo_indexi18n.xsl by referencing system property. This stylesheet also includes dita2fo_indexcommon.xsl. The system property is set in the build.xml file.
dita2fo_indexterm.xsl	This stylesheet checks <indexterm> element and generates corresponding index-key property or range indexing formatting objects.

File Name	Contents
dita2fo_layoutmasterset.xsl	This stylesheet generates fo:simple-page-master and fo:page-sequence-master.
dita2fo_main.xsl	This stylesheet contains main control templates.
dita2fo_message.xsl	This stylesheet defines variables for message output.
dita2fo_miscellaneouselements.xsl	Contains miscellaneous element templates such as <draft-comment>, <fn>, etc.
dita2fo_numberingmap.xsl	This stylesheet makes temporary tree for making <table>, <figure> and <fn> number.
dita2fo_param.xsl	This file defines stylesheet parameter <xsl:param>.
dita2fo_programmingelements.xsl	Contains programming element templates such as <apiname>, <codeblock>, etc.
dita2fo_referenceelements.xsl	Contains reference element templates such as <properties>.
dita2fo_relatedlinks.xsl	This stylesheet contains templates for <related-links>. This template does not outputs links for navigation.
dita2fo_shell.xsl	This is entry point stylesheet. Plugin build file specifies this file as main stylesheet.
dita2fo_softwareelements.xsl	Contains software related element templates such as <msgph>, <msgblock>, etc.
dita2fo_specializationelements.xsl	Contains specialization related element templates such as <itemgroup>, <required-cleanup>, etc.
dita2fo_staticcontent.xsl	This stylesheet generates contents of fo:static-contents.
dita2fo_tableelements.xsl	This stylesheet handles DITA table elements.
dita2fo_tablelist.xsl	This stylesheet makes table list page.
dita2fo_taskelements.xsl	Contains task related element templates such as <cmd>, <info>, etc.
dita2fo_thumbindexmap.xsl	This stylesheet makes temporary tree for making thumbnail index.
dita2fo_title.xsl	This stylesheet contains title related templates.
dita2fo_toc.xsl	This stylesheet makes toc page.
dita2fo_topicelements.xsl	Contains topic related element templates such as <abstract>, <shortdesc>, etc.
dita2fo_typographicelements.xsl	Contains typographic related element templates such as <b>, <i>, etc.
dita2fo_userinterfaceelements.xsl	Contains user interface related element templates such as <uicontrol>, <wintitle>, etc.
dita2fo_util.xsl	Contains utility templates and functions.
dita2fo_utilityelements.xsl	Contains utility related element templates such as <imagemap>, etc. Utility elements are used for HTML output.
dita2fo_xref.xsl	This stylesheet contains xref templates.

File Name	Contents
psmi.xsl	This stylesheet contains templates that adjust fo:page-sequences. Refer to http://www.cranesoftwrights.com/resources/psmi/index.htm for detais. This stylesheet is written by Crane Softwrights Ltd.

Table 5-1 Stylesheet file and contents

Chapter 6. Style definition file

Style definition file is a XML file that describes the information of the output PDF layout with XSL stylesheet like notation. You can customize output PDF layout by adding modification to the default style definition file or adding override to the language-specific alternative style definition file.

■ Style definition file contents

Style definition file is a well formed XML file that have following namespace.

`http://www.antennahouse.com/names/XSLT/Document/Layout`

This file has no DTD, you can use following elements in any place.

<variable>

This element defines the variable. The name attribute defines variable name and the child text is the variable value. Variable is referenced from other variable definition or attribute definition. Following is a sample of variable definition and reference.

```
<variable name="General_Serif_Font">serif</variable>
<variable name="General_Text_Font">$General_Serif_Font</variable>
```

In this example, the variable value of "General_Serif_Font" and "General_Text_Font" is both "serif". The "$" mark is a placeholder of the variable reference.

The variable elements can hold a language specific literals that can be obtained from stylesheet. For example following sample defines toc, index page title for English.

```
<variable name="Toc_Title">Contents</variable>
<variable name="Index_Title">Index</variable>
```

<attribute>

This element defines one attribute. This element has the notation that is mostly like the `xsl:attribute` element. The name attribute defines attribute's name. The child text is the attribute value. The attribute element must be the child of the attribute-set element. Following is a sample of the attribute definition.

```
<attribute name="line-height">normal</attribute>
```

