CGI Advantage® 4

Assembled Transaction

Formatting Objects Processor User Guide

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About this Guide

This user guide provides a basic knowledge and understanding of the FOP Fonts software. Examples are provided on how to add fonts users may want to use in the terms and conditions section of procurement documents that support the Assembly feature.

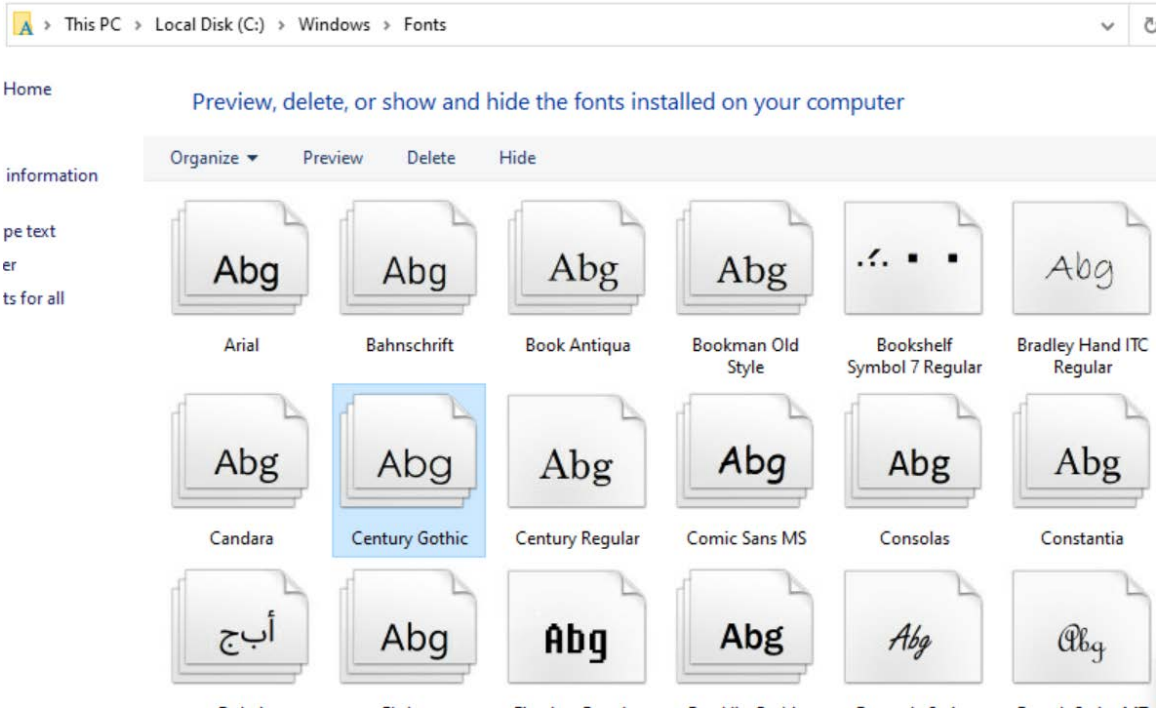
FOP: Overview

CGI Advantage uses the Formatting Objects Processor (FOP) software developed by Apache to convert existing TrueType Fonts (TTF) and Type 1 Font. This user guide covers examples of converting the TrueType Fonts to the independent XSL-FO format used later to create a merged assembled PDF, which will contain the TrueType font converted by the user. The complete introduction and description of the FOP software can be found at http://xmlgraphics.apache.org/fop/.

