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PostScript Level 2: Benefits (11/93)

Revised: 11/10/93
Security: Everyone

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Article Created: 10 November 1993

TOPIC -----

What are the benefits of PostScript Level 2?

DISCUSSION -----

To get more in-depth information on the what PostScript Level 2 provides over PostScript Level 1, Apple would suggest referring to the "PostScript Language Reference Manual, Second Edition" by Adobe Systems Incorporated (Addison Wesley). We have taken excerpts and/or paraphrased an overview of PostScript Level 2 features outlined in the reference manual, chapter 1, pages 7-9.

Here is a list of the new language features of PostScript Level 2, which include previous language extension features:

- Dictionaries
Many Level 2 operators expect a dictionary operand. This allows for optional parameters and future extensibility.
- Memory Management
In general, memory is more efficiently shared among different uses and arbitrary memory restrictions have been eliminated.
- Resources
The language includes convenient facilities for locating and managing resources.
- Filters
The language supports filters for ASCII encoding of binary data, compression and decompression, and embedded subfiles.
- Binary Encoding

In addition to the standard ASCII encoding, the language syntax includes two binary-encoded representations.

- User Paths
User path operators perform path construction and painting as a single operation for convenience and efficiency. There is also a user path cache and some convenience operators for painting rectangles.
- Forms
There is a form cache to optimize repeated uses of the same form.
- Color Spaces
Colors can be specified according to a variety of color systems (that is, gray scale, RGB, CMYK, and CIE based). The color space is now an explicit parameter of the graphics state.
- CIE-based color spaces
The language supports several device-independent color spaces based on the CIE 1931 (XYZ)-space.
- Patterns
It is possible to paint with patterns as well as with solid colors. There is a pattern cache to optimize repeated uses of the same pattern.
- Images
There are several enhancements to the facilities for painting sampled images: use of any color space, 12-bit component values, direct use of files as data sources, and additional decoding and rendering options.
- Other text and graphic operators
There are several other new operators optimized for performance: graphic state objects, automatic stroke adjustment, new variants of "show", and a new "selectfont" operator.
- Device Setup
The setpagedevice operator provides a device-independent framework for specifying the requirements of a page description and for controlling both standard and optional features of a device.
- Interpreter Parameters
Administrative operations such as system configuration and changing input-output device parameters are now organized in a more systematic way.

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Tech Info Library Article Number:13895