ADOBE® PDF Print Engine™

Adobe's native PDF RIP technology, packaged as a software development kit.

Overview

Adobe PDF Print Engine can be the basis for a variety of products for previewing and printing Portable Document Format (PDF) documents at different stages of the professional print workflow. PDF Print Engine uses a native PDF imaging model, eliminating the need to convert PDF documents to PostScript for printing, and processes jobs under the control of jobs specified in the Job Definition Format (JDF). The Adobe PDF Print Engine combines the strengths of Adobe PDF for content definition with the power of JDF for workflow automation.

As print consumers and design applications have matured, print workflow applications have had to deal with the growing number of problems and idiosyncracies inherent in PostScript-based workflows. Adobe PDF Print Engine enables them to circumvent these problems by supporting more advanced design features and implementing a more streamlined approach.

Components

The Adobe PDF Print Engine toolkit is comprised of several distinct components providing services which can be configured in a number of ways, but the essential parts of the Adobe PDF Print Engine include:

A JDF Print Processor - Processes incoming JDF job tickets, acts as the controller for Adobe PDF Print Engine, and includes messaging services for interacting with external systems.

Adobe Common Renderer - The workhorse of Adobe PDF Print Engine.
Its capabilities include trapping, imposition, rasterizing to a target device (either a monitor for preview, or a final output device), and advanced color management. Its actions are controlled by the JDF Print Processor.

Platforms Supported

· Windows 64-bit

· Linux 64-bit

· Mac OSX 64-bit

PDF Print Engine and transparency

Since the PostScript language is predicated on an opaque object model, transparent objects (such as drop shadows) must be converted, or "flattened", to opaque objects. Objects are often flattened at the early stages of a print workflow, causing several problems:

· Incorrect colorspace conversion during early flattening

· Incorrect resolution during early flattening

· Early flattening prevents late-stage edits

Adobe PDF Print Engine supports "live transparency"; since PDF inherently supports transparent objects, there is no need to "pre-process" them. Transparent objects therefore retain their intelligence until the final production stage. And since no operations are performed on the job, no errors are introduced. Transparent objects are rendered at the final stage, along with all the other content in the job, ensuring consistency and compatibility with the target output device.

Advanced Screening Technology

Advanced screening technology is available through StudioRIP Screening, an optional module which offers 16-bit technology, enabling better precision than the default screening in Adobe PDF Print Engine.

Generating job previews

Job previews are a vital part of any print workflow system. Print production personnel as well as consumers rely on online and hardcopy previews as assurances of final job quality.

While PostScript is required at the final stage, PDF is often used as the preferred file format for job previews (PostScript files are too large; PostScript viewers are not as available or as rich in features as Adobe Acrobat). Since different rendering engines are used in preview vs. final output, the possibility of discrepancies between the two exist. PDF Print Engine-based applications use the "Adobe Common Renderer" (ACR) for both previews and final output rasterization, thus ensuring that what you see is indeed what you get.
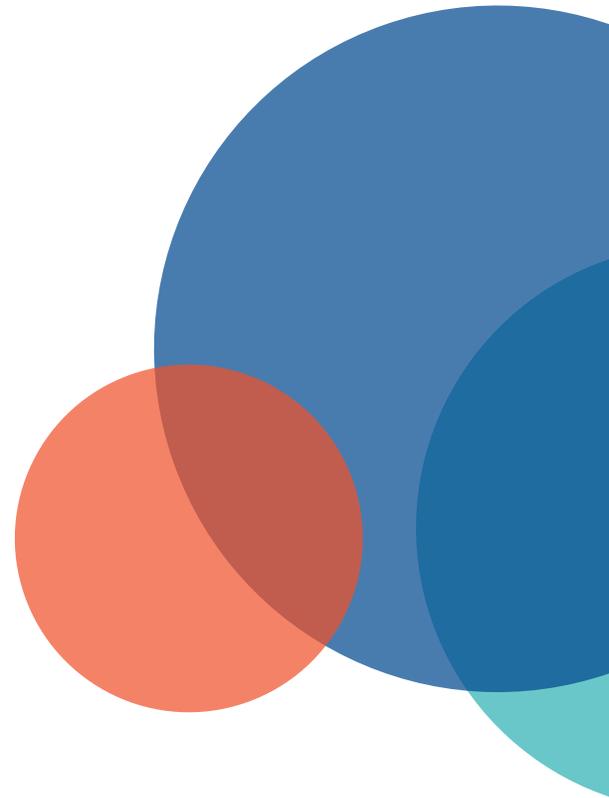
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