



PROIV Version 6 PDF Printing

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Internet: <http://www.proiv.com>

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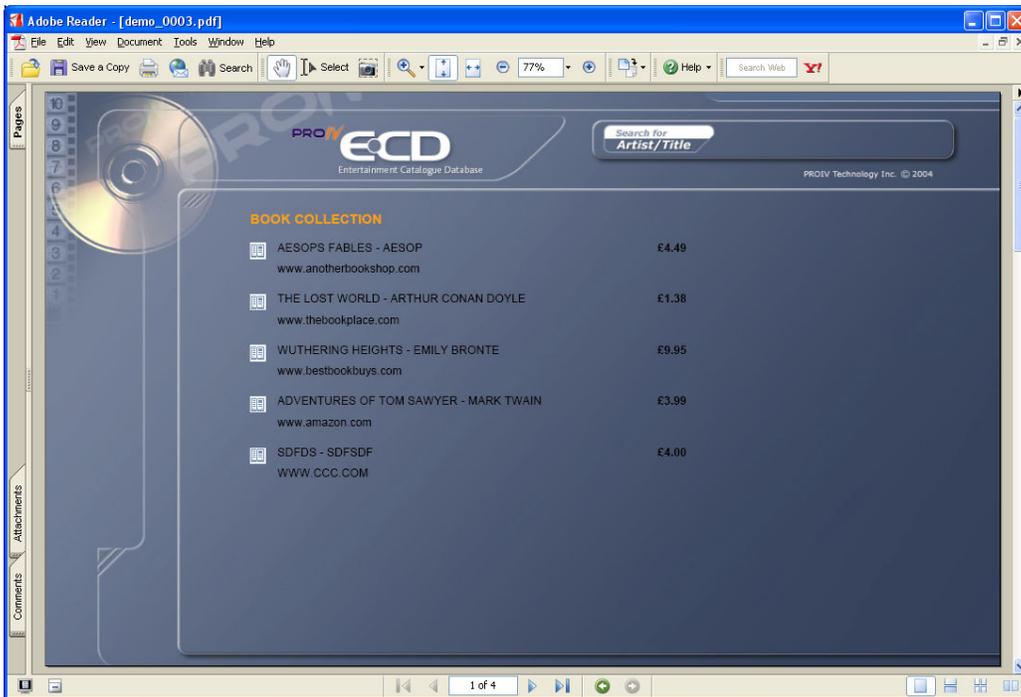
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1. Overview

PROIV version 6 now supports the production of a PDF using the standard PROIV spooler options. The Demo functions included with V6 and PROIV Developer both have examples of this.

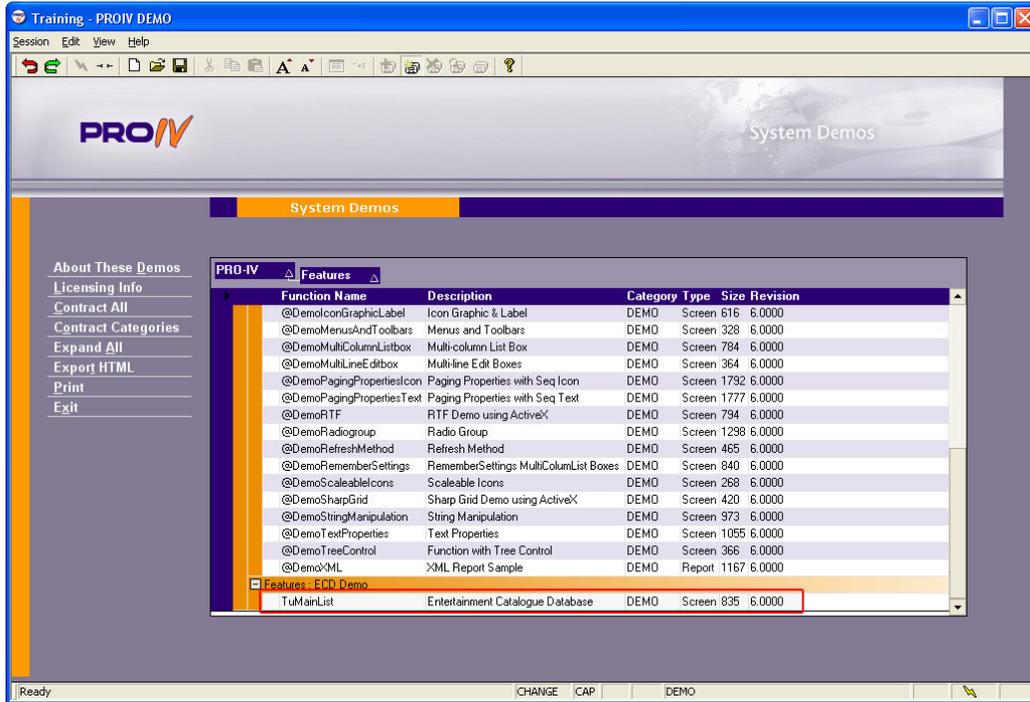
Once you are running under V6 there is no additional software required to produce this output. The output is produced using an XSLFO stylesheet. This means once you have developed the stylesheet they simple need to be deployed with the application for customers to produce the reports. This means no additional license costs.

