

PDF Optimization Proves to Drive Significant Improvement in Operational Efficiencies and Costs



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In 2016...

2.2 billion PDF files on the (public) web (Google)

20 billion PDF files in Dropbox

Airbus, Boeing and the US Dept. of Justice each have
over 1 billion PDFs

2 billion PDFs opened every year in Outlook.com

73 million new PDF files saved every day in Google
Drive & Mail

60% of non-image attachments are PDFs in Outlook
Exchange Enterprise

Source: PDF Europe Days



An estimated 2.5 trillion PDF documents in the world.

250+ billion PDFs were opened in Adobe products in the last year.

Since 1993 PDF has Been Evolving



- Camelot / Carousel for Windows and OS/2
- Free Reader
- Encryption
- Interactivity
- Expansions to allow more opportunities to expand into new markets
- More toolkits
- More use cases
- Transition to ISO Standard 32000-1:2008 and 2017, curated by ISO TC 171 SC 2 WG 8

Evolution



- [PDF/X](#) (since 2001 - series of ISO 15929 and ISO 15930 standards) - a.k.a. "PDF for Exchange" - for the *Graphic technology - Prepress digital data exchange* - (working in ISO Technical committee 130), based on PDF 1.3, PDF 1.4 and later also PDF 1.6
- [PDF/A](#) (since 2005 - series of ISO 19005 standards) - a.k.a. "PDF for Archive" - *Document management - Electronic document file format for long-term preservation* (working in ISO Technical committee 171), based on PDF 1.4 and later also ISO 32000-1 - PDF 1.7
- [PDF/E](#) (since 2008 - ISO 24517) - a.k.a. "PDF for Engineering" - *Document management - Engineering document format using PDF* (working in ISO Technical committee 171), based on PDF 1.6
- [PDF/VT](#) (since 2010 - ISO 16612-2) - a.k.a. "PDF for exchange of variable data and transactional (VT) printing" - *Graphic technology - Variable data exchange* (working in ISO Technical committee 130), based on PDF 1.6 as restricted by PDF/X-4 and PDF/X-5^[45]
- [PDF/UA](#) (since 2012 - ISO 14289-1) - a.k.a. "PDF for Universal Accessibility" - *Document management applications - Electronic document file format enhancement for accessibility* (working in ISO Technical committee 171), based on ISO 32000-1 - PDF 1.7
- [PDF/Raster 1.0](#) PDF Association - a subset of PDF 2.0 intended for storing, transporting and exchanging multi-page raster-image documents, especially scanned documents



But the Evolution left some debris...

Transform Product Leftovers

Transforming that do not run through the distiller often leave excess non-essential operands.

Ganging/Nesting Leftovers

Batching, imposing, Ganging and Nesting bring print efficiencies, but often result in giant PDFs with resource mismatches.

Font Leftovers and Mismatches

Designers, re-engineering solutions, and prepress operators may leave a trail of fonts and subsets from different platforms and technologies.

Resolution Mismatches

Too low or too high for the target output environment impacts network bandwidth.

File Bloat

From font to image, transparency to color spaces, the excesses take of network and archive space.

Cross Referencing

Cross references are useful, but they can add weight.



Designers Design

- Few understand that decisions they make can change the print efficiency
- Elements pulled from related and unrelated projects
- Ganging of disparate images
- Where images & fonts come from matters – but you may not be able to change those decisions
- It all impacts your RIP speeds and your archivability



PDF Creation = Messy

- Multiple Tools
- Inconsistent design goals
- Elements pulled from related and unrelated projects
- Ganging of disparate images

Put PDF on a Diet



Flatten Layers

Transparency, shading, and layers add processing time to every step and weight to network bandwidth



Fix Fonts

Subsets, missing files, and conflicting names add time to every step and risk faulty output



Tame Transforms

Excess operands and bloated records impeding archive processes and RIP times



Optimize Overhead

Design overhead and transform overhead add time and effort to every process





Solimar At-a-Glance

- **Experts in PDF workflows:**
 - White paper factories
 - Securing data & documents
 - JDF/JMF integration
- **Steady-State Architecture**
 - Scalable, multi-tenant, language localization, globalized releases
- **Active members & focus:**
 - AFP Consortium
 - CIP4 – Advisory Council, XJDF standards
 - MTAC – USPS Advisory Council
 - PDF Standards Committee (2.0/3.0)
 - Solimar User Conference – virtual 2020
 - Solimar University Online (SUO)
 - Solimar Customer Advisory Council



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Enterprise (SPDE)