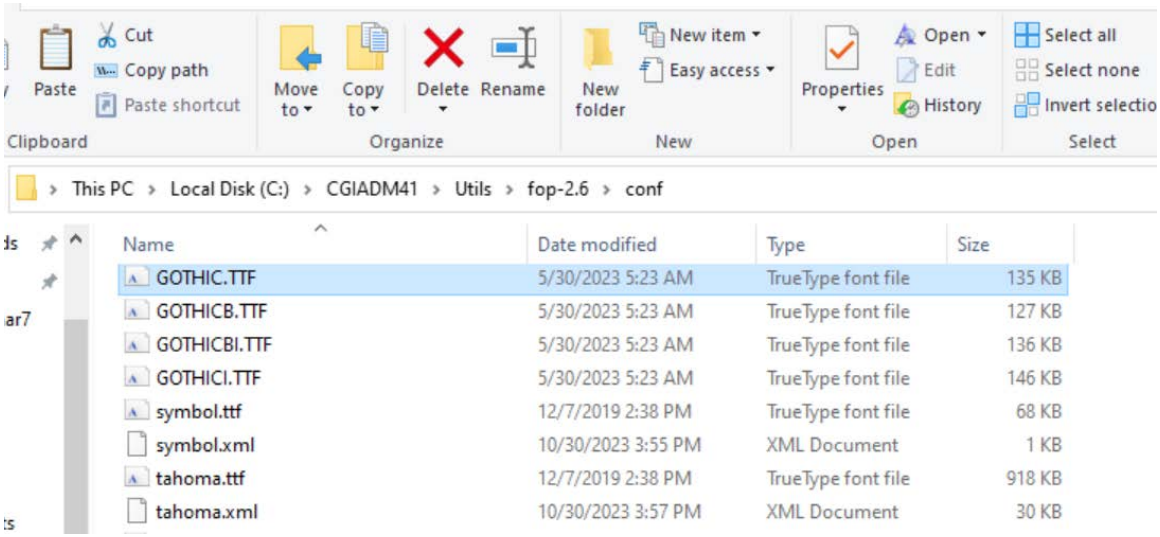
Adding Fonts Process

Adding a font to the CGI Advantage application may be necessary when an existing template for the desired font does not exist in the application's font library, which can be found in \ADV34_35\Utils\fop-2.6\conf. The application comes packaged with the normal, **bold**, *italic*, and ***italic-bold*** templates for Times New Roman, Courier New, and Arial and the normal and **bold** for Tahoma. A font template (.TTF file) is required for each style and weight of the font that the user wishes to display. In the templates provided, the Tahoma font only has a template for normal and **bold**, so they can only use these types. Another example is if the user wants to display *italic* Century Gothic text, they would need to follow the steps below to render this font into their Assembled transaction.

Locate the TTF file for the desired font. The first major step for adding a font is to locate the TTF file for the font you wish to add. This may vary from operating system to operating system, or if it is a custom-built font, you may already know the location of this file. On the Windows system, the font TTF files may be found in your /WINDOWS/Fonts directory (for Windows NT you may find them in /WINNT/FONTS). Please note that there may be more than one file description that says Century Gothic.



Copy the desired TTF file. The next major step is to copy the located TTF file to the application's font library that is \ADV34_35\Utils\fop-2.6\conf\. Since we only wanted Century Gothic *italic*, we will copy this file from the located font directory.



Notice the name of the TTF file, GOTHICI.TTF, the particular prefixes for fonts are normal – none, bold – bd, italic – i, and bold-talic – bi, for our GOTHIC font, that would be GOTHIC.TTF, GOTHICBD.TTF, GOTHICI.TTF, GOTHICBI.TTF respectively.

Convert TTF to XML. In order to convert the TTF to XML, you must run the FOP application's correct interpreter on the TTF file. From a command line you will have to run the java interpreter they have created, which can be done by creating a batch file with the following lines (which will need to be modified to your environment where there's bold).

----------BEGIN BATCH FILE BELOW THIS LINE----------

```
@echo off

Rem ********************FOP base directory **********
set FOP_BASE=<Advantage installation base directory>\ADV34_35\Utils\fop-2.6

set INPUT_FONT_FILE=%FOP_BASE%\conf\GOTHICI.TTF
set OUTPUT_FONT_FILE=%FOP_BASE%\conf\GOTHICI.xml

Rem ********************JDK**********
set JAVA_HOME=<Java home based on Application Server>

Rem ** jars libraries *********
set CLASSPATH=%CLASSPATH%;%FOP_BASE%\lib\avalon-framework-cvs-20020806.jar
set CLASSPATH=%CLASSPATH%;%FOP_BASE%\lib\batik.jar
set CLASSPATH=%CLASSPATH%;%FOP_BASE%\lib\commons-logging-1.0.4.jar
set CLASSPATH=%CLASSPATH%;%FOP_BASE%\lib\commons-io-1.3.1.jar
set CLASSPATH=%CLASSPATH%;%FOP_BASE%\lib\xmlgraphics-commons-2.6.jar
set CLASSPATH=%CLASSPATH%;%FOP_BASE%\build\fop.jar

 %JAVA_HOME%\bin\java -classpath %CLASSPATH% org.apache.fop.fonts.apps.TTFReader -
enc ansi %INPUT_FONT_FILE% %OUTPUT_FONT_FILE%
 echo Format Return Code is %errorlevel%
```