The pages below outline how the Demo application produces the PDF below directly from PROIV.



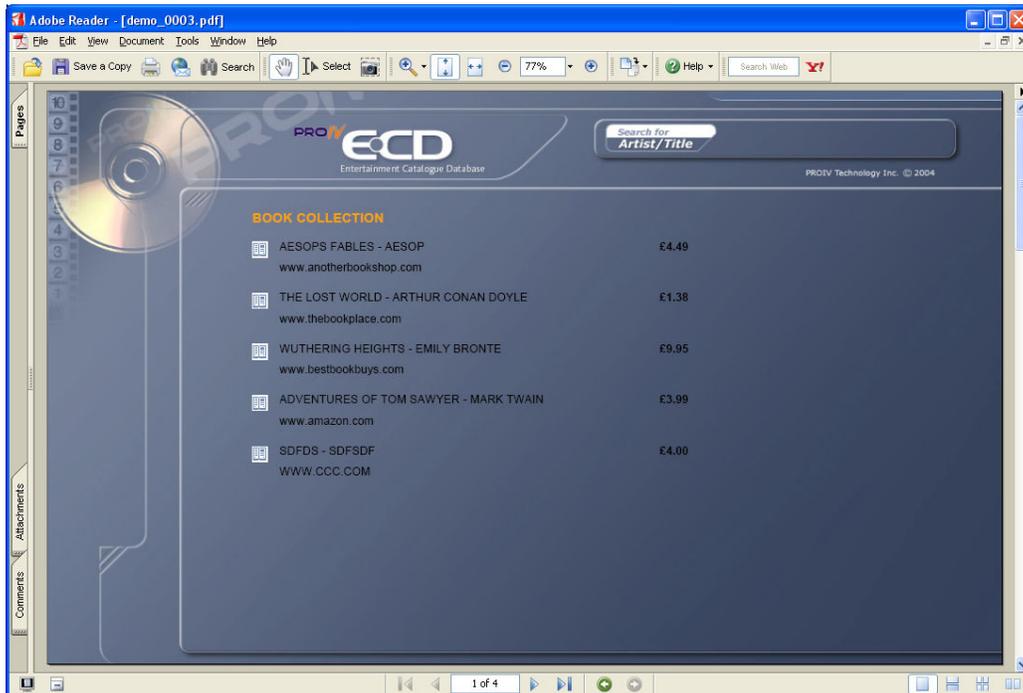
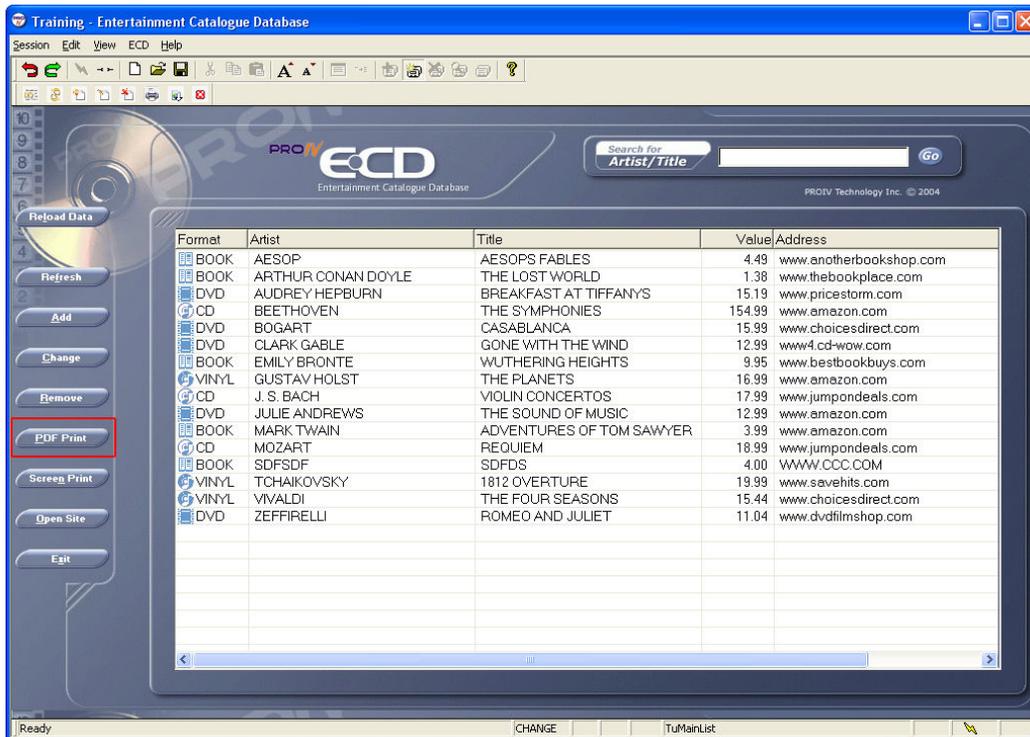
2. Demo Application

Included with PROIV version 5 and 6 are a number of Demo functions that demonstrate features of PROIV. To access these functions run the function "DEMO" to display the menu below. If you scroll to the bottom of the list select the option I have highlighted below to run the demo application.



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To produce the PDF select the highlighted button below.

