xtpxlib-xdoc

An xtpxlib component for generating documentation

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xtpxlib

xtpxlib library - component **xtpxlib-xdoc** - **v1.1.2** (2020-11-30)
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xtpxlib-xdoc is part of the **xtpxlib** library. **xtpxlib** contains software for processing XML, using languages like XSLT and XProc. It consists of several separate components, all named `xtpxlib-*`. Everything can be found on GitHub (https://github.com/xatapult).

The `xtpxlib-xdoc` component contains an XProc (1.0) based DocBook publication toolchain.

- Starting point is some narrative written in DocBook, with the following extensions:
  - Parameter references that are expanded (for dates, times, phrases, names, etc.)
  - Special elements that trigger conversions. These conversions can insert generated DocBook into the source. For instance complex tables, documentation, etc.
- The resulting "pure" DocBook can be used for further processing.
- The component contains specific pipelines for converting the DocBook to PDF and XHTML

Installation and usage information can be found on **xtpxlib**'s main website https://www.xtpxlib.org.

Technical information:

Component documentation: https://xdoc.xtpxlib.org
License: GNU GENERAL PUBLIC LICENSE - Version 3, 29 June 2007
Git URI: `git@github.com:xatapult/xtpxlib-xdoc.git`
Git site: https://github.com/xatapult/xtpxlib-xdoc
This component depends on:

- xtpxlib-container (Support for XML containers (multiple files wrapped into one))
- xtpxlib-common (Common component: Shared libraries and IDE support)

Release information:

v1.1.2 - 2020-11-30 (current)
Various small changes and fixes

v1.1.1 - 2020-10-15
Added `id-suffix` option to generating code documentation.
When XProc options are declared twice (using `@use-when`), only the first is used.

v1.1 - 2020-05-01
Updated the DocBook to PDF conversion (added footnotes, callouts, nested tables, etc.).

v1.0.A - 2020-02-16
New logo and minor fixes.

v1.0 - 2019-12-18
Initial release

(Abbreviated. Full release information in `README.md`.)

[* Unhandled element encountered: <xi:include href="xtpxlib-xdoc-chapter-description.xml"> (phase: structure)]**
[* Unhandled element encountered: <xi:include href="xtpxlib-xdoc-chapter-instructions.xml"> (phase: structure)]**
[* Unhandled element encountered: <xi:include href="xtpxlib-xdoc-chapter-transforms.xml"> (phase: structure)]**

1 XProc Pipelines

The xtpxlib-xdoc component contains the following XProc (1.0) pipelines:

Module/Pipeline	Description
docbook-to-pdf.xpl	This turns Docbook (5.1) into a PDF using FOP.
docbook-to-xhtml.xpl	This turns Docbook (5.1) into XHTML.
xdoc-to-docbook.xpl	Pipeline that transforms a DocBook source containing xdoc extensions into "pure" DocBook format.
xdoc-to-pdf.xpl	Convenience pipeline: Combines the xdoc-to-docbook and the docbook-to-pdf steps in one.
xdoc-to-xhtml.xpl	Convenience pipeline: Combines the xdoc-to-docbook and the docbook-to-xhtml steps in one.

Table 1-1 - Module overview

1.1 XProc (1.0) pipeline: docbook-to-pdf.xpl

File: xpl/docbook-to-pdf.xpl

Type: xdoc:docbook-to-pdf

This turns Docbook (5.1) into a PDF using FOP.

All necessary xdoc pre-processing (usually with xdoc-to-docbook.xpl) must have been done.

It will only convert a **[*** Referenced linkend id "xdoc-docbook-dialect" not found (phase: inline)]**.

If you don't use xdoc-to-docbook.xpl, you have to make sure to get correct xml:base attributes in, so the pipeline can find includes and images. The following XProc (1.0) code takes care of that:

```
<p:xinclude>
  <p:with-option name="fixup-xml-base" select="true()"/>
</p:xinclude>
<p:add-attribute attribute-name="xml:base" match="/*">
  <p:with-option name="attribute-value" select="/reference/to/source/document.xml"/>
</p:add-attribute>
```

Port	Type	Primary?	Description
source	in	yes	The docbook source document, fully expanded (with appropriate xml:base attributes)
result	out	yes	The resulting XSL-FO (that was transformed into the PDF).

Option	Rq?	Default	Description
chapter-id		''	Specific chapter identifier to output.
create-pdf		true()	Whether to actually create the PDF. If false, it will only output the XSL-FO
fop-config		resolve-uri('../../xtpxlib-common/data/fop-default-config.xml', static-base-uri())	Reference to the FOP configuration file
global-resources-directory		()	Images that are tagged as role="global" are searched here (discarding any directory information in the image's URI)
href-pdf	yes		The name of the resulting PDF file (must have file:// in front).
href-xsl-fo		()	If set, writes the intermediate XSL-FO to this href (so you can inspect it when things go wrong in FOP)
main-font-size		10	Main font size as an integer. Usual values somewhere between 8 and 10.
output-type		'a4'	Output type. Use either a4 or sb (= standard book size)
preliminary-version		false()	If true, adds a preliminary version marker and output any db:remark elements. If false, output of db:remark elements will be suppressed.

1.2 XProc (1.0) pipeline: docbook-to-xhtml.xpl

File: `xpl/docbook-to-xhtml.xpl`

Type: `xdoc:docbook-to-xhtml`

This turns Docbook (5.1) into XHTML.

All necessary `xdoc` pre-processing (usually with xdoc-to-docbook.xpl) must have been done.

It will only convert a **[*** Referenced linkend id "xdoc-docbook-dialect" not found (phase: inline)]**.

