



PDF and Standards

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We Live in a Standards-Based World...or do we?

SYSTEM	SIZES																
Europe	35	35½	36	37	37½	38	38½	39	40	41	42	43	44	45	46½	48	
Mexico						4.5	5	5.5	6	6.5	7	7.5	9	10	11	12	
Japan	M	21.5	22	22.5	23	23.5	24	24.5	25	25.5	26	26.5	27.5	28.5	29.5	30.5	31
	W	21	21.5	22	22.5	23	23.5	24	24.5	25	25.5	26	27	28	29	30	31
U.K.	M	3	3½	4	4½	5	5½	6	6½	7	7½	8	8½	10	11	12	13
	W	2½	3	3½	4	4½	5	5½	6	6½	7	7½	8	9½	10½	11½	13
Australia	M	3	3½	4	4½	5	5½	6	6½	7	7½	8	8½	10	11	12	13
	W	3½	4	4½	5	5½	6	6½	7	7½	8	8½	9	10½	11½	12½	14
U.S. & Canada	M	3½	4	4½	5	5½	6	6½	7	7½	8	8½	9	10½	11½	12½	14
	W	5	5½	6	6½	7	7½	8	8½	9	9½	10	10½	12	13	14	15
Russia & Ukraine	W	33½	34		35		36		37		38		39				
Korea (mm)		228	231	235	238	241	245	248	251	254	257	260	267	273	279	286	293
Inches		9	9 1/8	9 1/4	9 3/8	9 1/2	9 5/8	9 3/4	9 7/8	10	10 1/8	10 1/4	10 1/2	10 3/4	11	11 1/4	11 1/2
Centimeters		22.8	23.1	23.5	23.8	24.1	24.5	24.8	25.1	25.4	25.7	26	26.7	27.3	27.9	28.6	29.3
Mondopoint		228	231	235	238	241	245	248	251	254	257	260					



Standards Benefit Business and Government

- Facilitate interoperability
- Streamline regulatory compliance
- Align software development with industry need
- Raise quality, reliability, efficiency levels
- Help provide access to all



PDF & Standards Overview



PDF – the “Digital Envelope” for all your content

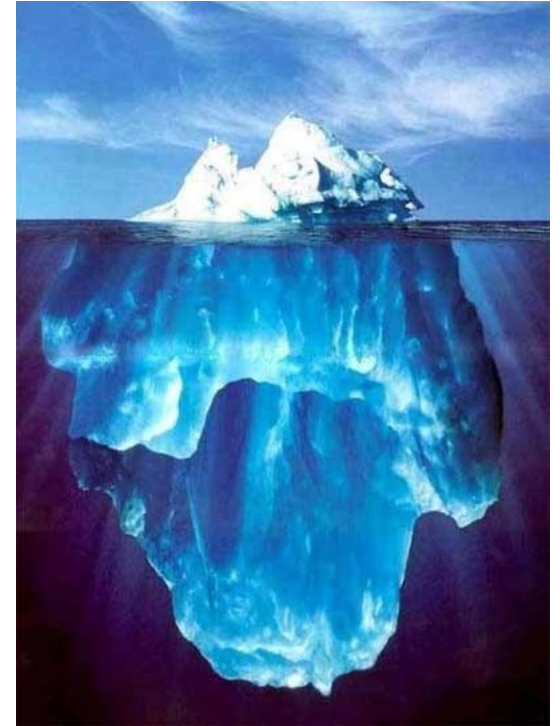
- A comprehensive format for representing documents and forms
- Solid Core Features
 - High fidelity, high precision text layout with embeddable fonts
 - High-end device independent, color managed graphics features
 - Layered content model with associated rich semantic s
 - Security & digital signatures
 - Platform independent definition
- Features for Interactive Documents
 - Document and Collection navigation elements
 - Framework for commenting, markup and collaboration
 - Interactive forms with integrated business logic
 - Multimedia
 - 3D