<attribute-set>

This element defines the attribute set. This element has the notation that is mostly like the `xsl:attribute-set` element. The name attribute defines attribute-set's name. The use-attribute-sets attribute defines the other attribute-set name to be incorporated this attribute-set. The attribute-set element can have the <attribute> child elements. Following is a sample of the attribute-set definition.

```
<variable name="Base_Font_Size">11pt</variable>

<attribute-set name="atsBaseFontSize">
    <attribute name="font-size">$Base_Font_Size</attribute>
</attribute-set>

<attribute-set name="atsBaseLineHeight">
    <attribute name="line-height">normal</attribute>
</attribute-set>

<attribute-set name="atsRoot" use-attribute-sets="atsBaseFontSize
atsBaseLineHeight">
    <attribute name="xml:lang">en</attribute>
    <attribute name="font-family">$General_Text_Font</attribute>
</attribute-set>
```

This example refers variable named "General_Text_Font" from font-family attribute definition.

Also this attribute-set incorporates "atsBaseFontSize" and "atsBaseLineHeight" attribute-sets defined in another location.

<instream-object>

This element defines the svg graphic. This element contains svg namespace child elements. In this stylesheet this svg graphic is used for <note> element symbol.

Refer to the `pdf5\config\default_style.xml` file for the actual example.

■ How style definition file works

There are two kind of style definition file in the `pdf5\config` folder.

Default style definition file

The file name is fixed to `default_style.xml`. This file defines basic variable and styles for English document.

Alternate style definition file

The file name is fixed to `[language-code]_style.xml`. The `language-code` is obtained from xml:lang attribute of the map root element. If the map root element does not contain xml:lang property, xml:lang="en" is supposed. This style definition file contains the override for the default style definition file.

DITA to XSL-FO stylesheets gets the style information by using the name of <attribute-set> element. If the stylesheet requests to get the attribute-set, the alternate style definition file is searched by using the attribute-set name. If there is no corresponding attribute-set then default style definition file is searched.

In other words if the same name attribute-set are defined in both file, this stylesheet adopts the attribute-set that is in the alternate style definition file overriding the default style definition file. By using this mechanism, you can write the language specific style overrides.

There are five alternate style definition files in the `pdf5\config` folder.

`en_style.xml, ja_style.xml, ko_style.xml, zh-CN_style.xml, zh-TW_style.xml`

The en_style.xml is a dummy file, it has no style definition.

Note

These alternate style definition file contents are not complete yet. You may need to add overrides when you make these language documents.

How to make alternate style definition file

It is not difficult to make alternative style definition file. For instance, if you want to make a Germany overrides:

1. Make `pdf5\config\de_style.xml`
2. Copy XML declalation and the header part from `default_style.xml`.
3. Translate the variable value from English to Germany.
4. If you want to change style, copy the corresponding style definition from `default_style.xml` and change the style value.
5. Specify *xml:lang="de"* to the ditamap root element.

Refer to bundled alternative style definition file in the `pdf5\config` folder for actual samples.

Chapter 7. Customizing Stylesheet

This plugin has `pdf5\customization` folder for stylesheet customization. In this folder there is `dita2fo_custom.xsl`. You can add your customized stylesheet into this file.

Note

As this stylesheet separates style information as external style definition file, you should customize stylesheet when you want to change the algorithms of template or you want to add a new template for the DITA element, etc. If you want to change the style of the documents, it will be better to use the override mechanism of the style definition file.

How To Add Customized Stylesheet

If you make a customized stylesheet named dita2fo_special.xsl, simply add the `xsl:include` instruction to the `pdf5\customization\dita2fo_custom.xsl`

```
<xsl:stylesheet version="2.0"
 xmlns:fo="http://www.w3.org/1999/XSL/Format"
 xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
 xmlns:xs="http://www.w3.org/2001/XMLSchema"
 xmlns:axf="http://www.antennahouse.com/names/XSL/Extensions"
 xmlns:ahf="http://www.antennahouse.com/names/XSLT/Functions/Document"
 exclude-result-prefixes="ahf"
>
<!-- Add your customization xsl here. -->
<xsl:include href="dita2fo_special.xsl"/>
</xsl:stylesheet>
```

Figure 7-1 Adding customized stylesheet to dita2fo_custom.xsl

As `dita2fo_custom.xsl` is included in the shell stylesheet `dita2fo_shell.xml`, this customization will work immediately.

```
<xsl:stylesheet version="2.0"
 xmlns:fo="http://www.w3.org/1999/XSL/Format"
 xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
    <xsl:import href="dita2fo_import.xsl"/>
    <xsl:strip-space elements="menucascade uicontrol abstract"/>
    <xsl:include href="../customization/dita2fo_custom.xsl"/>
</xsl:stylesheet>
```

Figure 7-2 dita2fo_shell.xsl

Note

For stylesheet customization mechanisms, refer to `dita2fo_shell.xml, dita2fo_import.xsl, dita2fo_custom.xsl`. According to the XSLT import mechanisms, the customization stylesheet is most honored.

