

PostScript Level 2 Overview

PostScript Level 2 unifies and extends the PostScript language by incorporating several PostScript language enhancements made over the last few years. Note that PostScript Level 2 products are fully compatible with the installed base of PostScript products, application software, printer drivers, and archived PostScript-language files, and that you can seamlessly mix Level 1 or Level 2 PostScript products in your computing environment.

Below is a brief description of enhancements and features introduced by PostScript Level 2.

Patterns

Whereas PostScript Level 1 did not allow for filling or stroking graphics with patterns, PostScript Level 2 provides a convenient way to paint with patterns, and provides a pattern cache to optimize repeated uses of the same pattern.

Forms

PostScript Level 1 provided no direct support for printing forms. PostScript Level 2 allows a program to specify that a set of operations constitute a form, which may be cached and retrieved again as needed.

Color

PostScript Level 2 provides a method for specifying colors based on the international standard CIE 1931 (*Commission Internationale de l'Éclairage*). The CIE color models are based on visual color perception rather than color production. This system allows for device-independent color, which enables you to create, view, and print color information with more predictable results on a variety of displays and printers.

Halftones

PostScript Level 2 incorporates new Accurate Screen technology which dramatically improves the accuracy of halftone screens.

Fonts

Under PostScript Level 1, fonts were limited to 256 characters, which proved inadequate in certain markets (for example, in the Kanji market). PostScript Level 2 now includes *composite fonts*. Instead of a character set with a certain number of predetermined characters, composite font character sets have a large number of character elements which, when combined, form complete characters. This effectively offers virtually unlimited character sets. PostScript Level 2 also enables fonts to be modified to support multiple writing directions.

Data Compression and Decompression Filters

PostScript Level 2 supports industry-standard formats for compression, decompression, and ASCII encoding of binary data. Standard formats include run-length encoding, CCITT Group 3 and 4, LZW, JPEG, and ASCII-85. For printing environments where file transmission is a bottleneck, transmitting compressed data translates directly into faster printing.

Memory Management

PostScript Level 2 has eliminated arbitrary memory restrictions present in PostScript Level 1, and instead makes one pool of memory available for all resource needs. Thus VM, stacks, paths, font cache, form cache, and the page buffer may all expand when necessary, sharing memory as needed.

Resource Management

PostScript Level 2 provides convenient facilities for locating, storing, and managing resources such as fonts, forms, patterns, font encoding vectors, and CIE-based color-rendering dictionaries.