

Techniques Used for Testing of HTML, SVG, WMF/EMF Formats

Tomaž Vajngerl <tomaz.vajngerl@collabora.com>

quikee, #libreoffice-dev, irc.freenode.net

Testing of OOXML and ODF

- Import, export, roundtrip
- At import assert the model state
- At export test, import and assert the model state..
- ..or assert the state of the exported document

OOXML, ODF - Assert exported document

- Document is a ZIP container, parts are XML files
- Easiest to use xpath to assert the desired values in the XML file

```
assertXPath (pXmlDoc,  
"/w:document/w:body/w:p[1]/w:r[1]/w:rP  
r/w14:textOutline", "align", "ctr");
```

Testing HTML export

- HTML is not XML
- Luckily libxml2 also supports HTML so can just use xpath

Testing HTML export (2)

- Calc: `sc/qa/extras/htmllexporttest.cxx`
- Draw: `sd/qa/unit/HtmlExportTest.cxx`
- Writer:
`sw/qa/extras/htmllexport/htmllexport.cxx`

WMF and EMF

- Windows Meta File / Enhanced Meta File
- vector graphic format
- Recording of drawing commands to GDI/GDI+

Testing WMF and EMF

- Import filter transforms a WMF/EMF to a MTF (GDIMetaFile / Star View Metafile)
- Problem - how to know if the problem is in rendering or in transformation and what the result of the transformation is?

Testing WMF and EMF (2)

- Idea – transform MTF into XML representation (for testing and debugging purposes)
- This makes it possible to:
 - inspect values
 - assert the values with xpath

Testing WMF and EMF (3)

- MetafileXmlDump [1]
- Additional ability to filter commands
- Used by WmfTest in VCL [2]
- Not all commands supported – feel free to extend it!

[1] /test/source/mtfxmldump.cxx

[2] vcl/qa/cppunit/wmf/wmfimporttest.cxx

EMF+?

- EMF+ has additional commands which are not supported by MTF
- Converts to MTF but EMF+ commands are transported as MTF comments
- cppcanvas renders the MTF instead of drawinglayer
- We should get rid of this

Scalable Vector Graphic (SVG)

- Is “just” XML – easy to test export
- At import a Primitive2DSequence is created – how to test that?
- Rendered then by drawinglayer

Scalable Vector Graphic (SVG)

- Similar approach as with MTF – transform Primitive2DSequence into XML and test that
- Primitive2dXmlDump [1]
- Used by tests in SVG filter (svgio) [2]

[1] /test/source/primitive2dxmlDump.cxx

[2] /svgio/qa/cppunit/SvgImportTest.cxx