Purpose of PDF Subset Standards

- Create a focused subset of PDF for a specific “use case”
 - PDF/X - Print Publishing
 - PDF/A - Long Term Archiving
 - PDF/E - Engineering (AEC + Building, Manufacturing, and Geospatial)
 - PDF/VT – Variable and Transaction Printing
 - PDF/UA – Universal Accessibility
- Or provide “best practices” use of PDF in various industries or areas of use
 - PDF for Healthcare

- Provide guidelines for correct viewer behavior to ensure that files are viewed the same whenever & wherever



PDF/X

ISO 15930



- Subset of PDF (1.3/1.4/1.6)
 - Removes things that can be problematic for printing
 - Security, etc.
 - No transparency
 - All print elements prepared for a single intended printing condition
 - OutputIntent
 - Requires all resources (eg. Fonts) embedded
- Conforming Viewer" Requirements



PDF/X Flavors

- PDF/X-1a (PDF 1.3)
 - CMYK + Spot Colors only
- PDF/X-3 (PDF 1.3)
 - Color managed color
- PDF/X-4 (PDF 1.6)
 - Complete PDF Transparency model
 - Optional Content for regional versioning
 - JBIG2 and JPEG2000 Compression
 - Support for XML-based metadata (XMP)
 - More reliable rendering based on lessons from PDF/A
 - Low level font tests
 - ICC version requirements, etc.

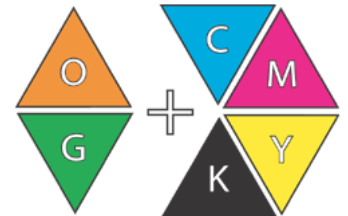


PDF/X-4p - 'p' for Profile

- A conformance level of PDF/X-4 that allows for the “output intent ICC profile” to be referenced by URL instead of embedded in the PDF.
- Requested by the European Newspaper community to enable distribution of smaller files with common/standardized profiles
 - BUT NEVER USED ☹️.



- Extensions to PDF/X-4 to enable specific uses where not all “resources” are present in the PDF and exchange requires “out of band” discussion
- X-5g - External “Graphics”
 - Allows parts of a PDF to be included by reference
 - Via Reference XObjects
- X-5pg - 5g + 4p
 - External graphics and a referenced profile
- X-5n - “N-Colorant Profile”
 - Allows the use of an Output Intent profile with >4 colors
 - (eg. Hexachrome or HiFi color)



PDF/A ISO 19005



PDF/A-1 – PDF for Archiving

- **ISO PDF/A 19005-1 (based on PDF 1.4) - Published October 2005**
- Standard defines what is required, recommended & prohibited
- For more information visit: http://www.aiim.org/pdf_a

- ✓ An archival replacement for paper
- ✓ Customized to offer consistent, long-term retrieval and rendering
- ✓ Includes document metadata (XMP) for search and retrieval
- ✓ Engineered for reliable migration and future compatibility
- ✓ Digital signatures are for verification and not authentication
- ✓ Developed and maintained by PDF/A ISO committee

PDF/A Details:

- ☒ All data must be self-contained
- ☒ All color is managed
- ☒ No encryption
- ☒ No multimedia
- ☒ No JavaScript
- ☒ No Transparency or Layers
- ☒ No JPEG2000
- ☒ No Attachments
- ☒ Basic Digital Signatures

PDF/A-2 – PDF for Archiving

- **ISO PDF/A 19005-2** (based on **ISO 32000-1**) - **Published June 2011**
- Standard defines what is required, recommended & prohibited
- For more information visit: http://www.aiim.org/pdf_a

- ✓ An archival replacement for paper
- ✓ Customized to offer consistent, long-term retrieval and rendering
- ✓ Includes document metadata (XMP) for search and retrieval
- ✓ Engineered for reliable migration and future compatibility
- ✓ Digital signatures are for verification and authentication
- ✓ Developed and maintained by PDF/A ISO committee

PDF/A Details:

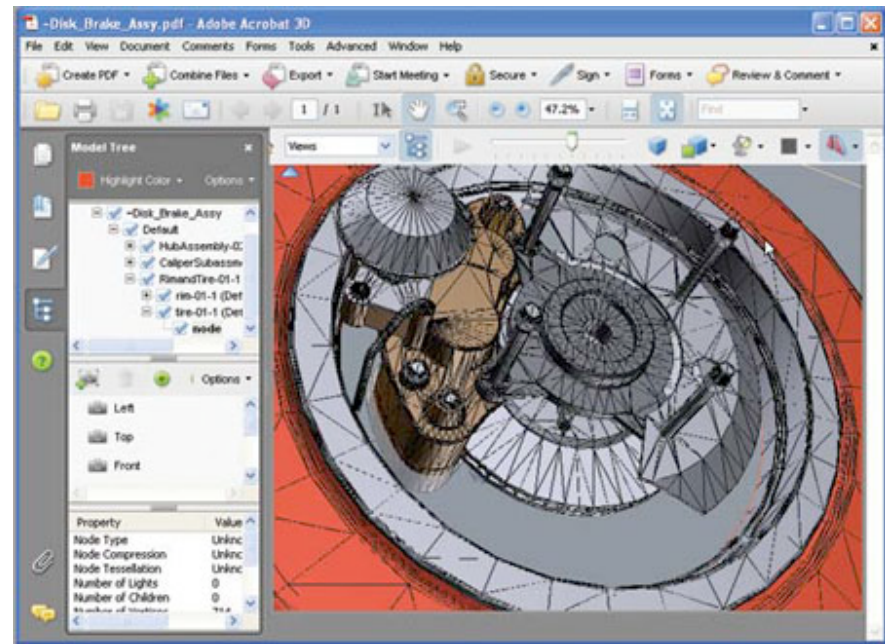
- ☒ All data must be self-contained
- ☒ All color is managed
- ☒ No encryption
- ☒ No multimedia
- ☒ No JavaScript
- ☒ Supports Transparency & Layers
- ☒ Supports JPEG2000
- ☒ Only PDF/A Attachments
- ☒ Advanced Digital Signatures (**PAdES**)

PDF/A-3 – PDF for Archiving

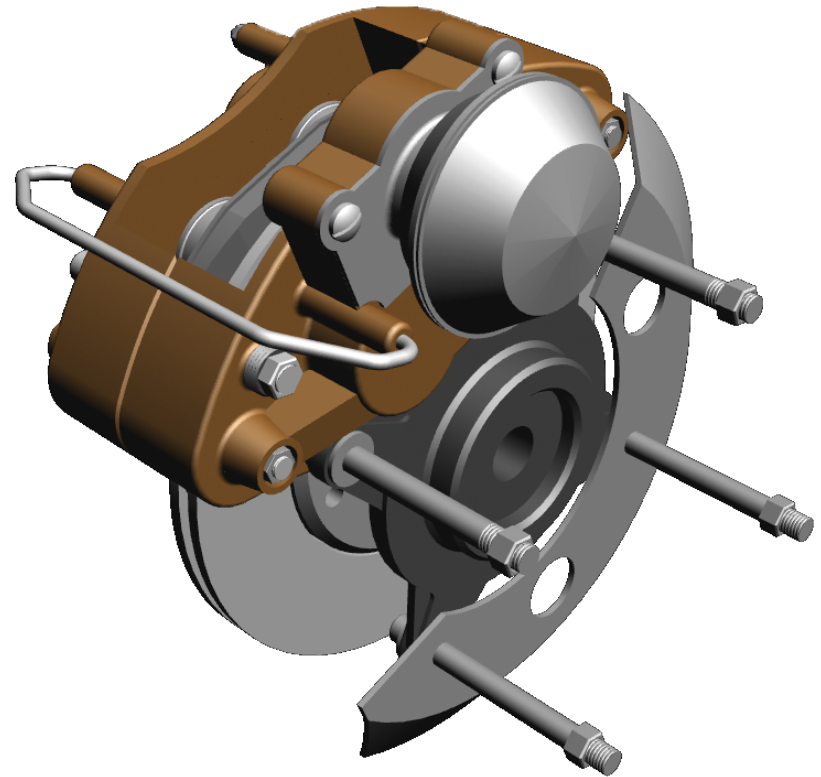
- **ISO PDF/A 19005-3** (based on ISO 32000-1) – **TO BE RATIFIED IN MAY 2012**
 - Standard defines what is required, recommended & prohibited
 - For more information visit: http://www.aiim.org/pdf_a
-
- ✓ An archival replacement for paper
 - ✓ Customized to offer consistent, long-term retrieval and rendering
 - ✓ Includes document metadata (XMP) for search and retrieval
 - ✓ Engineered for reliable migration and future compatibility
 - ✓ Digital signatures are for verification and authentication
 - ✓ Developed and maintained by PDF/A ISO committee
-
- PDF/A Details:**
- ☒ All data must be self-contained
 - ☒ All color is managed
 - ☒ No encryption
 - ☒ No multimedia
 - ☒ No JavaScript
 - ☒ Supports Transparency & Layers
 - ☒ Supports JPEG2000
 - ☒ **Any type of Attachment**
 - ☒ Advanced Digital Signatures (**PADES**)