----------END BATCH FILE ABOVE THIS LINE----------

Take the above batch parameters and paste them into a text editor and make the modifications to the two installation directories to reflect your current environment. Also notice how the INPUT_FONT_FILE is GOTHICI.TTF (which is the file we copied). Also notice the OUTPUT_FONT_FILE is GOTHICI.xml, which will be the resulting output file. The INPUT/OUTPUT_FONT_FILE will have to be changed for each subtype of font, as this process is repeated.

Note: Setting the Java home for below application servers. Replace “set JAVA_HOME=<Java home based on Application Server> “ based on application server:

IBM WebSphere	set JAVA_HOME=<**WebSphere installation base directory>**\WebSphere5113\AppServer\java\
Red Hat JBoss EAP	set JAVA_HOME= <ORACLE_SUN_JAVA_HOME_32_BIT>\jre directory

For more details: See the below screenshots

IBM WebSphere:

*Untitled - Notepad

File Edit Format View Help

```
@echo off

Rem ********************FOP base directory **********
set FOP_BASE=<Advantage installation base directory>\ADV34_35\Utils\fop-2.6

set INPUT_FONT_FILE=%FOP_BASE%\conf\GOTHICI.TTF
set OUTPUT_FONT_FILE=%FOP_BASE%\conf\GOTHICI.xml

Rem ********************JDK**********
set JAVA_HOME=C:\AMSAPPS\WebSphere5113\AppServer\java\

Rem ** jars libraries *********
set CLASSPATH=%CLASSPATH%;%FOP_BASE%\lib\avalon-framework-cvs-20020806.jar
set CLASSPATH=%CLASSPATH%;%FOP_BASE%\lib\batik.jar
set CLASSPATH=%CLASSPATH%;%FOP_BASE%\lib\commons-logging-1.0.4.jar
set CLASSPATH=%CLASSPATH%;%FOP_BASE%\lib\commons-io-1.3.1.jar
set CLASSPATH=%CLASSPATH%;%FOP_BASE%\lib\xmlgraphics-commons-2.6.jar
set CLASSPATH=%CLASSPATH%;%FOP_BASE%\build\fop.jar

 %JAVA_HOME%\bin\java -classpath %CLASSPATH% org.apache.fop.fonts.apps.TTFReader -enc ansi %INPUT_FONT_FILE% %OUTPUT_FONT_FILE%
 echo Format Return Code is %errorlevel%
```