The resulting XHTML will not be directly useable, post-processing the result into a complete and correct HTML page is necessary. The result of this pipeline consists of nested `div` elements. There is no surrounding `html` or `body` element.

Port	Type	Primary?	Description
`source`	in	yes	The docbook source document.
`result`	out	yes	The resulting XHTML

1.3 XProc (1.0) pipeline: xdoc-to-docbook.xpl

File: `xpl/xdoc-to-docbook.xpl`

Type: `xdoc:xdoc-to-docbook`

Pipeline that transforms a DocBook source containing `xdoc` extensions into "pure" DocBook format.

Port	Type	Primary?	Description
`source`	in	yes	The DocBook source with `xdoc` extensions
`result`	out	yes	The resulting DocBook

Option	Rq?	Default	Description
`alttarget`		`()`	The target for applying alternate settings.
`href-parameters`		`()`	Optional reference to a document with parameter settings. See here for details.
`parameter-filters`		`()`	Optional filter settings for processing the parameters. Format: `name=value|name=value|...`.

1.4 XProc (1.0) pipeline: xdoc-to-pdf.xpl

File: `xpl/xdoc-to-pdf.xpl`

Type: `xdoc:xdoc-to-pdf`

Convenience pipeline: Combines the xdoc-to-docbook and the docbook-to-pdf steps in one.

Port	Type	Primary?	Description
`source`	in	yes	The DocBook source with `xdoc` extensions
`result`	out	yes	Some XML report about the conversion

Option	Rq?	Default	Description
`alttarget`		`()`	The target for applying alternate settings.
`chapter-id`		`''`	Specific chapter identifier to output.
`fop-config`		`resolve-uri('../../xtpxlib-common/data/fop-default-config.xml', static-base-uri())`	Reference to the FOP configuration file
`global-resources-directory`		`()`	Images that are tagged as `role="global"` are searched here (discarding any directory information in the image's URI)
`href-docbook`		`()`	If set, writes the intermediate full DocBook to this href (so you can inspect it when things go wrong)
`href-parameters`		`()`	Optional reference to a document with parameter settings. See here for details.
`href-pdf`	yes		The name of the resulting PDF file

Option	Rq?	Default	Description
`href-xsl-fo`		`()`	If set, writes the intermediate XSL-FO to this href (so you can inspect it when things go wrong in FOP)
`main-font-size`		`10`	Main font size as an integer. Usual values somewhere between 8 and 10.
`output-type`		`'a4'`	Output type. Use either `a4` or `sb` (= standard book size)
`parameter-filters`		`()`	Optional filter settings for processing the parameters. Format: `name=value|name=value|...`.
`preliminary-version`		`false()`	If `true`, adds a preliminary version marker and output any `db:remark` elements. If `false`, output of `db:remark` elements will be suppressed.

1.5 XProc (1.0) pipeline: xdoc-to-xhtml.xpl

File: `xpl/xdoc-to-xhtml.xpl`

Type: `xdoc:xdoc-to-xhtml`

Convenience pipeline: Combines the xdoc-to-docbook and the docbook-to-xhtml steps in one.

Port	Type	Primary?	Description
`source`	in	yes	The DocBook source with `xdoc` extensions
`result`	out	yes	The resulting XHTML

Option	Rq?	Default	Description
`alttarget`		`()`	The target for applying alternate settings.
`href-parameters`		`()`	Optional reference to a document with parameter settings. See here for details.
`parameter-filters`		`()`	Optional filter settings for processing the parameters. Format: `name=value|name=value|...`.

2 XProc Libraries

The xtpxlib-xdoc component contains the following XProc (1.0) library module:

Module/Pipeline	Description
`xtpxlib-xdoc.mod.xpl`	Library with support pipelines for `xdoc` and related conversions.

Table 2-1 - Module overview

2.1 XProc (1.0) library: xtpxlib-xdoc.mod.xpl

File: `xplmod/xtpxlib-xdoc.mod/xtpxlib-xdoc.mod.xpl`

Library with support pipelines for `xdoc` and related conversions.

Prefix	Namespace URI
`xdoc`	`http://www.xtpxlib.nl/ns/xdoc`

2.1.1 Step: xdoc:markdown-to-docbook

Converts the contents of `xdoc:MARKDOWN` elements into DocBook.

This pipeline checks the incoming XML for `xdoc:MARKDOWN` elements. The contents of these elements is assumed to contain Markdown. The pipeline tries to convert this into DocBook. The `xdoc:MARKDOWN` element is removed/unwrapped.

The following rules apply:

- The contents of an `xdoc:MARKDOWN` element is stringified (so any child elements are lost).
- The resulting text can be indented, using space characters only (no tabs!). The non-empty line with the *minimum* indent is assumed to be its left margin.
- Only simple Markdown is supported. Specifically:
  - Inline markup for emphasis, bold, code, etc.
  - Links. A link target starting with a `%` is handled as an *internal* link (the `@xml:id` of something in the encompassing DocBook).
  - Code blocks (using three consecutive back-ticks)
  - Headers (these are all converted into the same DocBook `bridgehead` elements)
- Specifically not supported (yet?) are tables.

If you add an `header-only="true"` attribute to the `xdoc:MARKDOWN` element, only the first paragraph will be output.

Port	Type	Primary?	Description
`source`	in	yes	Any XML that might contain `xdoc:MARKDOWN` elements for conversion.
`result`	out	yes	The same XML but with the `xdoc:MARKDOWN` element's contents converted into DocBook.

[* Unhandled element encountered: <xi:include href="xtpxlib-chapter-docbook-dialect.xml"> (phase: structure)]**