

WHITE PAPER

PDF in the Office Environment

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Executive Summary

Since Adobe debuted the PDF file format in the early 1990s, it has become the de facto standard for electronic documents in many markets. While engineers, publishers, and printers push the format to its technical limits with rich media and 3-D content, the general office worker comprises the PDF-using majority.

Most business PDFs include text and graphics, and little else. The typical business user needs to view PDFs, edit/update existing PDFs, create PDFs from paper or electronic source files, and in some cases control security settings. The use of PDF documents for forms, regulatory compliance, and electronic archives is expanding the need for knowledge workers to digitally sign PDFs, too.

Today, many companies offer PDF software. Enterprise decision makers need to find the most cost-effective, complete solutions that enable knowledge workers to create, edit, and convert PDFs to Microsoft Office files. Furthermore, vendors that offer flexible licensing programs help an organization attain predictable, controlled budgeting goals. The best vendors also offer support, knowledgebase self-help on the web, and enterprise deployment tools to maximize an IT department's efficiency in managing the flow of business-critical PDF documents throughout the company.

About the Author

A freelance writer based in Nashua, NH, Don Fluckinger first reported on Acrobat 1.0 for Desktop Publishers Journal in 1993. From 2000–2009, he covered the entire PDF software universe as a reporter for Ziff-Davis's PDFzone.com, a site under the eWeek umbrella.

The Original Portable Document

Even a visionary such as Adobe co-founder John Warnock couldn't have predicted how his idea of the PDF file format would become the standard for electronic documents in today's world. In 1991, his team unveiled what was then called IPS (Interchange PostScript). It became PDF (Portable Document Format) two years later in Acrobat 1.0.

Making PDF an open standard in the 1990s opened the door for companies such as Nuance to create powerful, affordable PDF applications designed with the needs of business users in mind. Together, they helped pave the way for the adoption of PDF as an electronic document standard within the walls of private corporations, government agencies, and universities around the world.

Today PDF supports video, audio, fillable forms automated with databases that cut data entry to zero, JavaScript, electronic signatures, Flash animations, hyperlinking and bookmarking, 3-D rendering, and geo-spatial mapping. Many companies today create sophisticated authoring tools that can build these features into PDF documents. In addition, PDF has become a prepress standard for printers and publication design.

Recent developments

On July 2, 2008, Adobe formally relinquished control of the PDF document format by handing it over to the International Organization for Standardization. ISO is now responsible for updating and developing future versions of PDF, after ratifying it as ISO 32000-1.

The PDF/A standard also comprises the bedrock of electronic document archives for public and private institutions, as more and more large enterprises look for ways to slash records-storage costs and keep copies of documents that were never printed in the first place.

PDF Portfolios have become a simple, attractive way for knowledge workers to use the PDF file as a secure "wrapper" to organize a group of files, while keeping the originals (such as Microsoft Word or Excel documents) intact and accessible for future use.

PDF for Business

What always made PDF a flexible, powerful format still holds true: It can be viewed and searched onscreen in the same layout as it appears on paper. Or it can be printed. Or both, according to the needs of the recipient.

PDF is the only file format that truly serves these two purposes. In the business environment, PDF is the electronic standard in which data lives. Contracts, catalogs, marketing materials, correspondence, order forms, proposals, and financial reports are just a few types of business-critical documents that end up as PDFs.

A Coopers & Lybrand study determined that knowledge workers devote a full third of productive time recreating documents and information; in its own research, Nuance determined that 5% of that time is connected to PDF issues, such as lack of access to content stuck in PDFs. Using those numbers, Nuance estimates that a 500-person organization could recover as much as \$650,000 annually in knowledge worker labor by giving staff an accurate PDF-to-Office conversion tool.

What the average knowledge worker needs

Every office worker needs a PDF viewer. Beyond that, enabling most workers to create and edit PDFs saves time and money. It conserves natural resources as well. Instead of wasting time, paper, and postage/courier fees by mailing or faxing communications like offer sheets, invoices, contracts, and letters, it's more productive to click "save as PDF" in a word processor, email the resulting file, and move on to the next work task.

While most PDFs won't need to be password secured, everyone uses this feature once in a while. For example, human resources need to seal confidential employee records; sales staffers need to lock in a special rate card for a favored customer; marketing needs to keep a tight lid on pre-release product materials prior to public unveiling; or engineering designers need to protect the company's intellectual property from piracy. Features for offering document review input are also key to getting work done with PDFs.

Since many government entities honor digital signatures — and some of them will only accept electronic documents if they're in PDF — everyone needs the ability to digitally sign a PDF, if not now, in the very near future. Enabling as many workers as possible to scan paper documents directly into searchable PDF — from copy machines or document scanners — also creates efficiencies and cuts down on shipping and office supply costs.