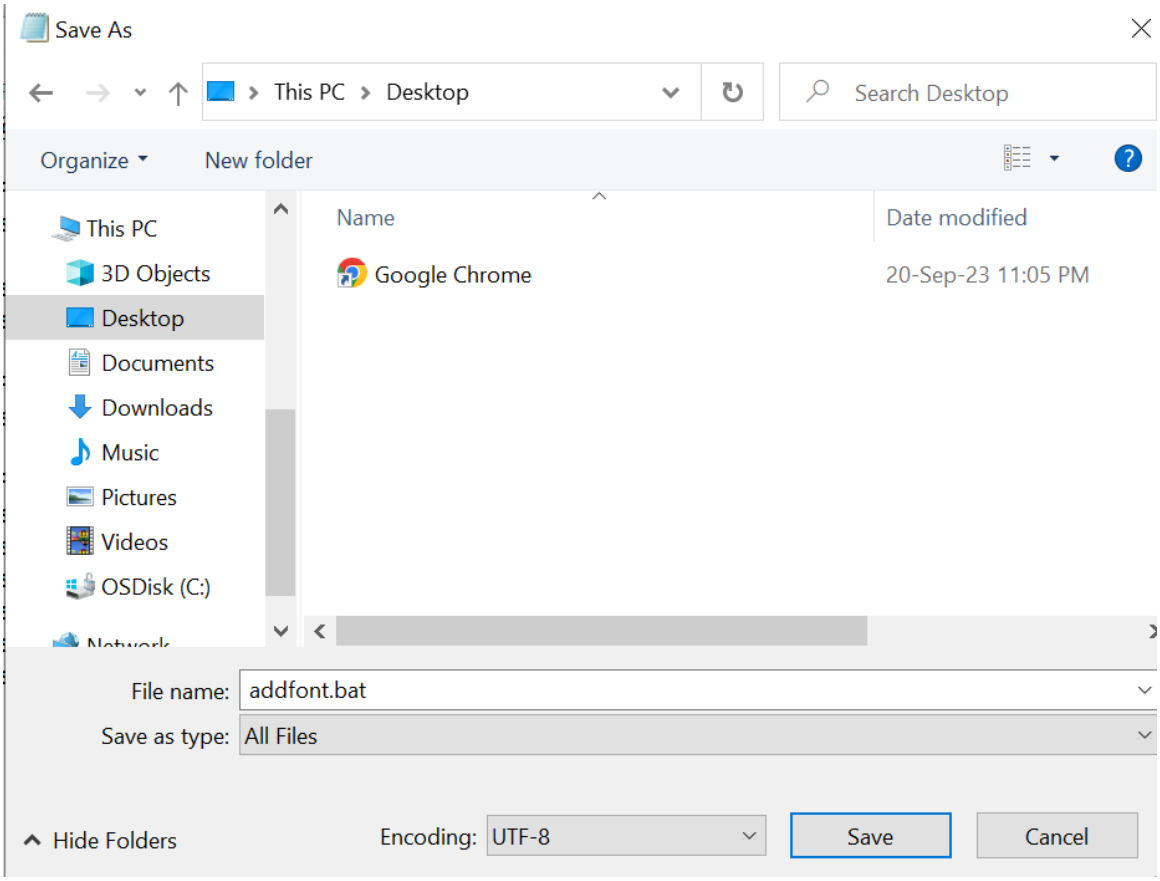
JBoss:

*Untitled - Notepad

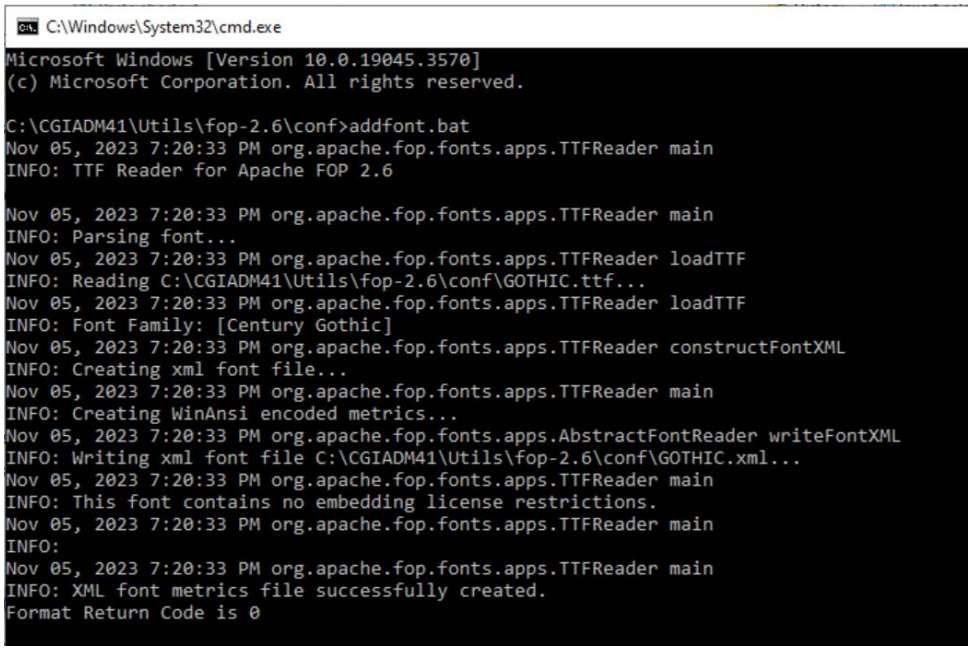
File Edit Format View Help

```
@echo off

Rem ********************FOP base directory **********
set FOP_BASE=<Advantage installation base directory>\ADV34_35\Utils\fop-2.6

set INPUT_FONT_FILE=%FOP_BASE%\conf\GOTHICI.TTF
set OUTPUT_FONT_FILE=%FOP_BASE%\conf\GOTHICI.xml

Rem ********************JDK**********
set JAVA_HOME=C:\AMSAPPS\Java\jdk1.7.0_51

Rem ** jars libraries *********
set CLASSPATH=%CLASSPATH%;%FOP_BASE%\lib\avalon-framework-cvs-20020806.jar
set CLASSPATH=%CLASSPATH%;%FOP_BASE%\lib\batik.jar
set CLASSPATH=%CLASSPATH%;%FOP_BASE%\lib\commons-logging-1.0.4.jar
set CLASSPATH=%CLASSPATH%;%FOP_BASE%\lib\commons-io-1.3.1.jar
set CLASSPATH=%CLASSPATH%;%FOP_BASE%\lib\xmlgraphics-commons-2.6.jar
set CLASSPATH=%CLASSPATH%;%FOP_BASE%\build\fop.jar

 %JAVA_HOME%\bin\java -classpath %CLASSPATH% org.apache.fop.fonts.apps.TTFReader -enc ansi %INPUT_FONT_FILE% %OUTPUT_FONT_FILE%
 echo Format Return Code is %errorlevel%
```