PDF/E

ISO 24517



- Addresses need for reliable exchange of engineering documentation
 - Secure distribution of intellectual property
 - Reliable exchange and change management
 - Reduces costs associated with proprietary viewers and formats as well as paper
- Covers 3 primary areas:
 1. Incorporation of complex data into compact PDF (3D, object-level data, etc.)
 2. Accurate printing of engineering drawings
 3. Support for secure exchange/management of annotation and comment data
- Constrained appearance to provide predictability
 - ✓ All fonts MUST be embedded
 - ✓ No external resources: self-contained
 - ✓ Layers, 3D, multimedia



- A need to archive engineering content – especially 3D
- Align with ISO 32000-2 (PDF 2.0) for engineering features
 - PRC – compact 3D format
 - Geospatial (GIS)
 - 2D & 3D Measurements
- Currently in CD 2
- To be published around the same time as 32000-2.

PDF/VT ISO 16612-2



- Based on PDF/X-4 and PDF/X-5
 - Which themselves are based on PDF 1.6
- Expectation of Job ticketing
 - Most likely JDF, but could be any

Three conformance levels

- PDF/VT-1
 - PDF/X-4
 - Completely self-contained single PDF file
- PDF/VT-2
 - PDF/X-4p, PDF/X-5g or PDF/X-5pg
 - Multiple file exchange
 - Single “master” file which refers to external profiles and/or content
- PDF/VT-2s
 - Streamed delivery of a PDF/VT-2 file set via MIME packaging
 - Enables printing to start before completion (if any) of full job

VDP Workflow for Print, Web and Mobile Devices



PDF/UA ISO 14289



- **ISO 14289 - TO BE RATIFIED IN MAY 2012**
 - Standard defining necessary elements for improved accessibility of PDF files to individuals who require assistive technology
 - For more information visit: <http://www.aiim.org/standards>
-
- ✓ Definition of accessible PDF documents
 - ✓ Specifies required structural elements for PDF document content such as tables, forms, fonts
 - ✓ Definition of accessible Readers and AT devices
 - ✓ Developed and maintained by ISO PDF/UA working group
 - ✓ Includes participants from government, education & private sector



