Tech Info Library

PostScript Fax: Variables Influencing Speed (9/94)

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Revised:        9/19/94
Security:       Everyone
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Article Created: 16 September 1994

TOPIC ---

When being used to receive a fax, how many pages per minute can a LaserWriter
Select 360 print?

DISCUSSION --

Unfortunately, we have no benchmarks that provide the throughput of faxed
documents. The engine print speed is rated at 10 pages per minute. This doesn't
take into account factors such as: the time required for a workstation to
prepare the print job, the time required to transmit the print job over a
network, the time for the printer to process the print job, or any of the
variables associated with faxing. It is just the throughput of the printer.

For example, if you were to print 11 copies of a 1 page document, the first page
may require 40 seconds to process/print. The remaining pages might then only
require 6 seconds each (60 seconds/10 pages). In this example, the 40 seconds I
refer to is a number I pulled "out-of-the-air." The actual time may be more or
less, and for very complex documents it may take a great deal longer (perhaps 10
minutes or more).

Additional variables to take into consideration with fax jobs are:

• whether the job is a PostScript file or a raster file
• how clean the phone line transmission is
• the fax transmission rate (4800 or 9600 baud)
• if the transmitting or receiving printer is processing other jobs
• whether there are fonts in the job that aren't resident in the printer
• if you are sending the job to one or more addresses
• the size of the job and whether it can be transmitted in one call or
  if it requires multiple calls

Some of these variables are discussed in more detail below.

The fastest fax jobs will typically be PostScript fax file jobs using few built-in fonts. PostScript fax file sizes are compressed by the built-in LZW compression and decompression capability of PostScript Level 2, making PostScript fax files significantly more compact than traditional faxes, reducing the transmission time and cost. However, if the file contains complex graphics or images it is possible for the size of the PostScript file to exceed the size of a raster fax.

If the document being sent requires fonts beyond the standard 35 fonts, the PostScript Fax printer will automatically send the additional fonts along with the PostScript file to the recipient's fax printer. PostScript fonts are generally about 35KB in size and require approximately 35 seconds of additional transmission time for each font transmitted. Once the file reaches the target printer, if the document contains 35 fonts, this printer will take significantly more time to process the job as compared to a document having one font, as would be the case with any print job.

If the destination printer is busy printing a document, that printer will save away incoming faxes in memory and print them when it's done with the current job. In one test, we received and buffered more than 20 pages of PostScript fax data on a LaserWriter Select 360f with no difficulties. However, we have not tested the upper limit. We can't give you a specific number of pages or fax jobs that can be buffered as "your mileage may vary". Variables that will affect this are:

- whether the fax job is a PostScript fax file or a G3 raster job
- are fonts being downloaded
- is the job in Group 3 standard mode (200 dpi by 100 dpi) or G3 fine mode (200 dpi by 200 dpi)
- is a hard drive connected to the printer and what is it's capacity

The transmission of a PostScript language file to a single destination is always made in a single call. Raster faxes can be transmitted in multiple calls.

Once the faxed document has been received by the printer, the processing time to complete the job is the same as if the file were sent directly to the printer from a workstation on the network.

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Tech Info Library Article Number:16301