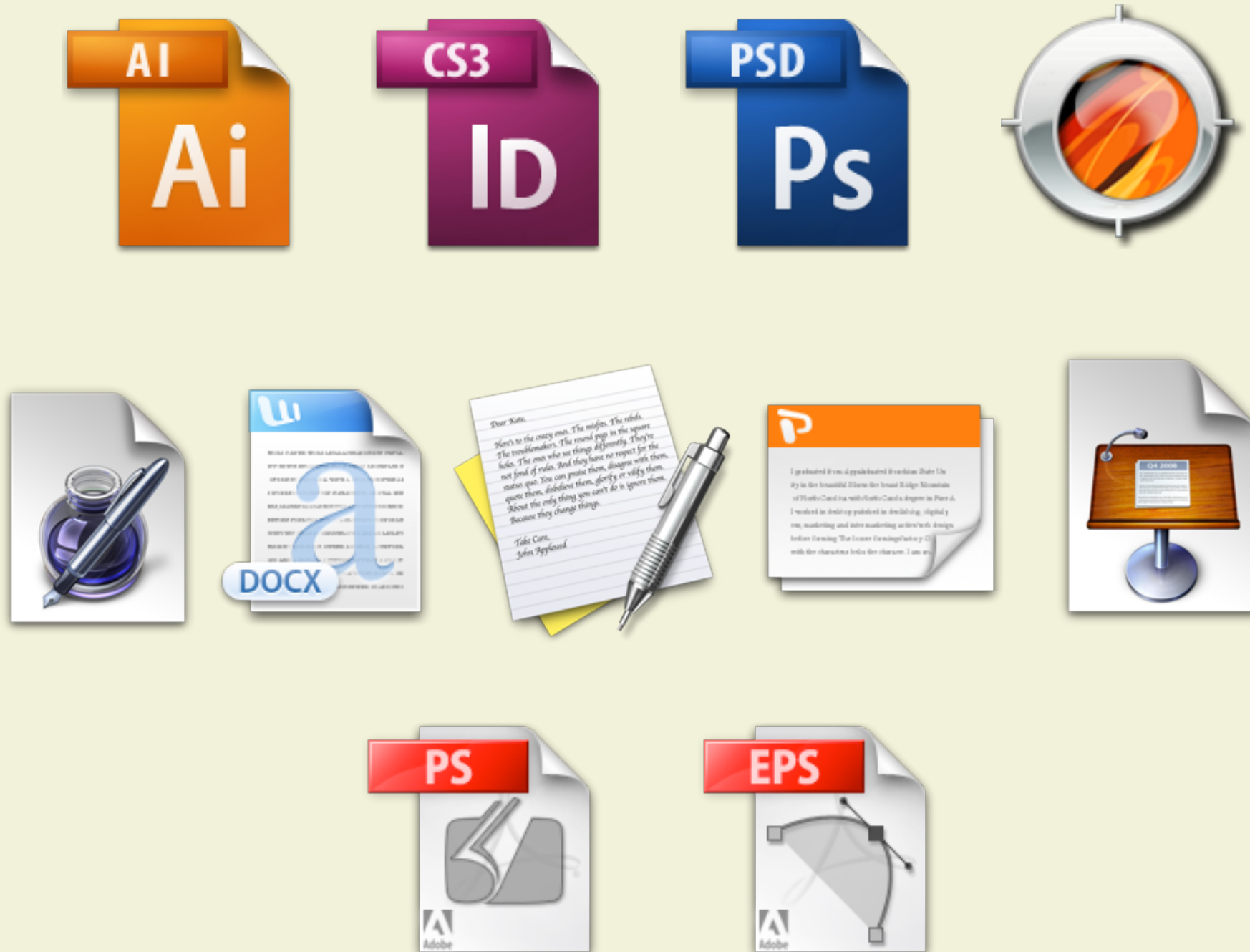# 7 Minutes with PDF/X

David van Driessche

Chief Technology Officer, Four Pees
Marketing Officer, GWG

The Problem
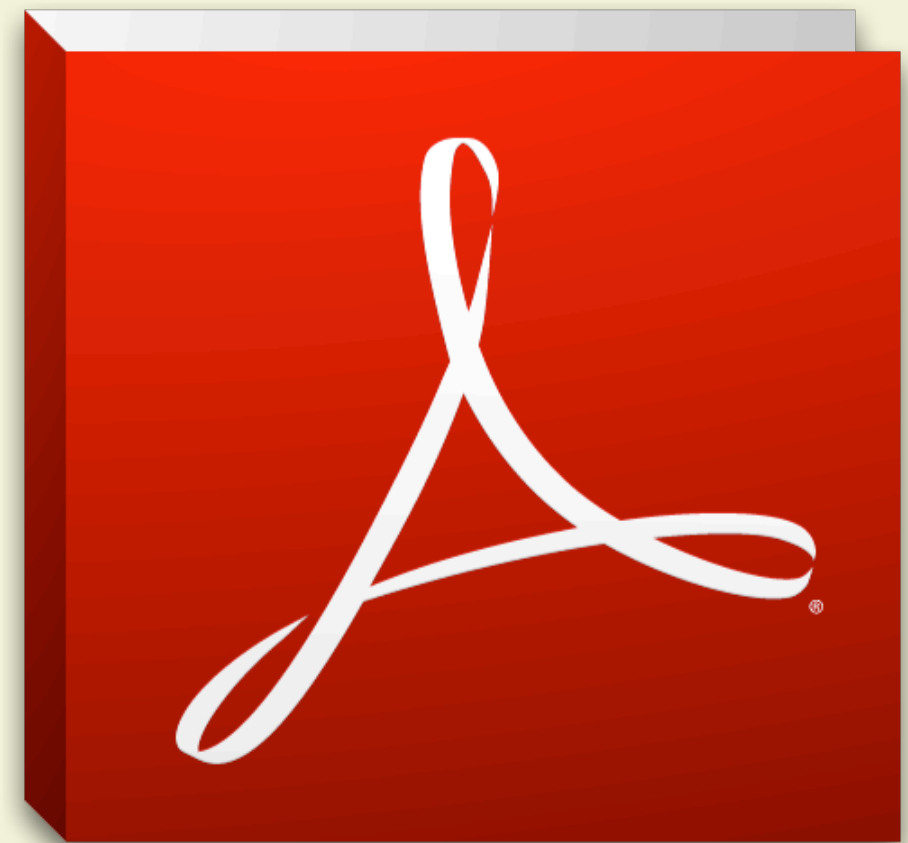
The Problem

The Problem

The Solution!

Oooops

- Missing fonts
- RGB color used
- Incorrect page boxes
- Movie included in PDF file
- Printable annotations obscuring content
- Problems with fonts used
- Postscript fragments included

- ...

The Solution!

PDF/X (AKA ISO 15930)

- X for "Blind eXchange"
- A base format for PDF files in the graphic arts industry
  - Restrictions on allowable color spaces
  - Structural guarantees on the PDF file format
  - Demands on having all information present in the PDF file
  - Restrictions on anything that could cause ambiguities

Strawberry or Vanilla?

- PDF/X-1
- PDF/X-1a   CMYK + Spot
- PDF/X-2
- PDF/X-3   Also ICC-Based color
- PDF/X-4   Transparency, Layers, JPEG2000...
- PDF/X-4p
- PDF/X-5
- PDF/X-5n
- PDF/X-5g
- PDF/X-5pg

FOUR PEES
FOR PRINT & PUBLISHING

Advantages

At least one embedded font is syntactically incorrect.

❌ Font not embedded (Copy 4)
❌ Glyphs missing in embedded font
❌ License for TrueType font does not permit embedding
❌ OpenType font used
❌ Alternate image is default for printing
❌ Alternate image uses compression type prohibited in PDF/X-1a or P
❌ Bits per color component > 8
❌ Image and it's alternate do not have same size and position
❌ Image has OPI information
❌ Image is not valid
❌ Image uses compression type prohibited in PDF/X-1a or PDF/X-3
