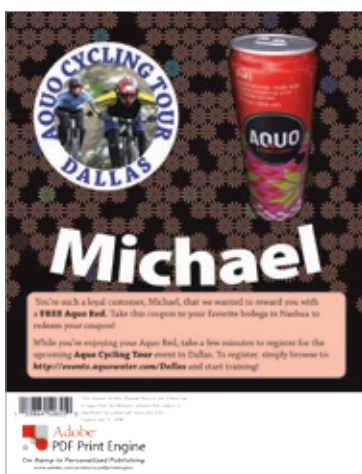


ADOBE® PDF PRINT ENGINE 2

Powering the next generation of digital and offset print workflows



Adobe PDF Print Engine 2 streamlines print production and personalized publishing workflows.

Industry

Print publishing

Challenge

Unify offset and digital print workflows, including those for personalized variable data jobs, while helping to ensure that the designer's intent is accurately reproduced on press.

Solution

A PDF workflow enabled by JDF that helps to preserve content in its highest level of abstraction, allowing live transparency rendering, consistent print previews and proofs, and late-stage modification of content or redirection to different output devices.

Benefit

Simplified upstream workflows for personalized publishing, and improved cost savings for all job types through faster processing, clean handoffs, and JDF-based automation.

Adobe PDF Print Engine 2 drives integrated, end-to-end PDF workflows for printing graphically rich content, including variable content for personalized publishing. Adobe OEM partners are integrating the technology into the next generation of prepress and print solutions.

Adobe transforms print production

More than 20 years ago, Adobe delivered the power to reliably print visually rich documents with Adobe PostScript®, sparking the desktop publishing revolution. The company then introduced the Portable Document Format (PDF), which helped ensure that a designer's intent could be reliably conveyed to the print service provider and streamlined handoffs between designers and print service providers. Using world-class Adobe Creative Suite® software, graphic designers have thus been empowered to produce the finest print communications.

In 2006, Adobe enabled the next generation of print publishing with the Adobe PDF Print Engine, which drives workflows based on the PDF and Job Definition Format (JDF) industry standards. Widely embraced by OEM partners and print service providers, the Adobe PDF Print Engine powers thousands of units in production.

The latest version of the Adobe PDF Print Engine ushers in the next revolution in print publishing, harnessing the reliability, flexibility, and portability of PDF to accelerate the industry's movement toward digital printing, personalization, and automation. Adobe PDF Print Engine 2 provides printers with an on-ramp to personalized publishing and enables Adobe OEM partners to build next-generation print solutions.

The power of PDF

A native end-to-end PDF workflow can dramatically improve reliability, throughput, and flexibility for all job types. With PDF

workflows based on the Adobe publishing platform and printing systems powered by Adobe PDF Print Engine 2, jobs are defined and preserved in PDF, including personalized Variable Data Publishing (VDP) jobs. Because PDF maintains content at the highest level of abstraction through the rendering stage, content can be repurposed to other publishing media such as web, e-mail, and mobile, adding more value to the printed page for integrated marketing campaigns that span multiple customer touchpoints.

JDF—the process container

JDF automates workflows from online submission through to final print production. As an electronic job ticket for process information, it describes the intent for a printed piece as well as process information for the target device—in a single format that accompanies the PDF content. In printing systems enabled by Adobe PDF Print Engine 2, PDF defines the job's content, while JDF describes job options such as paper stock, finishing options, production color information, and trap and imposition instructions. The host system communicates with PDF Print Engine 2 via Job Message Format (JMF).

Conclusion

Print solutions powered by Adobe PDF Print Engine 2 streamline print production by utilizing the same native end-to-end PDF workflow for offset, digital, and VDP production, maximizing reliability, flexibility, and opportunities for growth.



Features and benefits

Greater consistency and flexibility

By keeping PDF content at its highest level of abstraction, Adobe PDF Print Engine 2 enables a design-to-print workflow that is more consistent, reliable, and flexible.

- **Improved cost savings for all job types**—Improve efficiency through JDF-based automation, from online submission to final printing.
- **Integrated digital and offset print workflows**—Leverage existing expertise, tools, conventions, and technologies to maximize flexibility and opportunities for growth.
- **Intelligent, end-to-end native PDF workflow foundation**—Synchronize design and print production capabilities.
- **Live transparency rendering with no flattening**—Maintain device independence and full fidelity of artwork transparency and traps throughout the workflow.

