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LaserWriter ROMs: PostScript Versions Explained

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TOPIC -----

I have some technical questions about different versions of PostScript:

- 1) I thought that LaserWriter ROM versions 1.0, 2.0, and 3.0 correspond to versions 23, 38, and 47 of PostScript. However, in LaserWriter Plus printers the ROM contains 42.2. What happened to 47.0?
- 2) Also, when extracting information from a printer, CE Software's Widgets reports version 47.0 (1) for a LaserWriter IINT and a LaserWriter IINT which was upgraded to a LaserWriter IINTX. It also reports 51.8 (3) for a LaserWriter IINTX. What do the numbers in parentheses really stand for?
- 3) What is the difference between 47.0 and 51.8?

Adobe Technical Support said that these versions are functionally identical, which doesn't really answer my question.

DISCUSSION -----

- 1) There is a an error in the LaserWriter Plus ROMs that gives the version number 42.2 if read from PostScript, even though the ROMs contain Version 47 of PostScript.

PostScript version 47 is different than PostScript version 38 in the following ways:

- It is slightly faster.
- It contained miscellaneous bug fixes.
- It added code to support SCSI hard disks (as in the LaserWriter IINTX).

The Rev 47, PostScript-code-equipped LaserWriters can function up to 25 percent faster when printing text or up to 40 percent faster printing

bit-mapped graphics. PostScript version 38 is functionally equivalent to PostScript version 47 except for the above details.

2) CE Software's Widgets 3.0.4 issues two PostScript commands to get the "51.8(3)" from the LaserWriter IINTX with the latest ROMs. The first is the "version" command. This command returns a string that identifies the version of the PostScript language and interpreter being used. The second is the "revision" command. This command returns an integer designating the current revision level of the machine-dependent portion of the PostScript interpreter.

3) PostScript version 51.8 allows for the following enhancements:

- The entire font list is no longer searched when looking for a font. The search stops as soon as the font is found. This can save a lot of time if there is a hard disk attached and the font is a ROM font.
- Full support of software switching between emulations and ports. It is now possible to both switch into and out of an emulation mode via software.
- Improved support of multiple SCSI disks. You can now connect up to 8 SCSI hard disk drives to the LaserWriter IINTX SCSI port. Up to 80 percent of the hard disk with the lowest SCSI ID is used for font caching with the remainder of that disk and all of any other connected hard disks used for downloaded fonts. Each hard disk is now formatted as a separate volume, which lets a user move a disk (other than the startup disk) between systems without needing to reformat.
- Additional characters in the HP Laser Jet+ emulation. Four characters have been added that had been left out of the original implementation of HP Laser Jet+ emulation.
- Improved default settings for HP Laser Jet+ bit map printing. Previously, bitmaps in HP Laser Jet+ mode were interpreted at 7-bit, thus ignoring a significant bit. The new ROMs default to 8-bit serial communications.

Note: These new ROMs are in all LaserWriter IINTX printers with a part number ending in 6004/A.

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