Exporting Downloadable Fonts from Corel DRAW! 2.0

When Corel DRAW! 2.0 was released this past autumn with the announced capability to export all of its over 150 fonts as Type 1 (PostScript) outlines, it was cause for rejoicing among Windows 3.0 users. Unfortunately, while the new and improved WFNBOSS font converter would indeed create Type 1 soft fonts which would work with Windows software such as Ventura Publisher for Windows and Adobe Type Manager, it was in a form which for some unknown reason could not be downloaded automatically to a PostScript printer, but had to be manually downloaded as "permanent" soft fonts prior to printing. Naturally this reduced the fonts' utility, and with it, users' enthusiasm.

A few weeks ago, Corel announced they had found the source of the problem. While they have not yet released a fix or patch to WFNBOSS, they have published a text file on their CompuServe forum which describes a way to hand-modify exported Type 1 Printer Font Binary (PFB) files so they can be temporarily downloaded at print time.

I have followed and tested Corel's suggested procedures and found they do work. They do, however, require the user to work directly with the DOS Debug program -- something that non-DOS hackers may be reluctant to do, and which is vulnerable to typographical and other errors even in experienced hands. Corel suggests automating this procedure and gives instructions on how to automate it, but does not supply the actual files necessary for automation.

In the hope of simplifying the task of exporting Corel fonts for VPWin and ATM users, and also to make the procedure available to users who do not visit the Corel forum, I am doing two things. First, I am presenting a set of instructions which are specifically written for the user of both VPWin and ATM. Second, I am including with these instructions two additional files: FIXPFB.BAT and FIXPFB.DBG. These are, respectively, a batch file which automates the conversion of a Corel PFB file to temporarily downloadable form, and a Debug script which makes the automation possible.

These instructions are written with the assumption you will have ATM installed in Windows. Readers without ATM should nonetheless be able to use them to facilitate the conversion of Corel fonts for Windows use, although they will have to perform actual font installation in Windows manually rather than through use of ATM as described here. (Naturally it is also assumed you have a functional copy of Corel DRAW! 2.0 and WFNBOSS installed under Windows 3.0.)

Very recently, those in charge of the Corel forum have withdrawn their instruction text file from their library. The reason for this was the discovery that files modified according to those instructions (which are incorporated

into this document) would not download successfully to all PostScript printer makes and models. While I have not encountered this problem, you should be aware there is a possibility that the methods described herein will not produce a usable downloadable Type 1 font for you. If you encounter such difficulty, I would appreciate being notified so I can compile a list of printers on which Corel Type 1 fonts don't work correctly for inclusion in these instructions.

To begin:

Copy FIXPFB.BAT and FIXPFB.DBG to the hard disk subdirectory which contains your DOS software, particularly the DOS file DEBUG.COM. FIXPFB.BAT was written with the assumption that DOS software will be located in a directory named C:\DOS. If your DOS software is located in a directory having another name, you will need to open FIXPFB.BAT with a text editor. FIXPFB.BAT consists of the single line:

debug %1 <c:\dos\fixpfb.dbg

To make FIXPFB.BAT work with a directory other than C:\DOS, change the "C:\DOS" part of the line (and ONLY that part) to match the actual directory which contains your DOS files. You will also need to ensure that this directory is named in the PATH statement in your AUTOEXEC.BAT file.

Once FIXPFB.BAT and FIXPFB.DBG are installed in the directory containing DEBUG.COM and any necessary changes described in the preceding paragraph are made:

1. Start Windows.

2. In the Corel program group, double-click on the icon for the WFNBOSS Font Conversion Program.

3. Click on the the Conversion Type box until "Corel to Adobe Type 1" appears.

4. Make sure the Source Directory box names your \CORELDRW directory. If it does,
   you will see a list of Corel font names in the Available Fonts menu box. If it does
   not, click on the NewDir box and select the correct drive and directory from the
   menu which appears.

5. Select the font you want to convert from the Available Fonts menu box. Note that:

a. You should select only ONE font at a time for conversion;

b. The PostScript font name for the selected Corel font name appears in the box
below the Available Fonts menu; and,

c. Only 32 of the available Corel fonts can be listed in the Available Fonts menu
at one time. If you reach the end of the list without finding the font you want,
click on More Files for another list.

6. You may change the File Name (but DON'T change the PostScript FontName) if you
want. Record the File Name.

7. Click on Convert.

8. If the Corel font contains more than one weight of PostScript font, select the weight
which you want to convert (note that you may convert only one weight at a time).

9. Click on OK.

10. When the conversion is completed, click on Quit (at the bottom of the WFNBOSS
window).

11. WFNBOSS has created three new files in your \CORELDRW directory. These will
have the same name you recorded above, with three different extensions (.PFB,
.AFM and .PFM). These must now be copied to the appropriate Adobe font
directories elswhere on your hard disk(s). {Filename}.PFB should be copied to the
\PSFONTS directory. {Filename}.AFM should be copied to the \PSFONTS\ AFM
subdirectory. {Filename}.PFM should be copied to the \PSFONTS\PFM
subdirectory. (These directories should have been created automatically when you
installed Adobe Type Manager or Font Foundry). You can use the DOS COPY or
XCOPY utilities to copy these files, or you can use any DOS shell or even Windows

File Manager. Once the files are copied, you can delete the originals from the
    \CORELDRW directory.

