Ant-DocBook Styler package

Rendering DocBook documents in an easier (?) way

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1. What is Ant-DocBook Styler?

This is a specialized ANT task for rendering DocBook documentation. DocBook is provided within the package, an extension for file inclusion is also added to the base DocBook.

XsltProc is used if present in path for rendering XSLT transformations. The problem with XsltProc is that it is difficult to pass catalog information to it. If you must use catalogs, use XML version of catalogs, not SGML ones.

For Java XSLT processing, Saxon is used by default. Saxon is superior to most other XSLT processing engines in that it has a *really* small memory footprint. If you want to use other TraX-compliant engine, set system properties accordingly and disable the use of Saxon using:

```
ant -Ddisable.saxon=true -Ddisable.xsltproc=true ...
```

2. Package installation

Download Jakarta Commons' Resolver[1], package and install it in ANT's lib directory.

If you need additional modules, such as modules for PDF creation, refer to Section 4, "Additional modules".

Type the following in the directory where you copied Ant-DocBook Styler.

```
ant -f ant-build-docbook.xml install
```

The installation process is actually only about pasting fixed paths in some files (DTDs, catalogs) that we have found to be problematic with various XSLT processors. In addition to that, the install target also expands DocBook ZIPs.

3. Available target formats

Ant-DocBook Styler comes with several output formats to which a DocBook file can be converted.

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[1] Available at `http://xml.apache.org/commons/`

Table 1. Ant-DocBook Styler output formats for DocBook documents.

Styler's target name	Output format	Details
html.single	Single HTML file	Creates a single HTML file.
html.chunked	Chunked HTML file	Creates a set of HTML files corresponding to sections, chapters etc.
pdf.fop	PDF	Creates a PDF file using Apache FOP. This output format requires an additional module to be installed. See Section 4.1, "PDF generation module using Apache FOP" for details.
pdf.xep	PDF	Creates a PDF file using XEP. This output format requires an additional module to be installed, plus it requires an installed version of XEP, which is a commercial product.

4. Additional modules

The baseline version of the styler comes with HTML rendering capabilities for DocBook and DocBook Website to single and chunked HTML. Additional modules extend the basic functionality with other target formats. Modules are available as ZIP files and should be extracted over the existing styler installation. It is important to execute the install target again once the module has been unzipped from its distribution form:

```
ant -f ant-build-docbook.xml install
```

Specific modules may have additional requirements, please see `readme.txt` file distributed with each module.

4.1. PDF generation module using Apache FOP

This module includes a preconfigured version of Apache FOP and a set of TrueType fonts from MiKTeX distribution. The font files are added so that diacritic glyphs can be embedded into the PDF file correctly.

You are free to customize the module to adjust it to your needs.

4.2. PDF generation module using XEP

This module includes several configuration files for XEP — a commercial XSL:FO renderer from RenderX. The module also includes a set of TrueType fonts from MiKTeX distribution. The font files are added so that diacritic glyphs can be embedded into the PDF file correctly.

You are free to customize the module to adjust it to your needs.

> **Important**
>
> XEP is *not* part of the module and is not distributed with the Ant-DocBook Styler package. You must purchase it from RenderX.

5. Invoking Ant-DocBook Styler from your ANT build file

Ant-DocBook Styler is not an independent script — it is more like a "library" of predefined ANT targets, ready to use in your own ANT script.

What you need to get started is to write your own ANT build file, define several properties and invoke the selected target from Ant-DocBook Styler.

Consider the following example:

```
<ant antfile="${ant.docbook.styler}" ❶ inheritall="false" ❷ target="html.chunked"> ❸
<property name="ant.docbook.styler.dir" location="c:/styler" /> ❹
<property name="docbook.xml.dir" location="xml" /> ❺
<property name="docbook.resources.dir" location="figures" /> ❻
<property name="distribution.dir" location="tmp/chunked" /> ❼
<property name="build.dir" location="tmp/build" />  ❽
</ant>
```

❶   `antfile` property must point to the main Ant-DocBook Styler build file, usually named `ant-build-docbook.xml`. This path *must be absolute.*
❷   Setting `inheritall` to `false` ensures that the styler will run with a fresh set of properties.
❸   Choose any of the available output formats by selecting a target here. Output formats are listed in Section 3, "Available target formats".
❹   This property is obligatory and should point to the styler's installation directory. It can be easily and automatically derived from `ant.docbook.styler` property using `dirname` task of ANT (but the styler cannot do it internally, so you must pass this property explicitly).
❺❻   `docbook.xml.dir` property must point to a directory where your DocBook files can be found. Similarily, `docbook.figures.dir` should point to external resources, pictures etc. These resources are copied automatically by Ant-DocBook Styler to the distribution directory.
❼   A directory where the output files should be placed. Please note that output files may be a single file (PDF), or a structure of folders and files (HTML, CSS, images   ).
❽   Build directory for temporary files.

Note that switching to another output format usually requires *only* chaning the name of the target.

> **Note**
>
> It is a good idea to start using Ant-DocBook Styler by modifying the provided example. The example includes a directory structure and an ANT script rendering the DocBook files to various output formats.

6. Bugs

If you encounter any problems, first try to disable XsltProc by adding `disable.xsltproc` property to your ANT build file. You can also do this from command-line like this:

```
ant -Ddisable.xsltproc=true ...
```

Also, make sure you are using a current version of ANT. Older versions are known to cause problems.

If the error persists, please contact with the author of the package at the following e-mail address: `<dawid.weiss@cs.put.poznan.pl>`.

7. Known issues

7.1. Memory problems

If you assemble your DocBook from many independent XML files using Dawid Weiss' extensions to DocBook, you may encounter a problem with XsltProc consuming large chunks of memory; it is a known bug in XsltProc. Try disabling it and using Java's XSLT processor.

If Java fails with `OutOfMemory` error, increase the memory for JVM by setting `ANT_OPTS` variable to a higher value. Example:

```
ANT_OPTS=-Xmx500m
```

7.2. Firewall and network issues

Most XSLT processors will dynamically attempt to connect to a remote site to perform DTD validation. The styler package contains catalogues that map DocBook and DocBook WebSite DTDs to local files, but if you either change the version of DocBook, or put an incorrect public identifier in your XML files you might encounter strange "network" errors thrown from the styler.

If you are behind a firewall, setting a proxy server might help. Add the following line to your build file:

```
<setproxy proxyhost="my.proxy.host" proxyport="xxx"/>
```

Replace host and port according to your configuration.

7.3. XsltProc compatibility

Occasionally, you may encounter problems with XsltProc (although it is a rock-solid program for most of the time).

We test Ant-DocBook Styler with XsltProc on Windows with version:

```
Using libxml 20606, libxslt 10102 and libexslt 802
xsltproc was compiled against libxml 20604, libxslt 10102 and libexslt 802
libxslt 10102 was compiled against libxml 20604
libexslt 802 was compiled against libxml 20604
```

8. Licensing information

This program is freeware.

If you like it, send me an e-mail to keep me motivated: <dawid.weiss@cs.put.poznan.pl>. Obviously, money donations, postcards, gifts, anything is also welcome ;)

9. About authors of Ant-DocBook Styler

Ant-DocBook Styler was written and is maintained by Dawid Weiss.

Matthias Marschall added several contributions — he split the styles into separate directories, and added various other improvements.