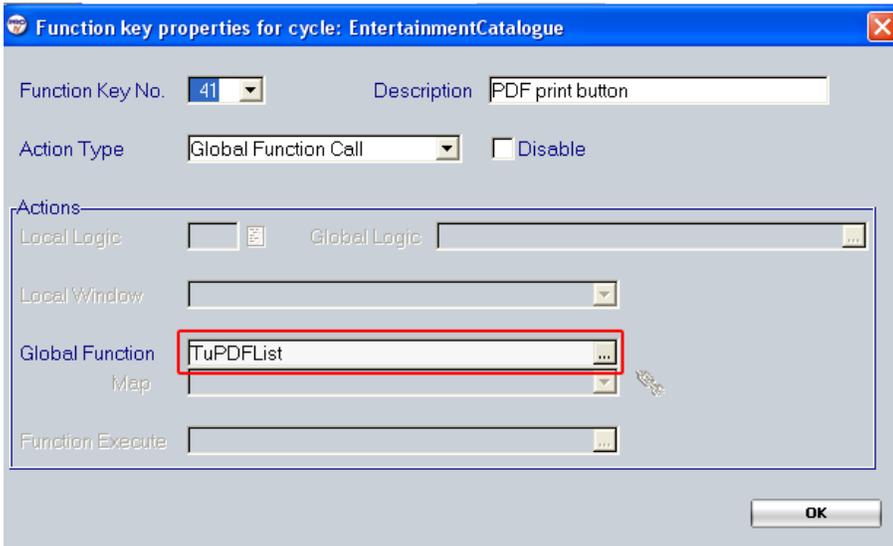
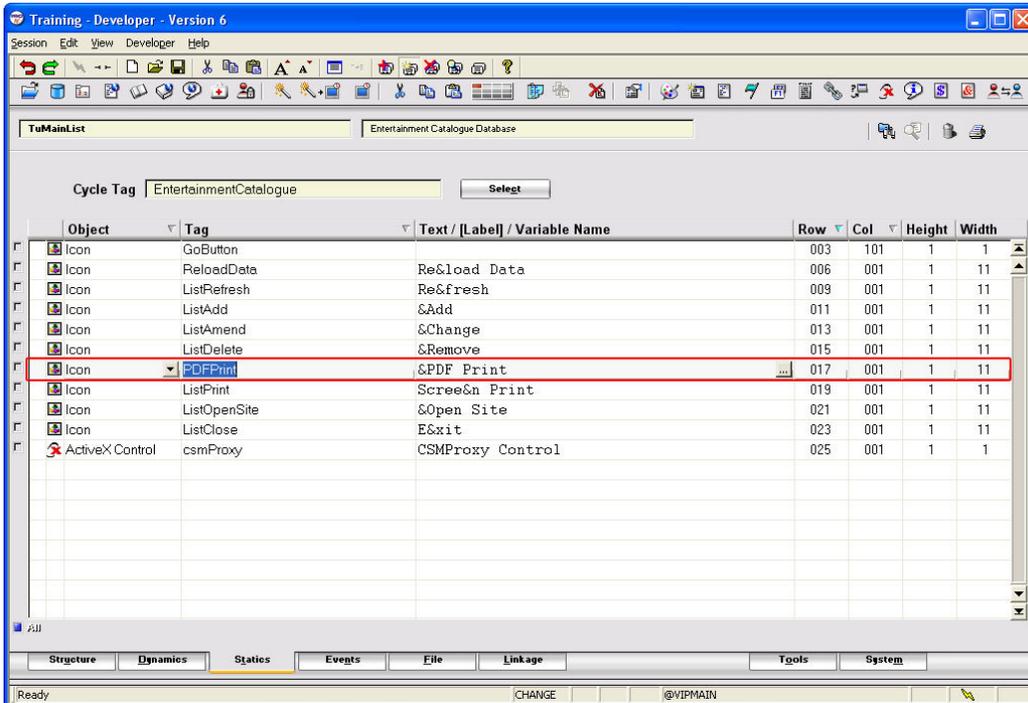


3. How is it done?

The first thing to point out about the demo functions and the demo application is all the source code has been provided.

