**Get ready for PDF 2.0**

It’s been a long time coming but PDF 2.0—aka ISO 32000-2—is due to be officially published in the middle of 2017. The next generation of the standard Portable Document Format, PDF 2.0 is the first major update in the post-Adobe world of PDF. The last one, PDF 1.7, became ISO 32000-1 in May 2008 so we’re talking the better part of a decade.

While there are a lot of changes, they primarily affect developers, giving them clearer, cleaner direction for developing software that relies on PDF technology, so we’ll just mention the major ones. But first, let’s explore why there’s a PDF 2.0 to begin with.

**Why update PDF?**

PDF 2.0 fixes many of the ambiguities that were present in the previous standard, provides concise and clear PDF specifications, and includes a range of new features that can be applied in many fields that rely on PDF.

Overall, it’s mainly been done to clarify how PDF works and should work in various technical scenarios where developers are creating new and better PDF-related tools and applications. As the PDF Association puts it, “PDF 2.0 makes it easier for developers to create tools to manage electronic documents with more and better features at a reduced cost.”

**New features introduced in PDF 2.0**

New features that have been specifically added to PDF 2.0 include:

* CAdES signatures and Long-Term Validation of Signatures
* Unencrypted wrapper document
* Document parts (DPart)
* Various enhancements for print and rendering-related features
* New annotation types to support projections, rich media, 3D annotations
* Geospatial features
* Navigators, to support graphical representation of embedded files
* Associated files
* Pronunciation hints
* Tagged PDF has several new standard structure elements and attributes

**New capabilities to existing features in PDF 2.0**

* Support for UTF-8
* Transparency and blend mode attributes for annotations
* Stamp Annot intent
* Polygon/Polyline real paths
* 256-bit AES encryption
* ECC-based certificates
* Unicode-based passwords
* L (length) key for inline image data
* Thumbnails for embedded files
* GoToDPart action
* Document requirement extensions
* New value for tab order of fields and annotations
* Etc,…

**Reorganization of existing features**

In addition, extensive sections of the specification have been rewritten and reorganized, including:

* 10.1~10.3, Rendering
* 11, Transparency
* 12.8, Digital Signatures
* 14.3, Metadata
* 14.8, Tagged PDF
* 14.9, “Repurposing and accessibility support”

**Deprecated features**

“Deprecation” means that tools reading PDF 2.0 files are recommended to ignore these features if they find them. But it’s not advisable for us to fully ignore those features because many PDF files are still created based on the previous standard with deprecated features included.

* PDF 2.0 deprecates features including:
* RC4 encryption algorithm in standard encryption and decryption (adding AES-256 encryption instead)
* All the keys except “CreationDate” and “ModDate” in document information dictionary, including “Title”, “Author”, etc.
* XFA forms

The biggest change: make the text easier to understand and use

Most of the changes to PDF 2.0 are to simplify and correct the text of the previous PDF standard. According to the PDF Association, “the text of PDF 2.0 is significantly clearer and more consistent in terms of describing the various features, requirements and considerations in PDF technology.” And it’s designed to help developers write better, clearer, enhanced pdf software and features, which is good for everyone.

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