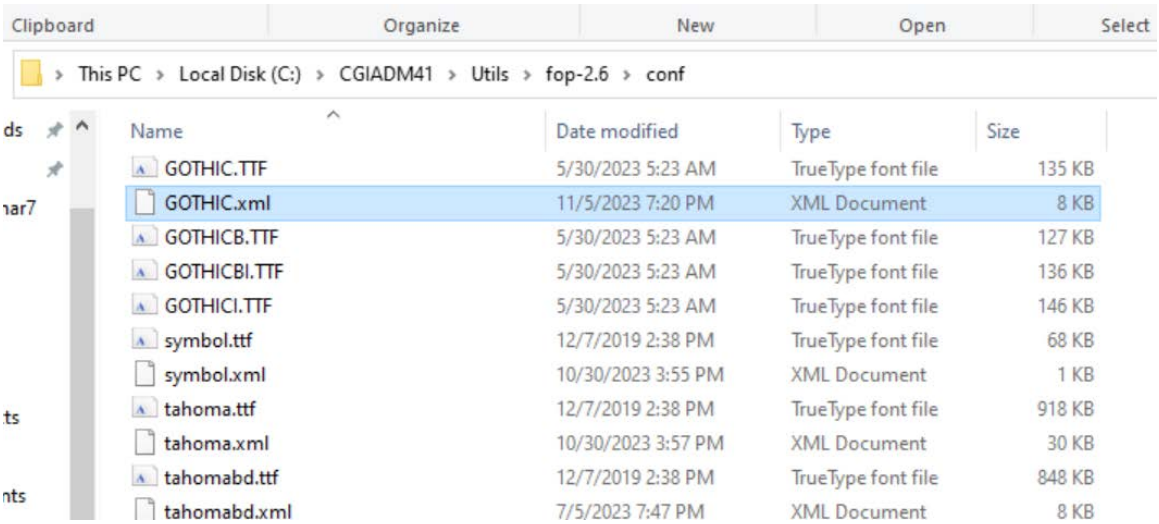
Save this text file as a .bat file.



