

Extended links

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Being an exploration of extended links with occasional diversions into other interesting matters.

Revision History

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One link

This is some prose that I've written. It's about something, but it doesn't really matter what. The next sentence is the important bit. There is an implementation (<https://xsltng.docbook.org>) of stylesheets for DocBook. The prose continues here. It goes on and on. The editor isn't going to like this paragraph at all.

Note



This document was designed to demonstrate features of the online presentation. It's a little less obvious what's special in the PDF version.

Four links

This is some prose that I've written. It's about something, but it doesn't really matter what. The next sentence is the important bit. There are several implementations of stylesheets for DocBook:

- XSLT 3.0 (<https://xsltng.docbook.org/>)
- XSLT 2.0 (<https://github.com/docbook/xslt20-stylesheets>)
- XSLT 1.0 (<https://github.com/docbook/xslt10-stylesheets>)
- DSSSL (<https://github.com/docbook/dsssl>)

The prose continues here. It goes on and on. The editor isn't going to like this paragraph at all.

Extended links

This is some prose that I've written. It's about something, but it doesn't really matter what. The next sentence is the important bit. There are several implementations [XSLT 3.0 (<https://github.com/docbook/xslt30-stylesheets>), XSLT 2.0 (<https://github.com/docbook/xslt20-stylesheets>), XSLT 1.0 (<https://github.com/docbook/xslt10-stylesheets>), DSSSL (<https://github.com/docbook/dsssl>)] of stylesheets for DocBook. The prose continues here. It goes on and on. The editor isn't going to like this paragraph at all.

Note



In the online (JavaScript-enabled) presentation of this document, those four links are hidden behind a drop-down menu.

How?

Markup.

There are **<extended-link>**

```
<from>several implementations</from>
```

```
<to href="https://github.com/docbook/xsltNG"  
  title="XSLT 3.0"/>
```

```
<to label="target" href="https://github.com/docbook/xslt20-stylesheets"  
  title="XSLT 2.0"/>
```

```
<to label="target" href="https://github.com/docbook/xslt10-stylesheets"  
  title="XSLT 1.0"/>
```

```
<to label="target" href="https://github.com/docbook/dsssl"  
  title="DSSSL"/>
```

</extended-link> of stylesheets for DocBook.

How really?

More markup.

```
<para>There are <phrase xlink:type="extended">
  <phrase xlink:label="source" xlink:type="resource"
    role="extended-link">several implementations</phrase>
  <link xlink:type="locator" xlink:label="target"
    xlink:href="https://github.com/docbook/xsltTNG"
    xlink:title="XSLT 3.0"/>
  <link xlink:type="locator" xlink:label="target"
    xlink:href="https://github.com/docbook/xslt20-stylesheets"
    xlink:title="XSLT 2.0"/>
  <link xlink:type="locator" xlink:label="target"
    xlink:href="https://github.com/docbook/xslt10-stylesheets"
    xlink:title="XSLT 1.0"/>
  <link xlink:type="locator" xlink:label="target"
    xlink:href="https://github.com/docbook/dsssl"
    xlink:title="DSSSL"/>
  <link xlink:to="target" xlink:from="source" xlink:type="arc"/></phrase>
of stylesheets for DocBook.</para>
```

No, really, how?

The *DocBook xslTNG Stylesheets* (<https://xsltng.docbook.org/>) run a pipeline¹² of transformations on your DocBook document:

1. XInclude
- ...
6. Resolve annotations
7. Resolve XLink *linkbases*
8. Optionally apply local conventions
9. Optionally validate

¹ The pipelines are not, alas, *yet* in XProc 3.0.

² In the online (JavaScript-enabled) presentation of this document, the text presented here as “footnote 1” is an annotation displayed in a modal dialog when the marker is clicked.

Local conventions

```
16 <xsl:template match="db:extended-link">
    <phrase xlink:type="extended">
        <xsl:apply-templates/>
        <link xlink:to="target" xlink:from="source"
20         xlink:type="arc" />
    </phrase>
</xsl:template>

<xsl:template match="db:from">
25 <phrase xlink:label="source" xlink:type="resource"
        role="extended-link">
        <xsl:apply-templates/>
    </phrase>
</xsl:template>

30 <xsl:template match="db:to">
    <link xlink:type="locator" xlink:label="target"
        xlink:href="{@href}" xlink:title="{@title}" />
</xsl:template>
```

Thank you!

Resources:

- *DocBook xslTNG Stylesheets* (<https://xsltng.docbook.org/>)
- This presentation (<http://so.nwalsh.com/examples/2020/balisage/links/index.html>)

(More things? How about that “How? slide or the out-of-band link?)

Appendix A. How did you do *that*?

Using XInclude to read actual source documents reduces the chances that your code and your documentation will get out of sync.

The “How?” slide is just this:

```
<article xml:id='how'>
<title>How?</title>

<para>Markup.</para>

<programlisting role="monochrome"
                linenumbering="unnumbered"
                language="xml"
><xi:include
  href="links.xml" parse="text"
  xpointer="search=/extended-link/,#/extended-link#"
/></programlisting>
</article>
```

Important



The use of `xpointer` here is a complete hack. I really should be using the `fragid` attribute but there's a bug (<https://github.com/docbook/docbook/issues/156>) in the DocBook schemas.

This slide is, of course, just this:

```
<appendix>
<title>How did you do <emphasis>that</emphasis>?</title>

<para>Using XInclude to read actual source
documents reduces the chances that your code
and your documentation will get out of sync.</para>

<para>The “<link linkend="how">How?</link>”
slide is just this:</para>

<programlisting role="monochrome"
```

```

        linenumbering="unnumbered"
        language="xml"
><xi:include href="links.xml" parse="text"
    xpointer="search=/xml:id='how' /, #/article#"
/></programlisting>

<important>
<para>The use of <tag class="attribute">xpointer</tag>
here is a complete hack. I really should be using
the <tag class="attribute">fragid</tag> attribute
but there's
<link xlink:href="https://github.com/docbook/docbook/issues/156">a
bug</link> in the DocBook schemas.</para>
</important>

<para><emphasis>This</emphasis> slide is,
of course, just this:</para>

<programlisting role="monochrome"
    linenumbering="unnumbered"
    language="xml"
><xi:include href="links.xml" parse="text"
    xpointer="search=/&lt;appendix/,2#/appendix#"
/></programlisting>

<para>because it's turtles all the way down.</para>
</appendix>

```

because it's turtles all the way down.

Appendix B. How did you do that other thing?

Using extended links with linkbases allows you to implement out-of-band linking. The DocBook markup on the “*No, really, how?* (#howarticle)” page for the list item about linkbases is:

```
<listitem>
<para>Resolve XLink <emphasis>linkbases</emphasis>
</para>
</listitem>
```

Conspicuous by its absence is any kind of linking markup.

The link is loaded from an external linkbase:

```
<extendedlink xmlns:xlink="http://www.w3.org/1999/xlink"
              xlink:type="extended">
<locator xlink:title="Linkbases"
          xlink:label="target"
          xlink:href="https://www.w3.org/TR/xlink11/#reltophysloc"
          xlink:type="locator"/>
<locator xlink:label="source"
          xlink:href="xmlns(db=http%3a//docbook.org/ns/docbook)
                    xpath(//db:emphasis%5b. = 'linkbases'%5d)"
          xlink:type="locator"/>
<arc xlink:to="target" xlink:from="source" xlink:type="arc"/>
</extendedlink>
```