❌ Transparency used (soft mask in image)
❌ Alternate color space not DeviceCMYK or DeviceGray
❌ Object uses RGB
❌ Uses device independent color
❌ Transparency used (filled object with ca value smaller than 1.0)
❌ Transparency used (stroked object with CA value smaller than 1.0)
❌ Has TR2 (transfer curve) entry
❌ Transfer curve used (Copy 4)
❌ Transfer function in halftone dictionary improperly used
❌ Transparency used (blend mode not "Normal" nor "Compatible")
❌ Transparency used (soft mask) (Copy 4)
❌ Transparency used (transparency group)
❌ Halftone not of type 1 or 5
❌ Halftone phase entry present
❌ HalftoneName key present
❌ Syntax problem: Unknown operator in page description
❌ PostScript embedded (PostScript Form XObject)
❌ PostScript embedded (XObject)
❌ PostScript operator embedded
❌ 3D annotation used (Copy 4)
❌ Annotation inside page area
❌ PrinterMark annotation inside TrimBox
❌ Interactive form field inside page area
❌ Page boxes not nested properly
❌ Page does not have MediaBox
❌ Page does not have TrimBox or ArtBox
❌ Page has TrimBox and ArtBox (but must only have one of this)
❌ Page is a separated plate
❌ Page uses compression type prohibited in PDF/X-1a or PDF/X-3
❌ Scaling factor used

PDF is not compliant with any of

❌ ▾   ☑ PDF/X-1a (2001)   ☑ PDF/X-1a (2003)   ☐ PDF/X-3 (2002)

☐ PDF/X-3 (2003)   ☐ PDF/X-4   ☐ PDF/X-4p

☐ PDF/X-5g   ☐ PDF/X-5pg

Advantages

- An international standard makes standardization and acceptance of standardization much easier

Thanks!
Questions?