- **Late-stage modifications**—Enable late-stage modifications of PDF content and repurposing to different output devices, fully leveraging the power of PDF to preserve job content and JDF to control job process.
- **ICC- and JDF-controlled rendering and ICC color management for n-color jobs**—Improve the accuracy and consistency of color proofs as well as the quality and predictability of final output.
- **JDF-driven trapping and imposition**—Keep content device neutral until rendering, and accommodate last-minute changes to job content and output intent.
- **JDF control of PDF layers**—Streamline workflows for versioned output.

Streamlined workflows for personalized publishing

Variable data content formats, proprietary or standard, have historically been specialized and different from those commonly used in the graphic arts.

- **Support for PDF/VT**—PDF Print Engine 2 can consume and efficiently render PDF/VT, the emerging standard format for VDP file exchange (ISO 16612-2).
- **Enable caching of repeating elements in VDP jobs**—Vector and raster elements that appear on multiple pages within a job are cached to maximize performance by eliminating redundant processing.

Stakeholder benefits

Unlike the VDP formats of today, PDF is easily shared, enabling collaboration among all stakeholders.

- **Digital printers**—Integrate personalized jobs into production print runs, harnessing the proven reliability of the PDF imaging model for graphically rich content.
- **Offset printers**—Accelerate the overall print process, especially handoffs from designers, with increased reliability and flexibility. Provide an easy on-ramp to digital printing with VDP, in a single, unified PDF-based workflow.
- **Graphic artists**—Design leading-edge, personalized content in a form easily shared with business users, presented to recipients or call centers online, and handed off to printers with greater confidence. Support for more complex color graphics and color transparency in personalized publishing provides designers with new opportunities to create more appealing and effective communications.
- **Marketers and business users**—Easily collaborate throughout the process by previewing, proofing, and approving VDP jobs in online or offline reviews using Adobe Reader® and Acrobat® software.

Upstream collaboration

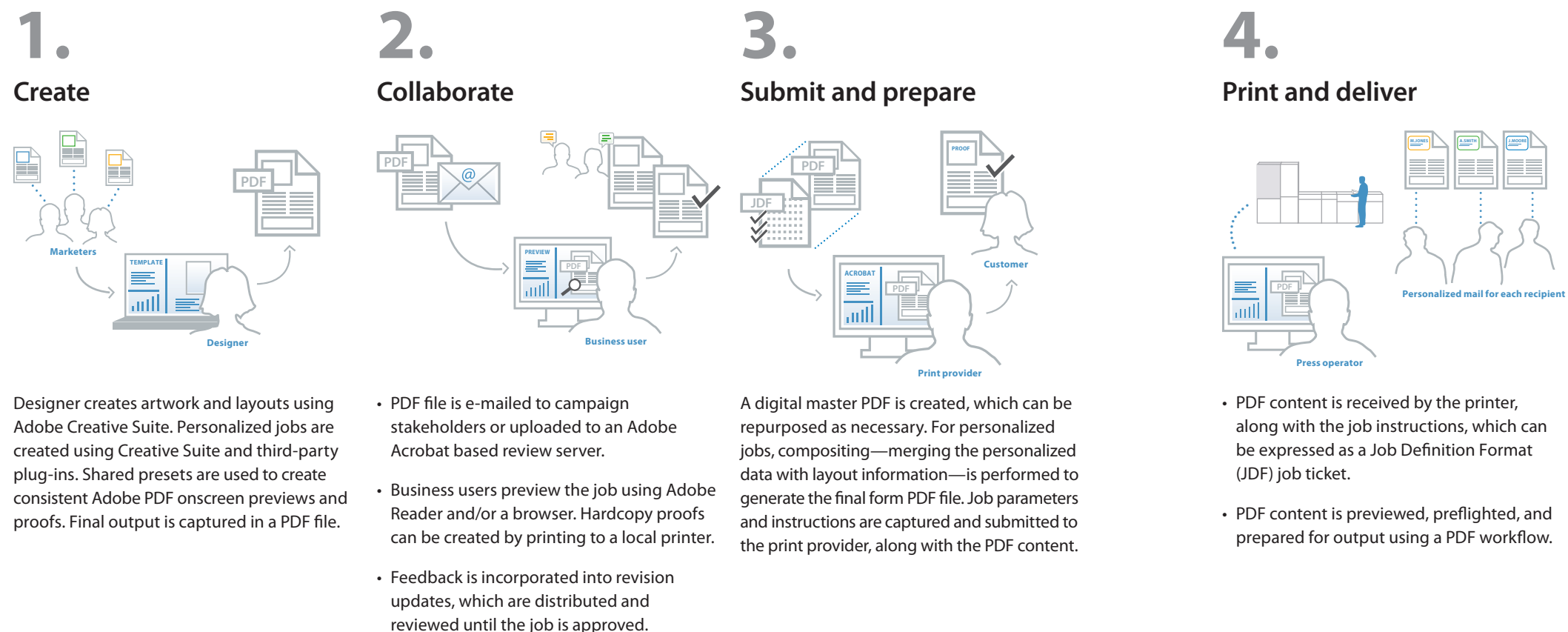
PDF Print Engine 2 opens the door to richer collaboration among designers, printers, and marketers. Using the Adobe publishing platform and third-party VDP plug-ins, creative professionals can design personalized PDF content that can be easily shared with marketers and business stakeholders, who can review, edit, and approve it using free Adobe Reader. Print solutions powered by Adobe PDF Print Engine 2 render files natively using the same core technology as Acrobat and Adobe Creative Suite® software, helping to ensure that complex designs and effects, even variable print elements, are reliably reproduced.