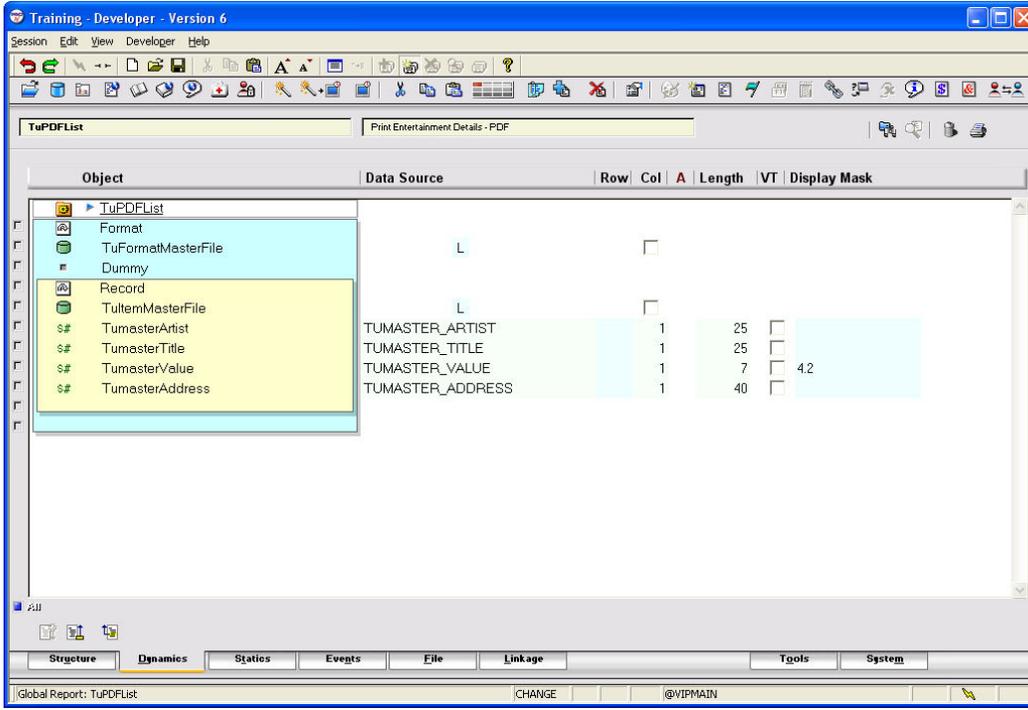
3.1 Print PDF Button

When you select the "Print PDF" button the event calls a global report called function "TuPDFList".

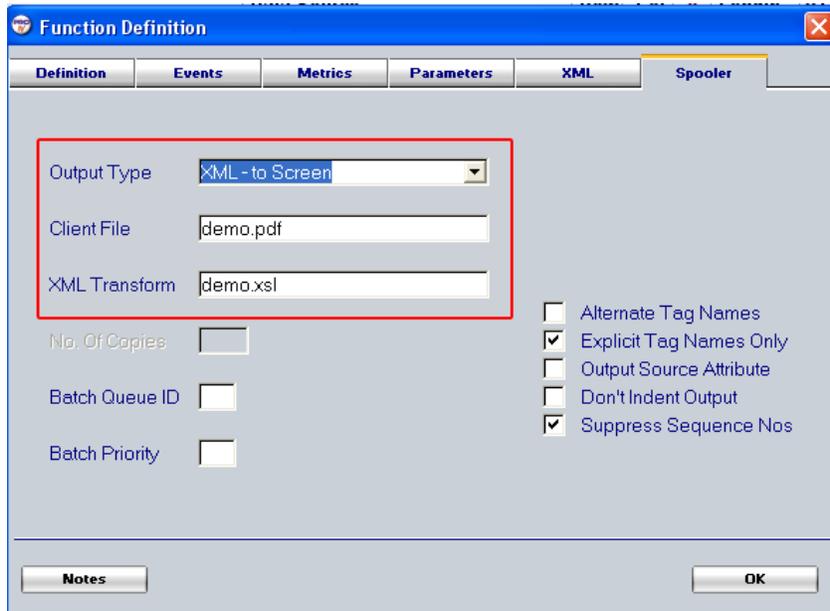


3.2 XML Report

The global report called "TuPDFList" is a standard PROIV report as shown below.



The spooler option for the report has been set to "XML - to Screen" and a stylesheet called "demo.xsl" has been specified as the transform.



3.2.1 XML Output Example

I removed the XML transform from the spooler to show the XML that is produced from the report.



```

Screen Report Title: TuPDFList
File
<?xml version="1.0"?>|
<?proiv version="6.1.28.0-PR" release=" "?>|
<Catalogue>|
  <Formats name="n/a" desc="n/a" icon="n/a">|
    <Format name="BOOK" icon="BOOK.GIF" desc="BOOK COLLECTION">|
      <Item>|
        <Artist>AESOP</Artist>|
        <Title>AESOPS FABLES</Title>|
        <Value>4.49</Value>|
        <Address>www.anotherbookshop.com</Address>|
      </Item>|
      <Item>|
        <Artist>ARTHUR CONAN DOYLE</Artist>|
        <Title>THE LOST WORLD</Title>|
        <Value>1.38</Value>|
        <Address>www.thebookplace.com</Address>|
      </Item>|
      <Item>|
        <Artist>EMILY BRONTE</Artist>|
        <Title>WUTHERING HEIGHTS</Title>|
        <Value>9.95</Value>|
        <Address>www.bestbookbuys.com</Address>|
      </Item>|
      <Item>|
        <Artist>MARK TWAIN</Artist>|
        <Title>ADVENTURES OF TOM SAWYER</Title>|
        <Value>3.99</Value>|
        <Address>www.amazon.com</Address>|
      </Item>|
      <Item>|
        <Artist>SDFSDF</Artist>|
        <Title>SDFDS</Title>|
        <Value>4.00</Value>|
        <Address>WWW.CCC.COM</Address>|
      </Item>|
    </Format>|
    <Format name="CD" icon="CD.GIF" desc="CD COLLECTION">|
      <Item>|
        <Artist>BEETHOVEN</Artist>|
        <Title>THE SYMPHONIES</Title>|
        <Value>154.99</Value>|
        <Address>www.amazon.com</Address>|
      </Item>|
      <Item>|
        <Artist>J. S. BACH</Artist>|
        <Title>VIOLIN CONCERTOS</Title>|
        <Value>17.99</Value>|
        <Address>www.jumpondeals.com</Address>|
      </Item>|
    </Format>|
  </Catalogue>|