12. Exit to the DOS prompt if you have not already done so and log on to your
    \PSFONTS directory. (Enter the drive if different from the one given in the DOS
    prompt, then enter CD\PSFONTS).

13. Type:

    FIXPFB {filename}.PFB

    Press <Enter>.

    Some DOSoid mumbo jumbo will appear on your screen. When the cursor
    reappears at the DOS prompt, the first of the two necessary modifications to your
    new PFB file has been completed.

14. Start Windows.

15. Open Windows Write.

    a. Click on File, then on Open.

    b. Change the Filename shown in the box to *.PFB. Press <Return>.

    c. Select the appropriate drive letter and [psfonts] from the Directories menu box.
        A list of PFB filenames will appear in the Files box.

    d. Find and click on the name of the PFB file you just exported and modified.
        Click on OK.

    e. **IMPORTANT: Click on "No Conversion."**

    f. At the top of the screen you will now see a paragraph which is mostly readable
        as PostScript language and which contains "PS-AdobeFont-1.0" near the
        beginning of the first line. In the bottom line of this readable section you will

see "UniqueID" followed by the number 4221071. The second of the two
problems with the way Corel exports a Type 1 font is that it always does so
with this same number -- i.e., it ISN'T unique -- and Windows consequently
can't tell Corel fonts apart. To fix this problem, place the Write cursor in the
number and edit it to a different value. So far I've been incrementing the
number by one for each font I've converted (that is, 4221071, ...72, ...73, etc.),
with excellent results. Be aware of the possibility that changing the value
randomly could result in selecting the same number used by an existing font.
Adobe Systems has stated that UniqueID numbers between 4,000,000 and
4,999,999 should not conflict with the numbers used in any existing fonts, but
the number of parties producing fonts is increasing quickly. If difficulties occur
after installing one of your converted fonts, there may be a conflict in
UniqueID numbers which you can correct by changing a number as described
here.

g. After editing the UniqueID number, select File, Save.

h. Close Write.

(The following section is for ATM users only. Follow your usual procedure for installing new fonts in Windows if you do not have ATM.)

16. Open the ATM Control Panel by double-clicking on its icon.

17. Select Add.

18. Find and select [psfonts] in the Directories List box.

19. Find and select [pfm] in the Directories List box.

20. Find and select the name of your newly created and modified Type 1 font file in the
Available Fonts menu box.

21. Click on Add.

22. Click on Exit (in the ATM Control Panel).

(The following section is for all VPWin users, regardless of whether the new fonts were installed via ATM or by other means.)

(Steps 23-26 are necessary only for people using PostScript printers or other printers with PostScript cartridges.)

23. Open Windows Notepad, System Editor or other text editor. Use it to open WIN.INI.

24. Scroll down through WIN.INI to the [PostScript,{portname}] section.

25. In the softfont list you will see your new font PFM has been added, as for example:

softfont1=c:\psfonts\pfm\aardvark.pfm

This is sufficient to cause Windows to recognize the Aachen-bold font, but not
enough to allow it to be downloaded automatically for printing. Following this
example you would change this line to read:

softfont1=c:\psfonts\pfm\aardvark.pfm,c:\psfonts\aardvark.pfb

Every time you add a new font, in other words, add a comma to the end of the
appropriate PostScript softfont line, followed by the complete path & filename of the
matching PFB file. This tells Windows where to find the file which is actually
downloaded to the printer.

26. Repeat steps 23-25 for any other PostScript ports listed in your WIN.INI file.

27. Exit Windows if you have not already done so.

28. Restart Windows.

29. Start VPWin.

30. Select File, Manage Width Table.

32. Select "Use Environment's Width Table," then "Save as New Width Table." (Save
    under the same name you normally use with the current Active Default Printer.)

33. Click on OK. You should now be able to open any chapter using the width table
    you have just saved, and the PostScript name for your newly installed font should
    appear in any list of available fonts. Remember to save your current style sheet or
    chapter to insure VPWin won't rebuild ENVIRON.WID every time it is started. Exit
    VPWin at your own convenience.

34. Repeat steps 29-33 for each printer you've installed in Windows, with that printer
    selected as Active Default in Windows Control panel.

That's it! The whole process is faster and easier than it may appear from the length of these instructions, and it can give you a whole battery of new scalable fonts for use with VPWin and other Windows applications.

Note that you *can* install more than one Corel font in Windows without going through all 34 steps with each one, by observing the following limitations:

(A) You must ***not*** use WFNBOSS to convert more than one font at a time, due to a bug in WFNBOSS. Close WFNBOSS and restart it after each conversion.

(B) You must process each file individually with FIXPFB and Write.

All other steps in the procedure may be performed on as many Type 1 files as you have available.

Also note that Corel's fonts are not up to the same quality standards as those from Adobe or Bitstream, particularly when generated in smaller sizes. You may find some are acceptable for general use, while others are suitable only for occasional novelty effect.

I'd appreciate hearing any comments you might have on these instructions so that I can improve them if necessary. I'm also available to answer individual questions.

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