LaserWriter Pro 810: Print Speed and Quality Compared to 630

Information Available to All Except User Groups and General Public

TOPIC --

LaserWriter Pro 810 printing speed and quality issues:

• Printing Speed
  Printing a Quark Xpress file (using A4 paper at 300dpi with 6 EPS
  files and multiple fonts) takes approximately 2 minutes on a
  LaserWriter Pro 630, and 10 minutes on a LaserWriter Pro 810. We
  also tried printing other documents such as a fax which took about 12
  seconds on the LaserWriter Pro 630 and about 32 seconds on the
  LaserWriter Pro 810.

• Printing Quality
  We compared printouts from the LaserWriter Pro 630 and the
  LaserWriter Pro 810. Printouts from the 810 (at 800dpi) don't look
  as good as printouts from the 630. When we printed various test
  pages on the 810, we found that very small font sizes were poorly
  defined. Printing at different resolutions doesn't help.

DISCUSSION --

Printing Speed

The speed differences you see between the LaserWriter Pro 630 and the
LaserWriter Pro 810 are fairly accurate and expected as they are two
generally different printers in terms of their implementation. To
summarize, the LaserWriter Pro 810 differs from the LaserWriter Pro 630
in two ways:

• Ethernet implementation

• TrueType handling

Here are more specifics:

• Ethernet Communications
  Ethernet implementation in the LaserWriter Pro 810 is slower than in
  the LaserWriter Pro 630. The printer doesn't have a direct Ethernet
  channel to the PostScript interpreter. Instead, it transfers data
  coming in through the Ethernet interface to the interpreter via the

printer's parallel channel. Because of this design, the LaserWriter
   Pro 810 may have somewhat slower Ethernet communications depending on
   the amount of communications entering or leaving the printer.
   Overall print time on the LaserWriter Pro 810 is less than the
   LaserWriter Pro 630 when printing multiple pages or multiple copies
   because of the 20ppm print engine speed.

• TrueType Rasterization
   The LaserWriter Pro 810 is a Class B device. This means that the
   TrueType rasterizer ISN'T present in ROM, and downloads into RAM when
   using TrueType fonts. Print jobs requiring TrueType font downloads
   to the printer take longer.

The bottom line is that there are tradeoffs between the LaserWriter Pro
630 and the LaserWriter Pro 810. Each of the printers meet specific
needs.

LaserWriter Pro 630 Features

• 600dpi native resolution
• Class A device (that is, TrueType rasterizer in ROM)
• Photograde and Fineprint capability at 300dpi
• Faster Ethernet implementation

LaserWriter Pro 810 Features

• Network connectivity: IPX, TCP/IP, EtherTalk, and Digital LAT.
• Paper handling: multiple sizes including Tabloid, A3, A4, A5, B4,
  B5, Letter, and Legal.
• Virtual printer technology: ability to set up 64 virtual printers.
• 20-page-per-minute maximum print engine speed

Printing Quality

Print quality is better on the LaserWriter Pro 630 because of distinct
differences between the two printers. The LaserWriter Pro 810 DOESN'T
employ FinePrint or PhotoGrade technology. One other major difference
is that the Pro 810 native resolution is 300 or 400dpi, and is combined
with controller technology that allows 600 and 800dpi. The LaserWriter
Pro 630 has a native resolution of 600dpi, so it naturally produces
better quality output.
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