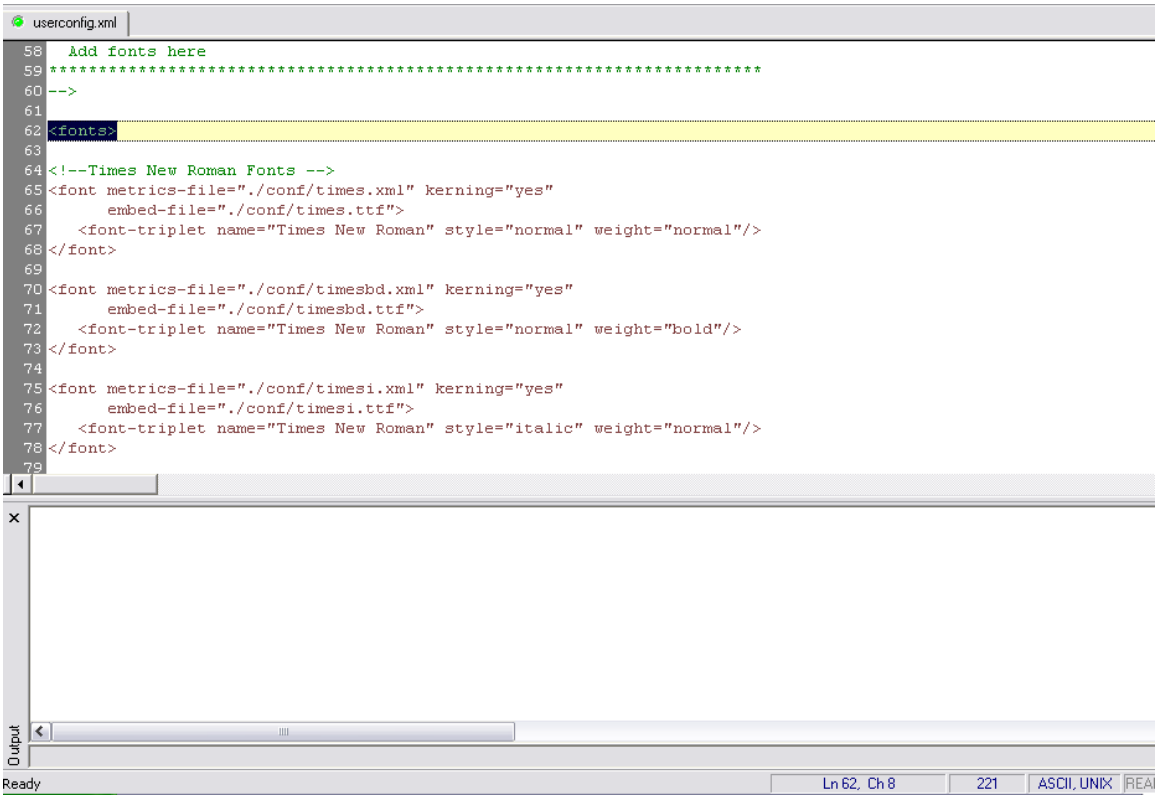
From a command line, execute the batch file from the location you saved it to.



Verify the presence of the new xml font file. The next step is to verify that the xml file is present in the application's font library.



Modify the userconfig.xml. The final step to adding a font is to modify the userconfig.xml so that the application knows where to find the templates for each given font type and sub-type. You can find this file under \ADV34_35\Utils\fop-2.6\conf. To modify the userconfig.xml, open the file using a text editor:



You will then need to scroll down to the <fonts> section of the file. The following template can be used for adding a font within the <fonts> section after modifying the bolded sections. Be sure to

check for the font before inserting it. If it is an addition to an existing font, which doesn't have that particular style and weight, place the section in its properly commented area:

```
<fonts>
<!-- Font Name if first entry of this font name type -->
-------------------------BEGIN FONT TEMPLATE BELOW THIS LINE-----------------------------------------
--
<font metrics-file="./conf/GOTHICI.xml" kerning="yes"
  embed-file="./conf/GOTHICI.TTF">
 <font-triplet name="Century Gothic" style="italic" weight="normal"/>
</font>
----------------------END FONT TEMPLATE ABOVE THIS LINE-------------------------------------------------
-

</fonts>
```

In this example, if the font name happens to be multiple words, you should add 2 sets of entries one with a space and one without.

For example:

```
<!-- Century Gothic Fonts -->
<font metrics-file="./conf/GOTHICI.xml" kerning="yes"
  embed-file="./conf/GOTHICI.TTF">
 <font-triplet name="Century Gothic" style="italic" weight="normal"/>
</font>

<!-- CenturyGothic Fonts (no space) -->
<font metrics-file="./conf/GOTHICI.xml" kerning="yes"
  embed-file="./conf/GOTHICI.TTF">
 <font-triplet name="CenturyGothic" style="italic" weight="normal"/>
</font>
```

As a final reminder, each font will have a style of two possibilities "normal" or "italic" and weight will have two possibilities "normal" or "bold".

Repeat as Needed. For each subtype to a font, normal, italic, bold, and bold-italic, this process will have to be repeated. You will need to locate the TTF file, copy the TTF file, modify the bat file created, run the bat file, and modify the userconfig.xml for each font type and sub-type.