Adobe PDF Print Engine 2 enables solution partners to provide full-fidelity desktop previewing for designers and prepress operators alike. The advanced PDF rendering engine used for final output is the same as that used to view jobs at every point in the workflow.

Adobe PDF Print Engine 2 is driven by JDF which decouples content (PDF) from process (JDF). This architecture allows print production professionals to quickly accommodate last-minute changes and easily configure PDF jobs for different target output devices. Designers and marketers are freed to focus their energies on the content, and a single digital master can be repurposed for other publishing platforms such as web, e-mail, and mobile.



Print workflow with Adobe PDF Print Engine 2





Adobe PDF Print Engine, 2006



The Adobe PDF Print Engine 2 software development kit (SDK) is available to OEM partners for building next-generation PDF workflow solutions—RIPs, previewing tools, proofing applications, and workflow systems. Ask your OEM about print solutions powered by Adobe PDF Print Engine 2.

For more information

To learn more, visit the following web pages.

Adobe PDF Print Engine 2: www.adobe.com/products/pdfprintengine

VDP: www.adobe.com/vdp

JDF: www.adobe.com/products/jdf

Adobe PDF: www.adobe.com/products/acrobat/adobepdf.html



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Technical specifications

Platforms

- Microsoft Windows® XP
- Microsoft® Windows Vista® (certified for 32-bit and 64-bit editions)
- Microsoft Windows Server® 2003
- Apple Mac OS X v10.4
- Linux®
- Sun™ Solaris™ 10 (Intel®)

Recommended hardware configuration

- 2GB of RAM
- Multicore processor

Imaging model

- Adobe PDF

Color processing

- All PDF color spaces supported (DeviceCMYK, DeviceRGB, DeviceGray, Device N, CIE, Lab, XYZ, ICC color spaces, separation, indexed, pattern, CalRGB, and CalGray); hi-fi color (xClr)
- True-to-print color processing by deferring color conversion operations until the last possible point in the rendering process
- Full n-channel proofing using ICC profiles
- Spot color overprint and spot color emulation
- ICC and JDF control to enable rendering intent by object type, n-color workflows, and detailed spot-to-process specifications—even in RIPs set up for xClr output

Standards

- PDF, PDF/X-1, PDF/X-3, PDF/X-4, PDF/X-5, PDF/VT
- Compatible with Acrobat 9
- Compatible with JDF 1.1, 1.2, and 1.3
- ICC (v4)

JDF support

OEM-configurable job control. Sample implementations for JDF processes include color space conversion, digital printing, imagesetting, imposition, interpreting, layout preparation, rendering, screening, separation, and trapping.

Font support

- Type 1, including OpenType® CFF
- TrueType, including OpenType TrueType
- CID-keyed, including OpenType CID-keyed
- PDF Type 3

Other

- Optimized for offset and digital presses
- Optimized for jobs with VDP characteristics
- Elimination of redundant processing
- ICC-based color conversion
- Spot color emulation (proofing)
- Rendering intent control by object type
- Screen selection by object type and/or colorant
- Potential to create soft proofing solutions
- Adaptive memory management
- JDF-controlled in-RIP trapping, imposition, and layer management
- APIs for CMM, screening, marking, JDF processors, and raster

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