```

3.2.2 Stylesheet

The screen below shows some of the XSLFO used to produce this PDF.

```

demo.xml - Notepad
File Edit Format View Help
<xsl:stylesheet version="1.1" exclude-result-prefixes="fo" xmlns:fo="http://www.w3.org/1999/XSL/FO"
<xsl:param name="path">D:\Program Files\Northgate\PROIV Version 6\Virtual Machine\xsl\images/</
<xsl:output version="1.0" omit-xml-declaration="no" indent="yes"/>
<xsl:template match="Catalogue">
  <fo:root>
    <fo:layout-master-set>
      <fo:simple-page-master master-name="ecddemo" page-height="21cm" page-width="35cm">
        <fo:region-body>
          <xsl:attribute name="background-image">
            <xsl:value-of select="$path"/>TU_Background.jpg</xsl:attribute>
          </fo:region-body>
          <fo:region-before extent="1cm" margin="0.3cm" display-align="after"/>
          <fo:region-after extent="2cm" margin="1.5cm"/>
        </fo:simple-page-master>
      </fo:layout-master-set>

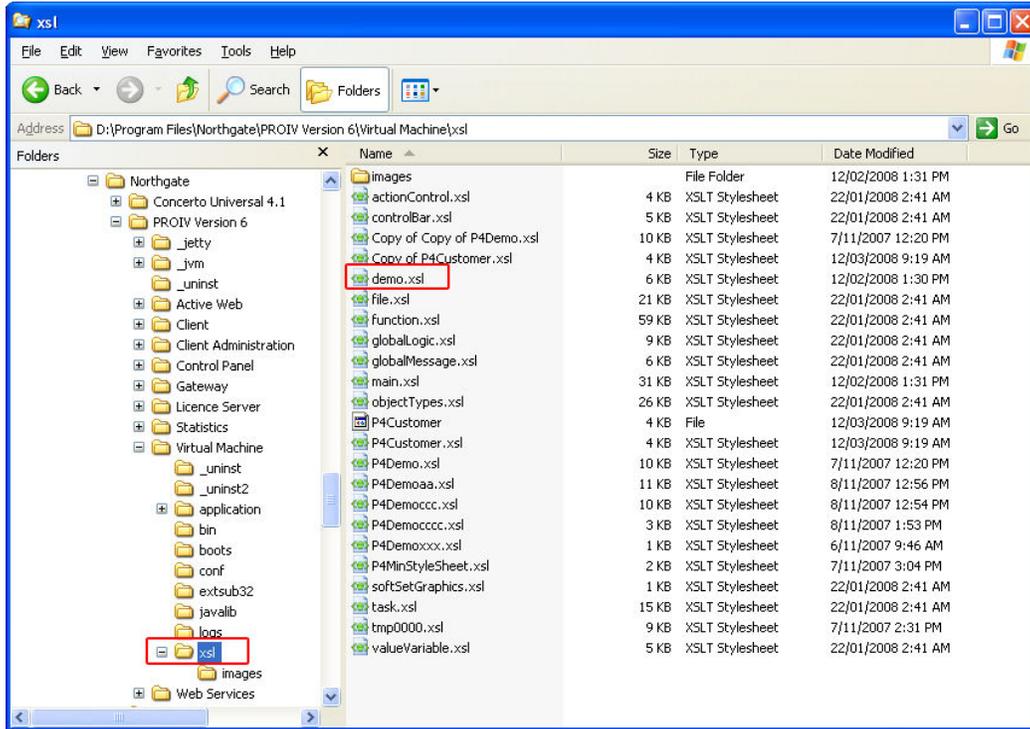
      <fo:page-sequence master-reference="ecddemo">
        <fo:flow flow-name="xsl-region-body">
          <fo:block id="toc"/>
          <fo:block>
            <fo:table table-layout="fixed" width="100%">
              <fo:table-column column-width="7.5cm"/>
              <fo:table-column column-width="20cm"/>
              <fo:table-header>
                <fo:table-row>
                  <fo:table-cell height="3.4cm">
                    <fo:block/>
                  </fo:table-cell>
                </fo:table-row>
              </fo:table-header>
              <fo:table-body>
                <xsl:for-each select="Formats/Format">
                  <xsl:variable name="format" select="@name"/>
                  <xsl:variable name="desc" select="@desc"/>
                  <xsl:variable name="icon" select="@icon"/>
                  <fo:table-row>
                    <fo:table-cell
                      <fo:table-cell padding-top="1cm">
                        <fo:block>
                          <xsl:attribute name="id">
                            <xsl:value-of select="$format"/>Block</xsl:attribute>
                            <xsl:attribute name="keep-together">always</xsl:attribute>
                            <xsl:call-template name="writertitle">
                              <xsl:with-param name="title" select="$format"/>
                            </xsl:call-template>
                            <xsl:for-each select="item">
                              <xsl:call-template name="itemTable">
                                <xsl:with-param name="title">
                                  <xsl:value-of select="Title"/> - <xsl:value-of select="Artist"/>
                                </xsl:with-param>
                                <xsl:with-param name="Address"/>
                              </xsl:with-param>
                            </xsl:for-each>
                          </fo:block>
                        </fo:table-cell>
                      </fo:table-cell>
                    </fo:table-row>
                  </xsl:for-each>
                </fo:table-body>
              </fo:table>
            </fo:block>
          </fo:flow>
        </fo:page-sequence>
      </fo:root>
    </fo:layout-master-set>
  </fo:root>
</xsl:template>

