

PDF/X: The Standard for Prepress Files

David L. Zwang
Chairman Ghent PDF Workgroup



Ghent PDF
Workgroup



What's PDF/X?

- A family of ISO standards
- Subsets of PDF
- Designed to increase the reliability of submitting files for print

- NOT a product
 - _ You can't buy PDF/X



Where does PDF/X fit in?

- Completely naïve customers
 - _ Request application files
- Naïve customers with frequent new jobs
 - _ Use automated preflight & submission tools
 - _ Download & install on customer computer, on-line service, or on your web site
- Fully automated, low-cost
 - _ Automated preflight on submission web-site
 - _ Range of options as to file formats supported
- Moderately sophisticated print buyers and advertisers
 - _ Request PDF/X files
- Sophisticated customers with new or repeat jobs
 - _ Agree best format between you
 - _ PDF/X is a good starting point



What does PDF/X do for you?

- Makes it easier to avoid errors when preparing files for submission
- Makes it easier to tell a customer how to reduce their error rate
 - _ “Save as PDF/X” options becoming more common
- Improves the match from pre-submission proof to final print
 - _ if the customer proofs from the PDF/X file!
 - _ if the print provider/publisher uses a PDF/X-compliant workflow
- Reduces the risk of processing errors in prepress
 - _ when using relatively up-to-date equipment





How does it do that?

- Restricts PDF specification
 - _ All fonts must be embedded
 - _ All colors must be fully described
 - _ Files must be tagged as trapped or not
 - _ Page trim box must be set
 - _ “Output intent” must be defined
 - _ No actions, javascript, etc



What does PDF/X not do?

- Does not set:
 - _ Minimum type size or rulte weight
 - _ Maximum total ink coverage
 - _ Min or max image resolution
 - _ Etc....