Examining the typical organization, department-specific PDF needs can include:

- **Human Resources** creates electronic forms such as vacation requisitions, benefits administration, and employee review documents. Staffers also need a straightforward paper-to-PDF conversion (including paper forms to fillable PDFs) tool that doesn't require programming skills.
- **Sales** creates documents including proposals, offer sheets, and order forms. Any document too complicated for email can be created and delivered more efficiently with PDF. Sales staffers also need conversion and editing tools to quickly extract content from PDFs and remix it into new documents.
- **Marketing groups** use PDF to create robust collateral material incorporating multimedia elements such as video and audio, and can assemble PDF Portfolios for press kits, catalogs, and presentations.
- **Engineering** circulates its designs for review as PDFs, because their renderings are created in design applications whose proprietary file formats can't be viewed on customers' and colleagues' computers.
- **IT** manages large numbers of desktop installations of PDF tools deployed via servers. They need network tools and connectivity to popular document management systems such as Interwoven and Microsoft SharePoint. Where Acrobat and Reader are installed, this department also must contend with the application's large size and plug-in architecture, constant polling for being the default software on end-users' machines, as well as contacting Adobe for updates and cross-pollinating into button bars in other applications (Microsoft Word, for example).
- **Finance and Legal** traffic heavily in invoices, purchase orders, contracts, and transcriptions, passing them among customers, courts, banks, and regulatory authorities. They need creation tools — including Bates Stamping for official records — and conversion tools to gain access to legacy PDFs for which the original files have been lost. Legal also needs redaction, or the ability to block out data from certain documents.
- **Records Management:** When an organization takes steps to create searchable electronic archives of documents from all of the above departments, those PDFs can remain accessible to the parties who need to see them. This helps the organization to meet regulatory mandates and saves warehouse space to boot.

PDF software choices

While many knowledge workers would like to enjoy the benefits of PDF — a secure electronic document format convenient for email — the cost of Adobe Acrobat (Standard, \$299; Professional, \$449; and Professional Extended, \$699) remains a barrier to PDF use at many corporate, government, and educational sites, especially because the cost includes a lot of features the average knowledge worker does not use.

Adobe so far has made two attempts to create tools for the rank-and-file knowledge worker, Acrobat Business Tools and Acrobat Elements. Neither of them is currently available in the United States, as vendors such as Nuance have responded to market needs with well-entrenched solutions that address the features business users need and offer a more cost-effective means to enable PDF use among knowledge workers.

Major categories

Readers. Hundreds of millions of users download and install Adobe Reader because it is free, very stable, and works across platforms (even many varieties of Linux), in many languages. Because of this, state, local and national governmental and corporate entities around the world require the use of Adobe Reader — sometimes to the exclusion of other readers — and it comes preinstalled as the default PDF viewer on many desktop and laptop computers.

Creation-only. Users who just want to make PDFs have choices that typically reside with the printer drivers at the operating system level. Most of these do not offer fine control over file size or security settings (such as password protection and “do not allow printing”) that knowledge workers typically need. Full-fledged applications such as Nuance PDF Create address these needs, and also offer robust tools to make searchable PDFs out of scanned paper documents.

Converters: Many organizations have found that the original application files (usually one Microsoft Office format or another) from which mission-critical PDFs were made have since vanished. Conversion back into Office applications can be difficult, as many products cannot maintain accuracy of layout and “remix” the PDF’s content when ported back into Word, for example. Online conversion services offer varying quality (i.e., with variable amounts of control over document settings and with layout in the resulting document more or less true to the original) and require trusting a third-party web site with the original application file as well as exposing documents to security vulnerabilities in transit to and from the site. A proven desktop application, Nuance PDF Converter offers best-in-class conversion to Office apps, maintaining fidelity to the original PDF even in hard-to-convert graphics such as tables.

Viewer/Editors: These tools enable PDF editing. Nuance PDF Converter allows for adding and updating text and remixing of pages, as well as adding and subtracting pages and batch conversion. While other PDF editing programs exist, only Acrobat and PDF Converter can view all the latest content that can be put into a PDF, such as XFA forms data, Flash, and video.

Complete Solutions: Several vendors compete with Acrobat and Nuance for tools that do it all: PDF creation, conversion, and editing. The aforementioned cost of Acrobat makes it a less attractive solution, while other lower cost alternatives do not offer the same features, support, and network tools businesses need. Nuance PDF Converter Pro is the only true replacement for Acrobat, and the only application that includes FormTyper, which turns static PDF forms into fillable PDF forms with a single click.