```

3.3 Deployment

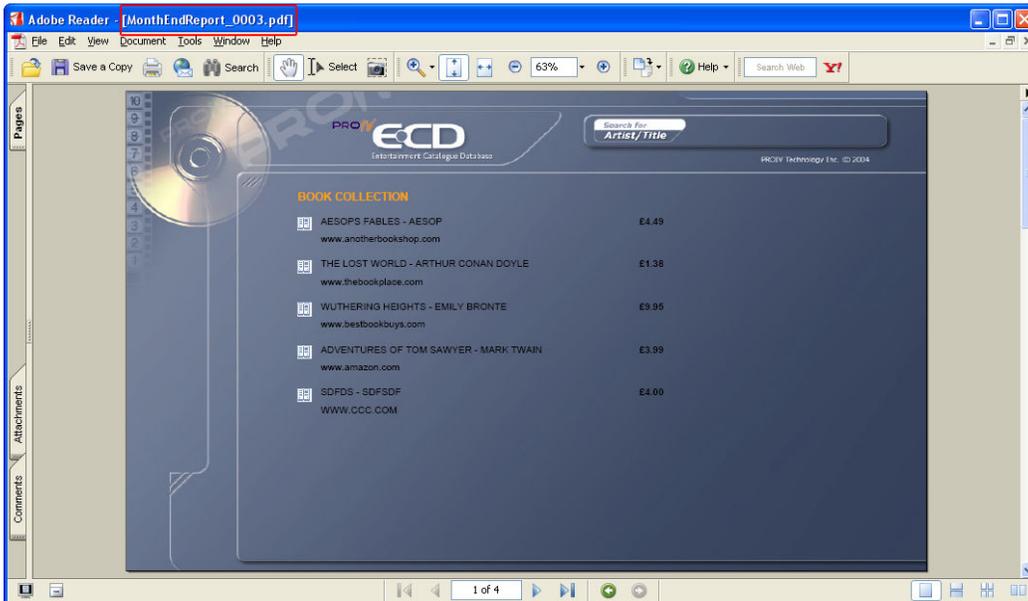
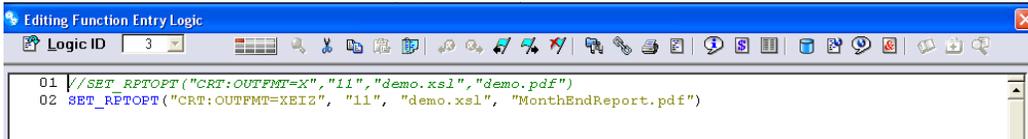
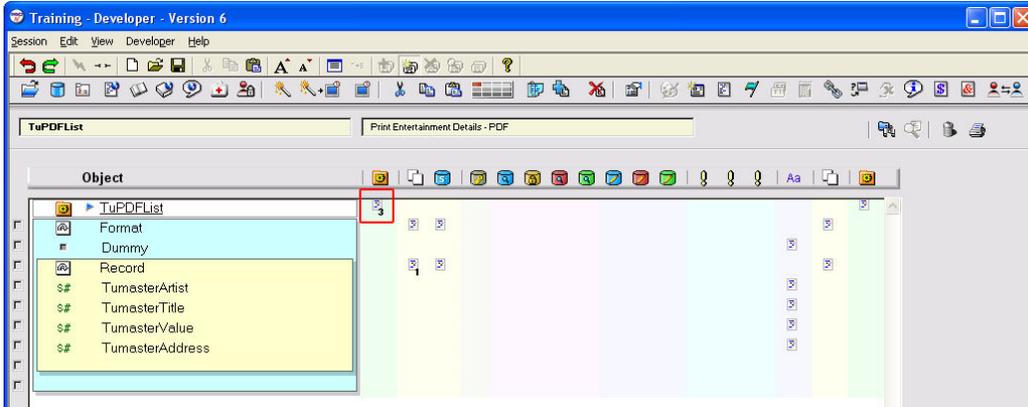
Once you have transferred your new code you simply need to deploy the Stylesheet into the folder below for PROIV to find it.

The example below is on Windows but the same folder exists in UNIX.



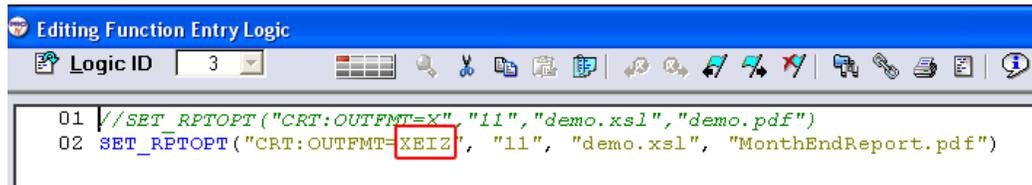
3.4 @RPTOPT

The name of the output file can be changed using @RPTOPT as shown below.