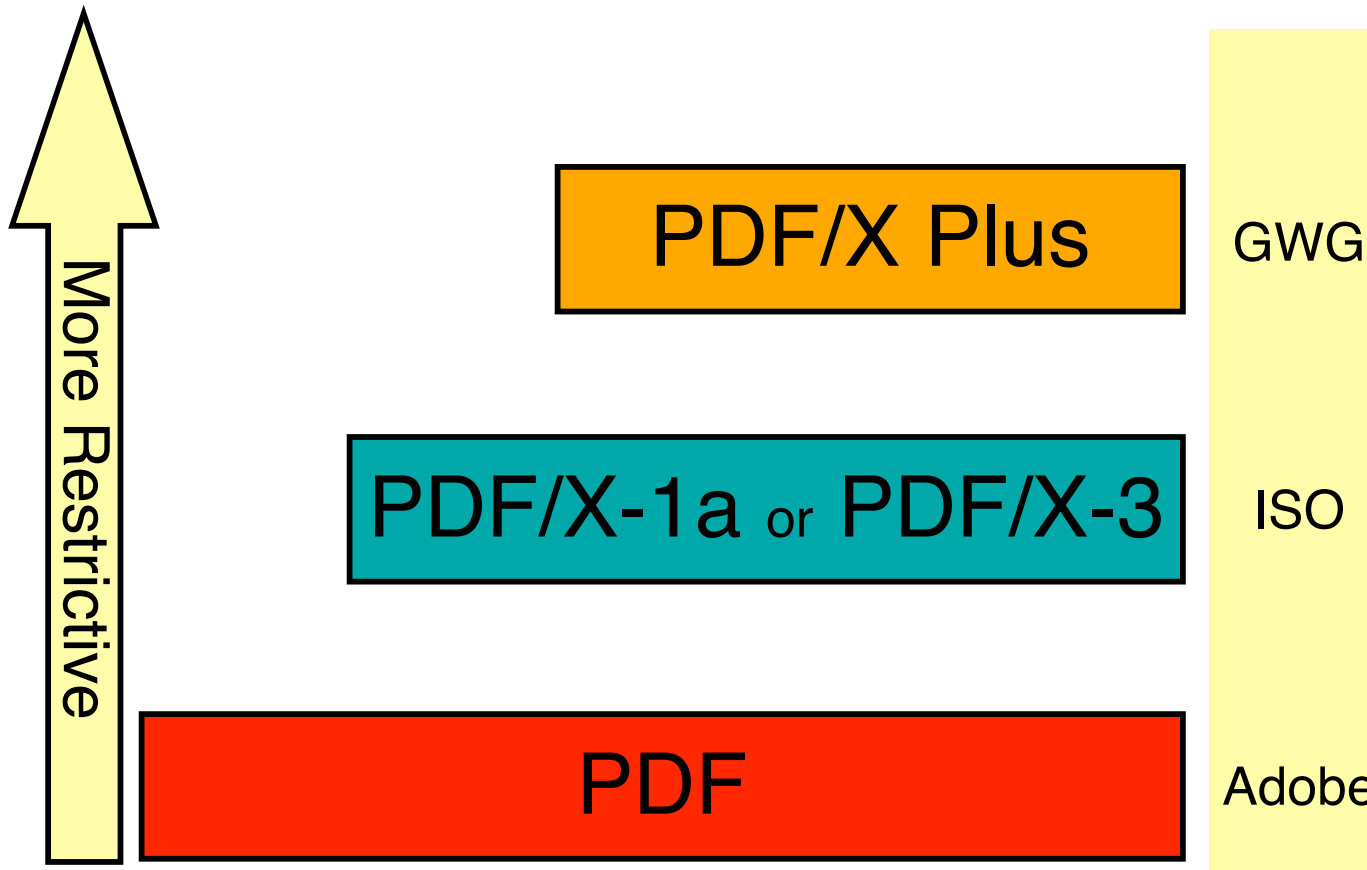


PDF/X Plus

- Specifications from geographical, print sector-specific etc groups
 - _ Ghent PDF Workgroup
 - www.gwg.org
- Each designed for specific use
- Fill in image resolution, min type size etc.



PDF/X Plus Concept



What PDF/X standards are there?

- PDF/X-1:1999 (ANSI/CGATS)
- PDF/X-1:2001
- PDF/X-1a:2001 – CMYK (& spot)
- PDF/X-3:2002 – CMYK (& spot)
and color managed
- PDF/X-1a:2003
- PDF/X-2:2003
- PDF/X-3:2003





Which PDF/X standard should I use

- Ask your printer
- If no recommendation ...
 - _ Use an appropriate PDF/X Plus spec
 - _ Included in many applications
 - _ www.gwgg.org
- If no appropriate PDF/X+ spec ...
- Talk to printer!





Which PDF/X standard should I use?

- CMYK & Spot: PDF/X-1a:2001
- Do you need/want color-managed workflow?
 - _ “RGB” workflows?
 - _ Transfer of responsibility for “correct” color to PDF creation or print company?
 - _ Using digital presses with color management and no clear CMYK print condition to match?

PDF/X-3:2002



Ghent PDF
Workgroup



Setting “output intent”

- Defines Print Conditions
- “CMYK”
 - _ Does not define ‘color’
 - _ Lots of different CMYK
- PDF/X files include an “output intent”
 - _ Says which CMYK the file was prepared for
 - _ Aids with preflight and proofing
 - _ ICC profile(s) for images in PDF/X-3 files





Which print condition should I choose?

- Use appropriate Regional Standards
 - _ US
 - _ Europe
 - _ Japan
- Working on 'Global' agreement
- Ask your printer!





Does it work?

- Yes
- One agency reported:
 - _ 37% failure rate with baseline PDF
 - _ 2% with PDF/X-1a
- Is it a silver bullet?
 - _ No



Up-coming PDF/X standards

- PDF/X-4
 - _ Based on PDF 1.6
 - _ Color support similar to PDF/X-3
 - _ Enables versioning through restricted use of layers
 - _ Allows live PDF transparency
- PDF/X-4p
 - _ PDF/X-4, but allowing output intent profiles to be external to the file
 - _ Designed for catalogs, on-line template-based job creation, variable data printing etc
- Publication expected Q3 2007



Up-coming PDF/X standards

- PDF/X-5g
 - _ As PDF/X-4, with external graphics, enabling OPI-like workflows for parallel workflows etc
- PDF/X-5pg
 - _ PDF/X-4p & PDF/X-5g – external graphics and output intent profiles
- PDF/X-5n
 - _ PDF/X-4p, but not limited to CMYK print conditions, enabling support for Hexachrome etc
- Publication expected Q3 2007



Using PDF/X-4

- Use with care
 - _ Print provider must have equipment newer than average
- Much better than “just send me a PDF”
 - _ If a print provider can take any PDF, they can take PDF/X-4
 - _ BUT in the short-term the output intent may not be acted on



Using PDF/X-4p and PDF/X-5

- Don't use without discussions between customer and print provider
- Will need new versions of software from vendors to support
- Which comes first, the standard or the software that implements it?



Thank You!

www.gwg.org

david@zwang.com



Ghent PDF
Workgroup