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Prepress
Server™



Secure
IPP Print
Server™



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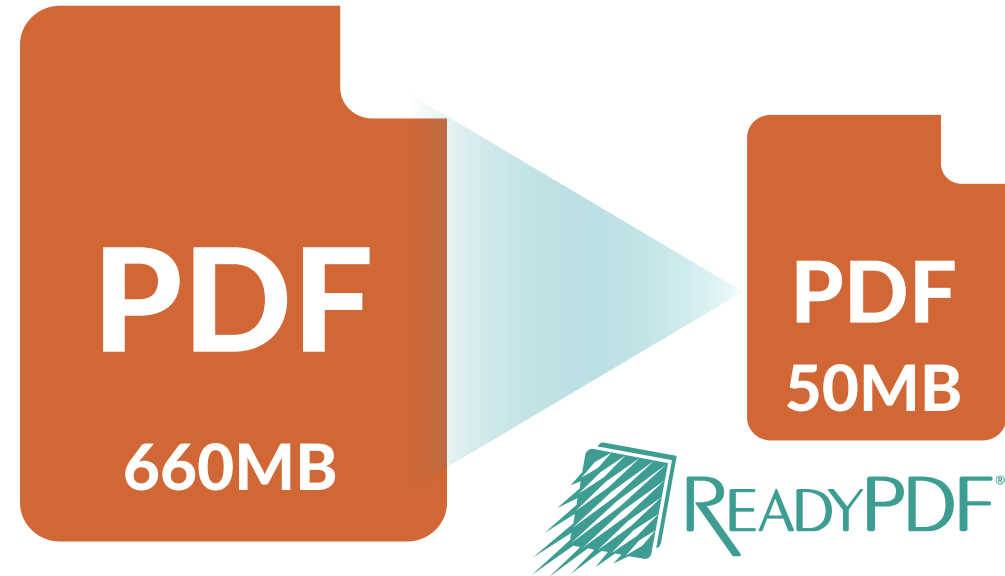
**Tactical to Strategic
PDF Centric Solutions**

Optimized PDF is NEEDED: Why & How



Save Money & Print Faster

Most PDF is poorly constructed, dragging down your workflow



More Efficiency in Every Step

Built for industrial-sized PDF files found in transactional and commercial print work.

Keypoint Intelligence UK Laboratory ReadyPDF Test Results

Catalog



14X
SMALLER

Transpromo



7X
SMALLER

Optimization Results: 4,003 Pages

Before / **After**

Images:

31,162,676 / **16,366 bytes**



99.95%

Content Streams:

8,725,814 / **5,887,307 bytes**



32.53%

Fonts:

53,404,861 / **2,467,320 bytes**



95.38%

Structure Info:

Comments & 3D Content:

Document Overhead:

1,844,907 / **1,197,926 bytes**



35.07%

Color Spaces:

X Object Forms:

Extended Graphic States

Cross Reference Table

1,130,340 / **323,060 bytes**



71.42%

**9.7X
Smaller**

Total File Size (4,003 Pages):

96,268,598 / **9,891,979 bytes**



89.72%

Optimization Results: 10,000 Pages

Before / After

Images:

36,131,366 / 450,893 bytes



98.75%

Content Streams:

24,113,292 / 22,821,794 bytes



5.31%

Fonts:

1,806,181 / 58,177 bytes



96.78%

Structure Info:

Comments & 3D Content:

Document Overhead:

3,575,097 / 1,972,196 bytes



44.84%

Color Spaces:

X Object Forms:

Extended Graphic States

22,082 / 58 bytes



99.74%

Cross Reference Table

889,580 / 0 bytes



100%

2.6X
Smaller

Total File Size (10,000 Pages):

66,537,620 / 25,303,118 bytes



61.97%

Optimization Results: 15,000 Pages

Before / **After**

Images:

4,356,268 / **1,934,355 bytes**



55.60%

Content Streams:

2,353,593 / **1,537,737 bytes**



34.66%

Fonts:

405,243 / **28,343 bytes**



93.01%

Bookmarks:

7,327,263 / **0 bytes**



100%

Comments & 3D Content:

Document Overhead:

12,003,164 / **1,360,125 bytes**



88.67%

Color Spaces:

X Object Forms:

2,252,727,929 / **1,719,535 bytes**



99.92%

Extended Graphic States

Cross Reference Table

3,060,900 / **0 bytes**



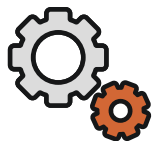
100%

**346.8X
Smaller**

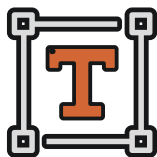
Total File Size (15,000 Pages):
2,282,234,360 / **6,580,095 bytes**



99.71%



RESOURCES



FONTS



COLORS



IMAGES

8 WAYS

OPTIMIZING PDF HAS EVOLVED



OBJECTS



STRUCTURE



OBFUSCATION



AUTOMATION

Benefits That Save \$\$\$:

- **Subset Font Correction**
- **Font Consolidation/Embedding**
- Image Downsampling
- Color Tuning including ICC color profiles
- Resource Caching
- **Processing of Large Files/Volumes**
- Advanced Control of Transparencies
- **Structural Corrections**
- Tuned Output for Multiple Destinations
- Templatized Automation
- **Obfuscate Content to Secure PII**

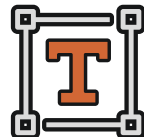


GOT UGLY PDF?

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SOLIMAR PDF OPTIMIZER!



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& REUSES
RESOURCES



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CONSOLIDATES
FONTS



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COLORS



OPTIMIZES
IMAGES



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& REMOVES
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Many thanks - ping us to learn more!

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