



PDF as IPP FAX Format

Rick Seeler

Adobe Systems Incorporated





PDF Licensing Issues

Phone Conference

- **Adobe Participants:**
 - Scott Foshee
 - Rick Armstrong
 - Rick Brown



Why use PDF?

- Comparable compression algorithms compared to TIFF-FX
- Use existing 'Reader' to view on PCs.
- Avoids legal issues over TIFF & MRC licensing.



Two PDF Solutions

Features they have in common

- Viewable with current Acrobat Reader 5.0
- JBIG2 Bi-Level Compression (3X – 7X better than CCITT G4)
- JPEG (DCT) Gray/Color Compression
- JPEG2000 in a coming release. (~4X better than JPEG)
- Data is created single pass – no post processing required.
- Data can be printed with minimal buffering – no more than a single page.
- Random access not required to create or print.



Solution 1

Separate PDF for each page

- **Pros**

- No restrictions on file structure.
- Can be created with existing PDF creation code (Adobe's PDFLibrary, etc.)
- Low risk – proven.
- Quicker to implement.

- **Cons**

- Multiple files per document
- Somewhat larger total document size (a few %)



Solution 2

New PDF Sub-Format -- "PDFax"

- Fundamentally a page ordering scheme – all objects for particular page are transmitted together.
- Any PDF can be modified to meet this spec.
- Could be made into new PDF/X ISO standard
- Pros
 - Single file for entire document
 - Smaller total document size
- Cons
 - Requires new production process – modification of 'PDF Library' or third-party implementation.
 - Restrictions on file organization



PDFax

Format Specification Proposal

- **Special Dictionary Object in object 1 indicates document is 'PDFax'.**
- **All pages must be in order (1..N).**
- **All objects for current page must occur after current 'Page' object and before next 'Page'.**
- **All 'Content' and 'Resource' objects may only appear after they are referenced..**
- **The 'Content' object must include an image of the page.**
- **Objects not part of 'Content' or 'Resource' can be ignored.**
- **Fully conforms to PDF 1.4 Specification.**



PDFax

- **JBIG2 Sample Files**
- **Sample “PDFax”**
- **Free PDF 1.4 Reference books – one per company, please.**



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