



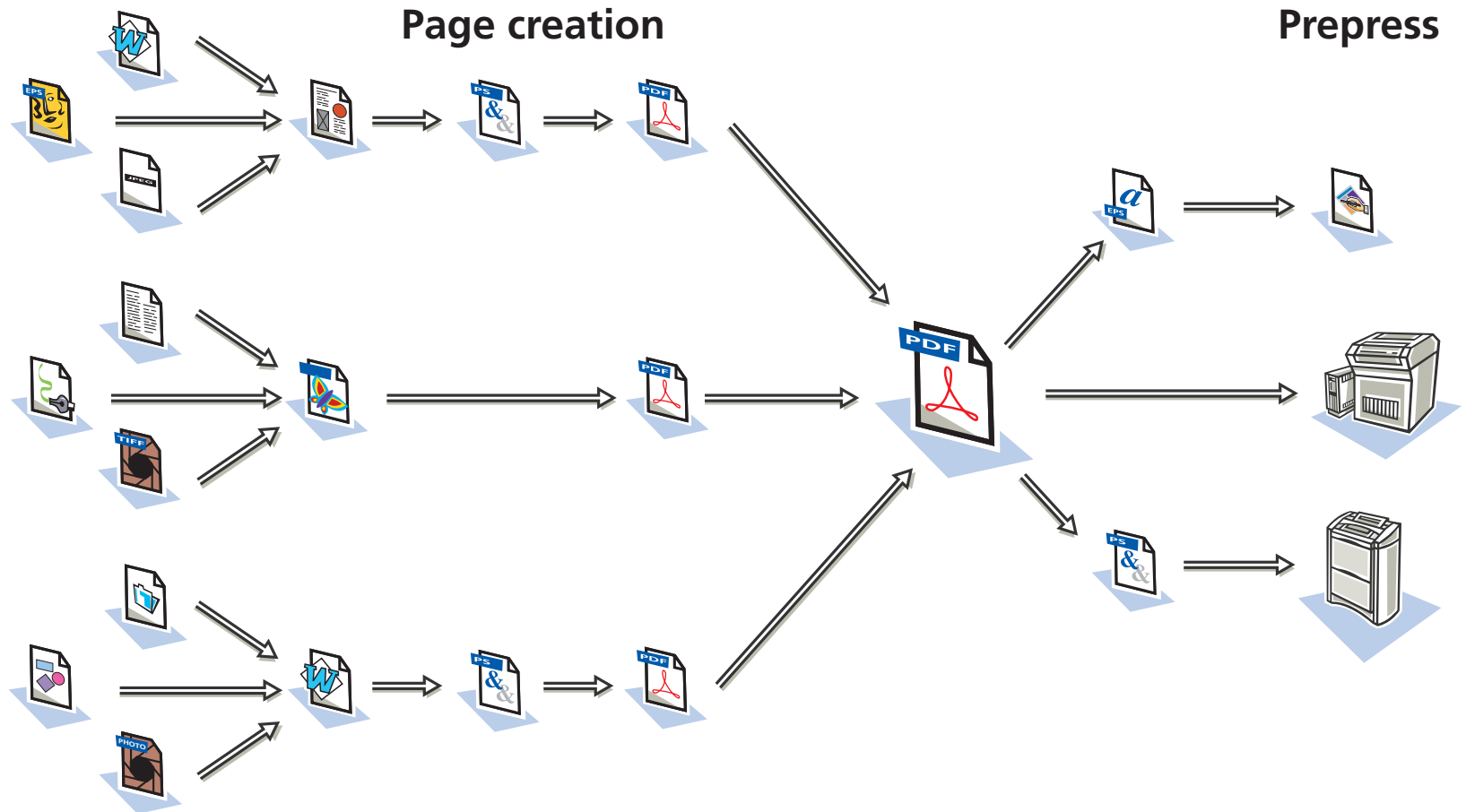
PDF/X Standard

- Why PDF/X ?
- History of PDF/X
- PDF/X family
- Differences
- Creation
- Support
- Importance





Universal data exchange ?