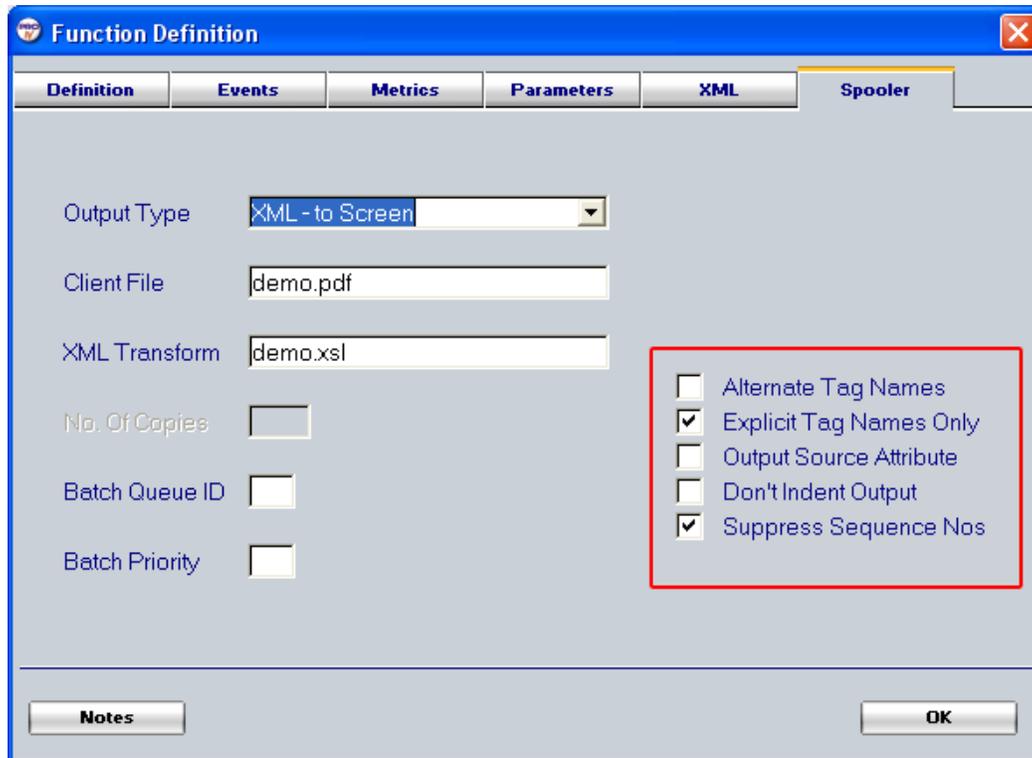


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The option highlighted below set the spooler options highlighted.



```
01 ✓/SET_RPTOPT("CRT:OUTFMT=X", "11", "demo.xml", "demo.pdf")
02 SET_RPTOPT("CRT:OUTFMT=XE12", "11", "demo.xml", "MonthEndReport.pdf")
```



Function Definition

Definition Events Metrics Parameters XML Spooler

Output Type: XML - to Screen

Client File: demo.pdf

XML Transform: demo.xml

No. Of Copies:

Batch Queue ID:

Batch Priority:

Alternate Tag Names

Explicit Tag Names Only

Output Source Attribute

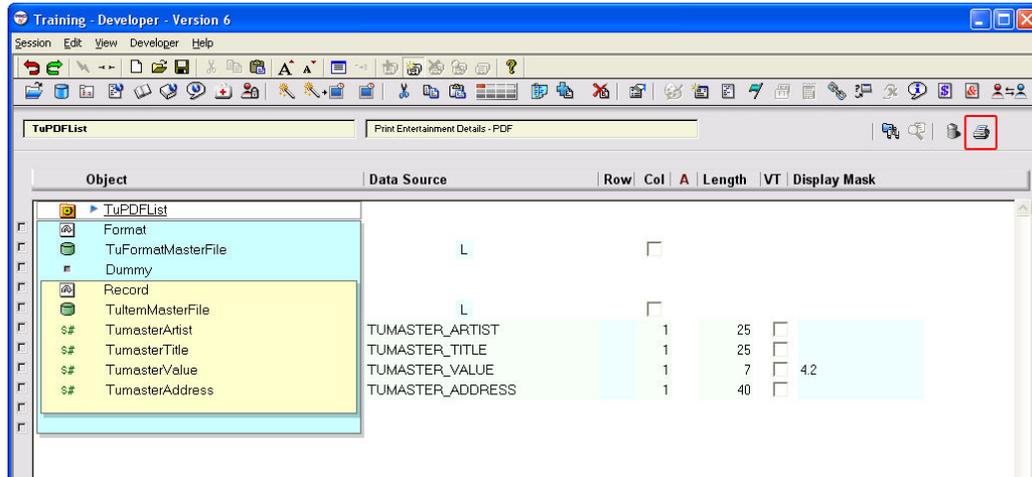
Don't Indent Output

Suppress Sequence Nos

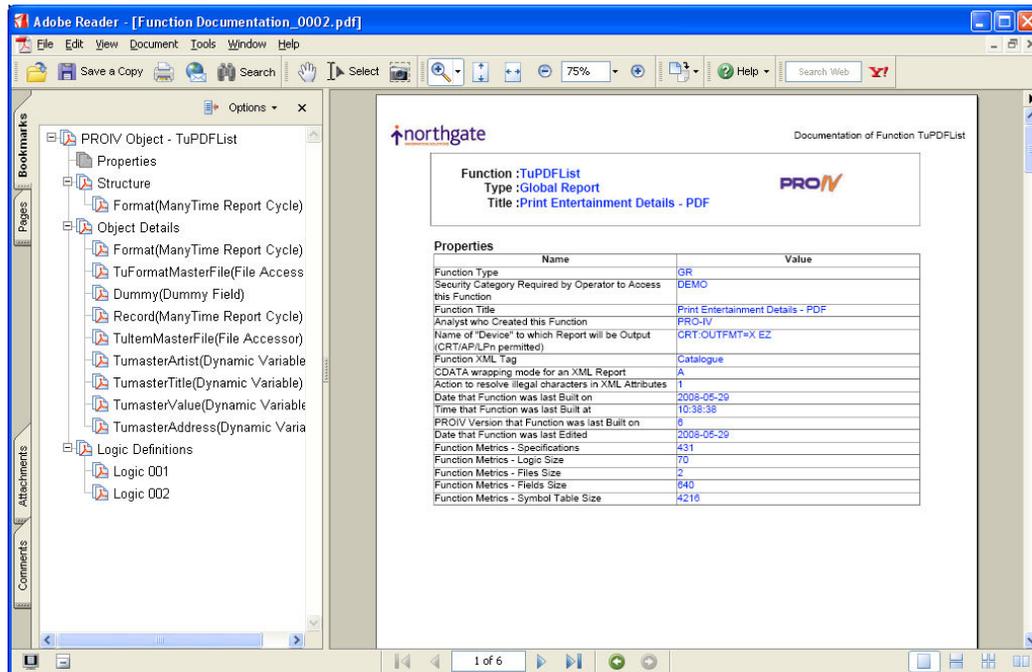
Notes OK

4. PROIV Documentation

PROIV Developer also has an example of printing to PDF. If you select the highlighted icon below your function is documented to PDF. All the stylesheets for this report can also be found in the folder shown on the previous page.



Notice how they have put a table of contents down the left side. This is performed in the stylesheet. Just think how good this would look in your applications. Imagine producing a report by department and listing the departments down the left. When the users selects the department the PDF jumps immediately to that page.



5. XML Attributes

PROIV version 6 now allows attributes to be written to XML files. This has been done in the example we have looked at in this document. The attributes have been defined against the cycle “Record” by selecting the “Attributes” button highlighted below. Notice also how the tag name for the cycle has been changed to “Format” which is highlighted in orange below.

The screenshot shows the 'Training - Developer - Version 6' application. The main window has tabs for 'Events', 'Output', and 'Reference'. The 'Reference' tab is active, showing configuration for 'Cycle Tag Name: Record', 'Cycle XML Tag: Format', and 'Record XML Tag: Item'. The 'Format' tag name is highlighted in orange. A red circle highlights the 'Attributes' button. Below this, a table titled 'Attributes for this XML Element' lists three attributes: 'name' (TUFORMAT_FORMAT), 'icon' (TUFORMAT_ICON), and 'desc' (TUFORMAT_DESC). The XML output window shows the resulting XML structure, with the 'Format' tag and its attributes highlighted in orange and green, corresponding to the configuration above.

Seq	Attribute Name	Attribute Value	Type	No Output if Null
001	name	TUFORMAT_FORMAT	A	<input type="checkbox"/>
002	icon	TUFORMAT_ICON	A	<input type="checkbox"/>
003	desc	TUFORMAT_DESC	A	<input type="checkbox"/>

```

<?xml version="1.0"?>
<?proiv version="6.1.28.0-PR" release=" "?>
<Catalogue>
  <Formats name="a" desc="n/a" icon="n/a">
    <Format name="BOOK" icon="BOOK.GIF" desc="BOOK COLLECTION">
      <Item>
        <Artist>AESOP</Artist>
        <Title>AESOPS FABLES</Title>
        <Value>4.49</Value>
        <Address>www.anotherbookshop.com</Address>
      </Item>
      <Item>
        <Artist>ARTHUR CONAN DOYLE</Artist>
        <Title>THE LOST WORLD</Title>
        <Value>1.38</Value>
        <Address>www.thebookplace.com</Address>
      </Item>
    </Formats>
  </Catalogue>

```

6. XSLFO Resources

6.1 Applications

There are a number of tools that allow you to develop stylesheets and some are WYSIWYG. They allow you to drag and drop items from your XML file onto a report and it generates the XSLFO for you. They also allow you to preview the PDF. The products below are all available as a trial download.

WYSIWYG

<http://www.renderx.com/>

http://www.altova.com/products/stylevision/xslt_stylesheet_designer.html

Not WYSIWYG but validate syntax

<http://www.oxygenxml.com/>

<http://www.stylusstudio.com/>

6.2 Books

http://www.amazon.com/Xsl-Fo-Dave-Pawson/dp/0596003552/ref=pd_bbs_2?ie=UTF8&s=books&qid=1212031987&sr=8-2

6.3 WEB Tutorial

<http://www.w3schools.com/xslfo/default.asp>