Chapter 8. Stylesheet Message

The DITA to XSL-FO stylesheets outputs the following messages. The suffix character of the message number means:

The suffix is "W"

This is warning message.

The suffix is "F"

This is fatal error message. Stylesheet processing will be abort.

Message	Contents
[General 001W] No template is defined for this element. element=%elem file=%file	This stylesheet does not have template for %elem. Check the stylesheet file and add template.
[getAttributeSet 005F] Attribute-set name not found attribute-set=%attrsetname file=%file	Check the style definition file=%file.
[getAttributeValue 006F] Attribute-set name not found. attribute-set=%attrsetname file=%file	Check the style definition file=%file.
[getVarValue 008F] Variable %var is not found in %file.	Check the style definition file=%file.
[getInstreamObject 009F] Instream object name not found. objname=%objname file=%file	Check the style definition file=%file.
[getVarValue 020F] Variable %var defined more than once in %file.	Check the style definition file=%file.
[getVarValue 021F] Variable %var defined more than once in %file.	Check the style definition file=%file.
[getVarRecursive 023F] Referenced variable %varname is not exist in %stylefile	Check the style definition file=%stylefile.
[getCssStyle 025F] Style %style does not defined in %file.	Check the style definition file=%file. This is inner error.
dita2fo_documentcheck.xsl	Contains document checking templates.
[percentToNumber 028W] Invalid @scale value. Assumed 100. scale=%scale element=%elem file=%file	Correct the authoring.
[processLocalXref 030F] Xref/@href destination topic does not found. Probably href format is illegal. href=%h file=%file.	Correct the xref/@href authoring.
[getXrefTitle 031W] Xref/@href destination section has no title element. Section id=%id file=%file	Correct the xref or section authoring.
[getXrefTitle 032W] Xref/@href destination example has no title element. Example id=%id file=%file	Correct the xref or example authoring.
[getXrefTitle 033W] Xref/@href destination table has no title element. Table id=%id file=%file	Correct the xref or table authoring.

Message	Contents
[getXrefTitle 034W] Xref/@href destination fig has no title element. Fig id=%id file=%file	Correct the xref or fig authoring.
[getXrefTitle 035W] Xref/@href destination %elem has no text content. %elem id=%id file=%file	Correct the xref authoring.
[bodyelements 041W] Element object that has foreign, unknown element is not supported. file=%file trace=%trace	Correct the object authoring.
[bodyelements 040W] Element object is not suitable for PDF output. Ignored. file=%file classid=%class	Correct the object authoring.
[getKeyCol 050W] The keycol attribute is not positive integer. Assumed as not specified. file=%file element=%elem keycol=%keycol	Correct the @keycol authoring.
[dlhead 055W] As PRM_FORMAT_DL_AS_BLOCK='yes', the dl/dlhead element is ignored. file=%file	Change the parameter PRM_FORMAT_DL_AS_BLOCK='no' or delete dl/dlhead element.
[synnoteref 060W] The href attribute of synnoteref cannot be resolved. file=%file trace=%trace @href=%href	Check the synnoteref authoring.
[processLink 062W] Ignored invalid link in related-links or reltable. file=%file href=%href	Check the reltable or related-links authoring.
[processLink 063W] Ignored invalid link in related-links or reltable. file=%file href=%href	Check the reltable or related-links authoring.
[processLink 070W] topicref/@href target does not found. href='%href' file=%file	Check the topicref authoring.
[processLocalXref 072F] Xref target is not contained in map. href='%href' file=%file	Check the xref target.
[ditamapClass 100F] Undefined ditamap class. class=%class file=%file	Check the map file.
[documentLang 101W] xml:lang is not specified in map. Adopt 'en' as default language.	Check the ditamap file.
[altstyledef 102W] Alternate style definition file %file does not found. Stylesheet use %default as style definition file.	Check the xml:lang attribute of map root element or make new alternate style definition file.
[getPropertyNu 400W] Invalid non-numeric property value='%val'. Treated as 1.0.	Some font-size attribute in the style definition file is not numeric.
[documentCheck 500F] topicref/@href target does not found. ditamap=%xtrf href=%ohref	Check the ditamap file.
[documentCheck 501F] Detected same topic/@id value. It must be unique. @id='%id' file1=%xtrf1 file2=%xtrf2	Correct the id value of the topic.
[documentCheck 503F] The part and chapter level element coexists. Either part or chapter only document is supported. ditamap=%xtrf	This stylesheet does not accept this configuration. Correct the ditamap file.