PDF is too powerful...

- PDF is designed to work with very different applications
 - Office communication
 - Archives (CD-ROM)
 - Internet
 - Interactive publications
 - Prepress data exchange
- PDF documents can contain elements which create problems in imaging
 - RGB images, 72 dpi
 - Movies
 - Form fields
 - Comments

Not all PDF documents are suited for imaging!





Goals for PDF/X

- Use of PDF for prepress data exchange
- Complete (blind) exchange
 - Everything is defined properly
 - No additional information necessary
- Method
 - A limited PDF feature set
 - Definition of the minimal requirement





Little history of PDF/X

- 1995: First discussion at DDAP (USA)
- 1996: CGATS project (USA)
- Nov. 1999: PDF/X-1 becomes an ANSI-Standard (USA)
- 2000: Proposal of US ISO delegation to use PDF/X-1 for the ISO standard
- Opposition in Germany and Switzerland
- Sept. 2000: Submission of PDF/X-3 at ISO meeting
- May 2001: PDF/X-3 voting
- Sept. 2001: PDF/X-3 final draft discussed at ISO meeting in Chicago
- Five month balloting => 1st quarter 2002

<http://www.eci.org/pdfx3.pdf>





PDF/X family

PDF/X-1a < PDF/X-3 < PDF/X-2

- **PDF/X-1**
 - Complete (blind) exchange
 - Only CMYK + spot colors (no ICC-based colors)
 - Based on PDF 1.2 (No DeviceN, 2-byte fonts)
 - Allows embedding of pixel images (TIFF-IT, DCS, EPS)
=> expensive software necessary
- **PDFX-1a**
 - Like PDF/X-1, but without embedded files
 - New version based on PDF 1.3
- **PDF/X-2**
 - Incomplete exchange (without highres images)
- **PDF/X-3**
 - Complete (blind) exchange
 - Based on PDF 1.3 (Multitones, spot color gradients, ...)
 - Allows ICC-based workflow (as well as CMYK)





Differences PDF – PDF/X-3

- **Restrictions**
 - No RGB images (without ICC profile)
 - No annotations inside MediaBox
 - No visible form fields, buttons and links
 - No encryption
 - No external references (images, fonts)
- **Requirements**
 - All fonts must be embedded
 - All images must be in high resolution
 - Trapping key (with/without trapping)
 - Page geometry (BleedBox, TrimBox)
- **Enhancements**
 - PDF/X identification in info dictionary
 - Embedded ICC profile to characterize the intended printing condition





Adobe TechNote# 5413

- **“Recording OutputIntents for Color Critical Workflows”**
 - Embedding of an ICC output profile in PDF
 - Enhancement of PDF 1.3 (and 1.4)
- **Applications**
 - Color transformation for output
 - Page proof

<http://partners.adobe.com/asn/developer/pdfs/tn/5413.OutputIntentions.pdf>





Creation

- **Direct export (layout application)**
 - **DDAP meetings at Seybold Boston and San Francisco...**
- **Via PostScript**
 - **Distiller 4.05 (or higher)**
 - **Acrobat-Plugin (pdfInspector for PDF/X-3)**
 - **Preflight**
 - **Correction**
 - **Embed/extract of ICC output profile**
 - **Adds/checks PDF/X identification in info dictionary**





Support

- Free PDF/X-3 tools (Mac/Win)
 - Sponsored by bvdm, EMPA/UGRA, ifra
 - Acrobat Plugin (callas)
 - Distiller joboptions (Stephan Jaeggi)
 - PPD file (Stephan Jaeggi)
 - ICC output profiles (fogra, ifra, ECI, etc.)
- Free PDF/X-3 cookbooks
 - European Color Initiative (ECI)
 - <http://www.eci.org>





Importance of PDF/X-3

- Official ISO standard (also DIN) for prepress digital data exchange
- No individual arrangements between sender and receiver necessary
- Greater reliability
- Color Management allowed but not necessary
- Can be created with off the shelf Acrobat
- Tools free for everybody
- Support in layout and prepress applications coming