Trade tools: While most people use PDF to convert business files or media into a viewable, format that can be emailed, the printing trade uses deep PDF features to build complex, high-resolution books, magazines, and other publications. Other companies offer paper-to-PDF conversion tools that automate the process of

scanning mass volumes of documents. Yet others add engineering and manufacturing-specific 3-D rendering tools. Finally, other niche tools address the needs of the instructional market, where PDFs become lively, rich-media course manuals loaded with Flash content, tests, polls, and quizzes.

Choosing the Best PDF Solution

With so many choices at varying price points in the market, it's sometimes difficult to choose the right PDF software for an organization. Factors to consider include features, cost, licensing issues, and vendor support.

Choosing the right PDF solution

The decision process includes four main steps:

Determine the need. Regardless of the department they work in, most employees need to create, convert, edit and share PDFs — from both electronic documents and paper — and edit and share them. They need password security, digital signatures, PDF/A support for archiving, and conversion back to Word and other Office formats. Some will also need forms and redaction features, while the IT staff needs to be able to manage each desktop at the server level. For the most part, to get the full return on PDF investment (using it instead of paper and saving printing, storage, and waste costs associated with it) each user will need a complete PDF solution that covers all of these needs.

Count the costs. PDF freeware has a great upside — it's free! Initially, that is. It also represents hidden investments, such as little or no vendor support, file bloat, and forced installation of productivity-draining adware or “pesterware” that forces employees to repeatedly click “upgrade later” boxes before they can get work done. The different editions of Adobe Acrobat are the most feature-laden PDF solutions, but they are also the most costly off-the-shelf authoring tools. They contain many specialty features (such as preflight for publication design in Acrobat Pro) that most knowledge workers will never use.

When it comes to PDF software, especially during economic slowdowns, budgets become a determining factor in choosing a PDF solution. Many businesses try to find a replacement for Acrobat that costs less, resource-wise, than freeware. Nuance PDF Converter Pro (\$99.99) offers the features business users need at around half the cost of Acrobat Standard, when a business calculates maintenance costs and total cost of ownership.

Look at licensing and deployment. Look for software with licensing models that can accommodate growth without spiraling out of control, cost-wise, or incurring unplanned costs at inopportune times. Beyond the single-user box, group-licensing models can include a site license, which covers every seat in the organization. Open licensing comprises a set number of seats at a volume discount. Both make for predictable budgeting, without surprise bills in the middle of the fiscal year. Beyond these concerns, if you're installing a PDF solution on more than a few desktops, does the vendor you're considering offer tools enabling IT staffers to manage the process from the server level?

Get the support you need. Another decision factor is the support and online help that come with a PDF solution. Nuance offers a deep, searchable self-help knowledge base on their web site and technical support plans on a per-call or unlimited basis.

The bottom line

PDF Converter Pro is the only PDF tool other than Acrobat that can view and create PDF Portfolios as well as forms in XFA format, and it supports PDF conversion from more file formats than its main competitors. Its paper-to-PDF text conversion is based on Nuance's OmniPage Optical Character Recognition (OCR) engine — a well-established product known for being one of the most accurate on the market — while most other PDF vendors must license someone else's OCR engine.

If your organization's budget dictates that you must segment PDF creation and conversion among different groups of employees, Nuance offers PDF Converter (\$49.99) and PDF Create (\$49.99), PDF Converter's site-license and open-license plans offer budget control and flexibility. Nuance's web site knowledge base helps end-users quickly find answers to most of their questions, and also offers best practices to improve productivity. These choices offer immediate relief from the high costs of Acrobat.

PDF Converter Enterprise (\$149.99) adds redaction, Bates Stamping for legal use and regulatory recordkeeping, and network deployment tools, as well as tech-support plans that give IT departments the means to efficiently roll out and maintain PDF use throughout the organization. It also includes a full-featured PDF viewer that can show all types of content that can be put into a PDF (Flash, 3-D renderings, etc.) — negating the need for switching back and forth into Adobe Reader — and the most robust array of PDF editing features in the PDF Converter line. Furthermore, its integration with Microsoft SharePoint, Hummingbird, Interwoven, and Open Text document management systems, as well as CaseMap from LexisNexis, will help organize the sea of PDF files flowing through your network, and make them accessible for managers, recordkeeping, and regulatory mandates.

Nuance leads the way toward bringing the productivity of PDF to your organization, while saving significant costs over Adobe Acrobat. That holds true whether your business has one employee or 1,000, thanks to the many licensing and support plans available. Join the ranks of thousands of businesses that have already chosen Nuance for their most vital IT projects. While the business world is unlikely to achieve a truly paperless office in our lifetime, a less-paper office is within reach through Nuance PDF.

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