Message	Contents
[documentCheck 504F] The part level element contains attribute toc='no'. file=%ohref ditamap=%xtrf	This stylesheet does not accept this pattern. Correct the ditamap file.
[documentCheck 505F] The chapter level element contains attribute toc='no'. file=%ohref ditamap=%xtrf	This stylesheet does not accept this pattern. Correct the ditamap file.
[documentCheck 510F] The figurelist element exists plurally in the ditamap. Only one figurelist is supported. ditamap=%xtrf	Correct the bookmap file.
[documentCheck 511F] The tablelist element exists plurally in the ditamap. Only one figurelist is supported. ditamap=%xtrf	Correct the bookmap file.
[documentCheck 512F] The toc element exists plurally in the ditamap. Only one toc is supported. ditamap=%xtrf	Correct the bookmap file.
[documentCheck 513F] The indexlist element exists plurally in the ditamap. Only one indexlist is supported. ditamap=%xtrf	Correct the bookmap file.
[documentCheck 599F] Terminated by document fatal error.	Check the previous error message.
[genIndex 600F] Failed to sort indexterm. Counts before sorting=%before, after sorting=%after	This will be the difficulty of the I18n Index Library.
[genIndex 601I] Index debug start.	This is debug message.
[genIndex 602I] Index debug end.	This is debug message.
[indexterm 610W] Authoring error! Indexterm has sibling index-see element. index-key='%key' file=%file Stylesheet will ignore this index-see element.	Correct the indexterm authoring.
[indexterm 611W] Authoring error! Indexterm has sibling index-see-also element. index-key='%key' file=%file Stylesheet will ignore this index-see-also element.	Correct the indexterm authoring.
[indexterm 612W] Authoring error! Indexterm has both index-see and index-see-also child element. index-key='%key' file=%file Stylesheet will ignore this index-see element.	Correct the indexterm authoring.
[indexterm 620W] Authoring error! Text of indexterm is empty. index-key='%key' file=%file Stylesheet will ignore this indexterm element.	Correct the indexterm authoring.
[indexterm 621W] Authoring error! Text of indexterm is too long. It must be less than %max characters for sorting. index-key='%key' file=%file Stylesheet will trim this indexterm text for index sorting.	Correct the indexterm authoring. This message will not output when you use I18n Index Library.
[indexterm 630W] Authoring error! Start attribute is specified in nesting indexterm more than once. previous='%prev' current='%curr' index-key='%key' file=%file Stylesheet will ignore this start attribute.	Correct the indexterm authoring.
[indexterm 640W] End attribute authoring error! Corresponding indexterm that has same start attribute value does not found. end='%end' index-key='%key' file=%file Stylesheet will ignore this end attribute.	Correct the indexterm authoring.

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[indexterm 641W] End attribute authoring error! Corresponding indexterm that has same start attribute value exist plurally. end='%end'index-key='%key' file=%file Stylesheet will ignore this end attribute.	Correct the indexterm authoring.
[indexterm 642W] Authoring warning! Indexterm element that has end attribute should not have ancestor indexterm element. end='%end' index-key='%key' file=%file Stylesheet will ignore ancestor indexterm.	Correct the indexterm authoring.
[indexterm 643W] Authoring warning! Indexterm element that has end attribute should not have child indexterm element. end='%end' index-key='%key' file=%file Stylesheet will ignore child indexterm.	Correct the indexterm authoring.
[indexterm 650W] Authoring error! Attribute start and end cannot be specified together in one indexterm. start='%start' end='%end' index-key='%key' file=%file Stylesheet will ignore this indexterm.	Correct the indexterm authoring.
[indexterm 651W] Authoring error! End attribute cannot be specified to the descendant of indexterm that has start attribute. start='%start' end='%end' index-key='%key' file=%file Stylesheet will ignore this indexterm.	Correct the indexterm authoring.
[indexterm 652W] Authoring error! Start attribute cannot be specified to the descendant of indexterm that has end attribute. start='%start' end='%end' index-key='%key' file=%file Stylesheet will ignore this indexterm.	Correct the indexterm authoring.
[makeChapterMap 700W] Illegal class is found in topicref. class='%class' file=%file.	Check the ditamap file.

Table 8-1 Stylesheet messages