

# **PDF 2.0 specification overview**

Written by Apitron documentation team

As you probably know the PDF 2.0 specification has been recently released and it introduced many long awaited features as well as deprecated some stuff. Here we would like to highlight the changes, so you could have an overview of what is going to happen in PDF world soon. Our dev team is working on adding support for all the new features and some of them are already implemented, but nevertheless it will take some time to align the products with the new spec.

So here are the features:

- "Unencrypted wrapper document" – the way to use custom encryption algorithms for encrypting string and streams
- "Use of black point compensation" – related to rendering intents and color conversion using ICC
- "Projection annotations" – projection annotations provide a way to save 3D and other specialized measurements and comments as markup annotations. These measurements and comments then persist in the document
- "CADES signatures as used in PDF" – adds new subfilter to PDF signatures
- "Long term validation of signatures" along with the "Document Security Store (DSS)" and "Document timestamp (DTS) dictionary" specifies the way to store the information needed to validate signatures on a long-term basis (CRL, OCSP and Timestamp data)
- "Geospatial features" – new way to store geospatial data
- "Rich media" annotations – common framework for video, audio and animated content
- "Namespaces" for tagged PDF – new way for preserving logical structure of docs converted from other formats
- "Pronunciation hints" – a way to aid text-to-speech processors with correct pronunciation
- "Document parts" – specifies the way to divide the document into logical parts with different purposes, simply speaking, defining subdocuments
- "Associated files" – a way to indicate the relationship between the PDF objects in the document and content in other formats
- Support for ISO 14739-1:2014 Product Representation Compact (PRC) file format
- Support for UTF-8

Existing PDF features were updated by adding the following capabilities:

- Transparency and blend mode attributes for the annotations
- Stamp Annot intent
- Polygon and Polyline real paths
- 256-bit AES encryption
- ECC-based certificates
- Unicode based passwords
- Document requirement extensions
- New value for tab order of fields and annotations
- Page-level OutputIntents
- Referenced (external) OutputIntents
- Thumbnails for embedded files
- Halftone Origin (HTO)
- Measurement and Point Data for image and form XObjects

- L (length) key for inline image data
- Viewer preferences enforcement (for print scaling)
- 3D measurements
- GoToDp action
- RichMediaExecute action
- Extension for GoTo and GoToR supporting linking to specific structure elements
- Extension for Signature Field Locks and Signature Seed Values
- Extensions for 3D viewing conditions, including transparency
- Ref (reference) structure elements
- PageNum and Bates artifact types
- New list types for structured lists
- “Short” (short name) attribute for table header cells
- Extensions to OutputIntents (MixingHints and SpectralData)

And of course, many things were deprecated, see the list below:

- XFA (finally!) including NeedsRendering
- Movie, Sound and TrapNet annotations
- Movie and Sound actions
- Info dictionary
- Assistive technology restrictions via DRM
- ProcSet
- Operation system specific file specifications
- Operation system specific additions to Launch actions
- Names for XObjects
- Names for Fonts
- Arrays of Blend Modes
- Alternate Presentations
- Open prepress interface
- CharSet (For Type 1 fonts)
- CIDSet (for CID fonts)
- Prepress viewer preferences (ViewArea, ViewClip and so on)
- NeedAppearances
- *adbe.pkcs7.sha1* subfilter, as SHA1 was considered weak
- *adbe.x509.rsa\_sha1* subfilter, same as above
- Encryption of FDF files
- *Suspects* flag in MarkInfo dictionary
- UR signatures

If we missed something just let us know and we'll add it asap. New releases will be available soon, so keep an eye on [Apitron PDF Kit](#) and [Apitron PDF Rasterizer](#) pages and nuget packages.