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LaserWriter IIf and IIg: How They Differ from LaserWriter IINTX

Revised: 9/30/91
Security: Everyone

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Article Created: 1 October 1991
Article Last Reviewed:
Article Last Updated:

TOPIC -----

This article describes the enhancements of the LaserWriter IIf and IIg, compared to the LaserWriter IINTX.

DISCUSSION -----

The LaserWriter IIf offers a 50% performance improvement over the LaserWriter IINTX. With gray scale mode disabled, the LaserWriter IIg gives twice the performance of the IINTX. The IIg's performance is the same as the IINTX with gray scale mode active.

The LaserWriter IIf and IIg controllers provide twice the processing power of the LaserWriter IINTX. The major controller components include:

- Processors
- Memory
- ASICs (Application Specific Integrated Circuits)
- I/O

These components, plus the PostScript Level 2 software, provide significantly faster performance than LaserWriter IINTX.

The Motorola 68030 in the IIf and IIg improves performance over the 68020 in the LaserWriter IINTX in the following ways:

- The 68030 runs at a faster clock speed. This makes the IIf 25% faster and the IIg 55% faster than the IINTX.

LaserWriter	Clock Speed
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IINTX	16 MHz

IIf	20 MHz
IIg	25 MHz

- The 68030 has integrated instruction and data cache to give a 15% performance improvement over the IINTX.
- The 68030 has burst-mode RAM access to transfer large amounts of data in less time.

PhotoGrade allows printing more than 65 levels of gray. The LaserWriter IINTX offers 33 levels of gray.

The IIf and IIg use 80ns memory. This means that RAM from the IINTX or IISC can't be used in the LaserWriter IIf or IIg. The Macintosh IIfx uses the same RAM as the LaserWriter IIf and IIg.

Unlike the LaserWriter IINTX, the LaserWriter IIg has three communication ports, and all three can be physically connected at the same time. Arbitration logic controls the activity of the ports. Because PostScript processes one job at a time, only one port has access to the printer at any given time.

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Tech Info Library Article Number:8910