ISO 32000



PDF becomes an ISO Standard

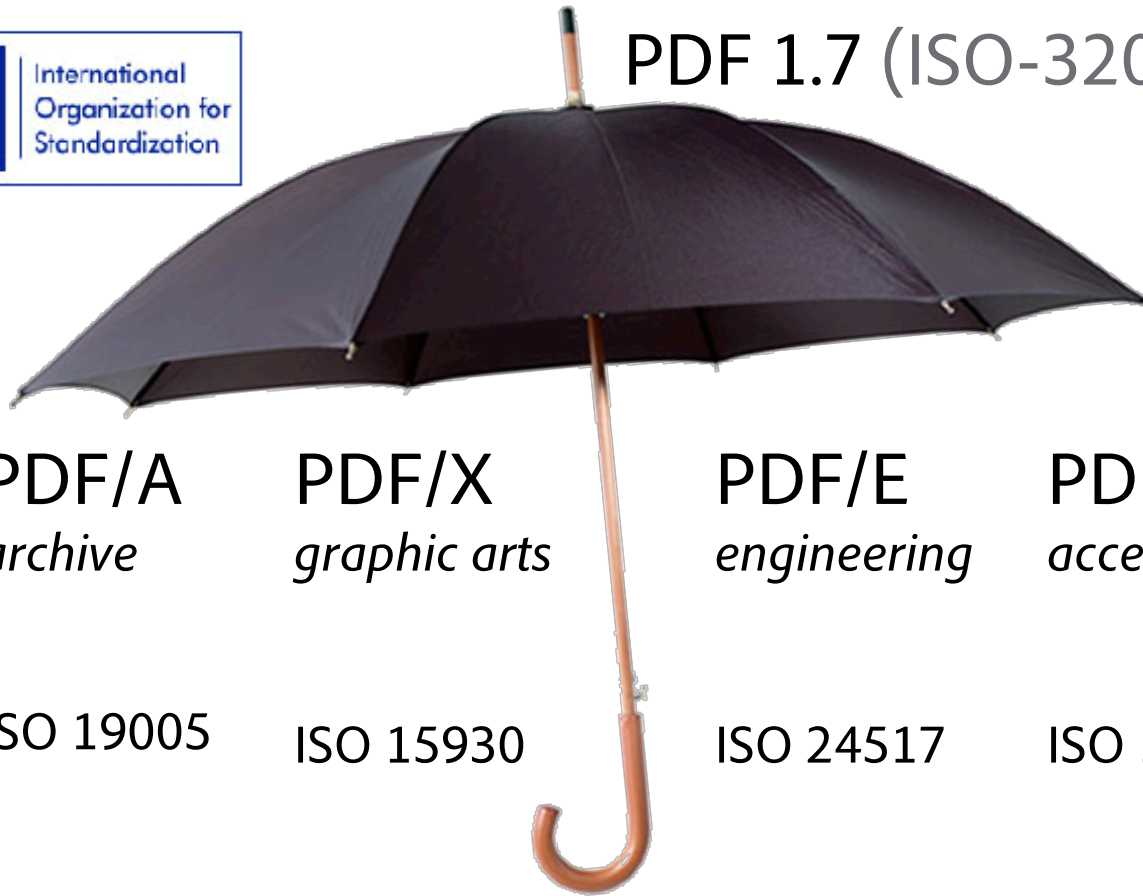
- *“SAN JOSE, Calif. — Jan. 29, 2007 — Adobe Systems Incorporated (Nasdaq:ADBE) today announced that it intends to release the full Portable Document Format (PDF) 1.7 specification to AIIIM, the Enterprise Content Management Association, for the purpose of publication by the International Organization for Standardization (ISO).”*
- Establish a baseline standard
 - cover the millions of PDF files that already exist
 - describe the behavior of existing ‘defacto standard’ viewers
- Evolution of PDF specification as a public and open activity
 - ISO is widely recognized and respected & experienced with PDF-based standards
 - Adobe is just one of many participants in the working group
- **ISO 32000-1 was ratified in January 2008! (published 5/2008)**



Establishing the ISO PDF Umbrella



PDF 1.7 (ISO-32000)



PDF/A
archive

PDF/X
graphic arts

PDF/E
engineering

PDF/UA
accessibility

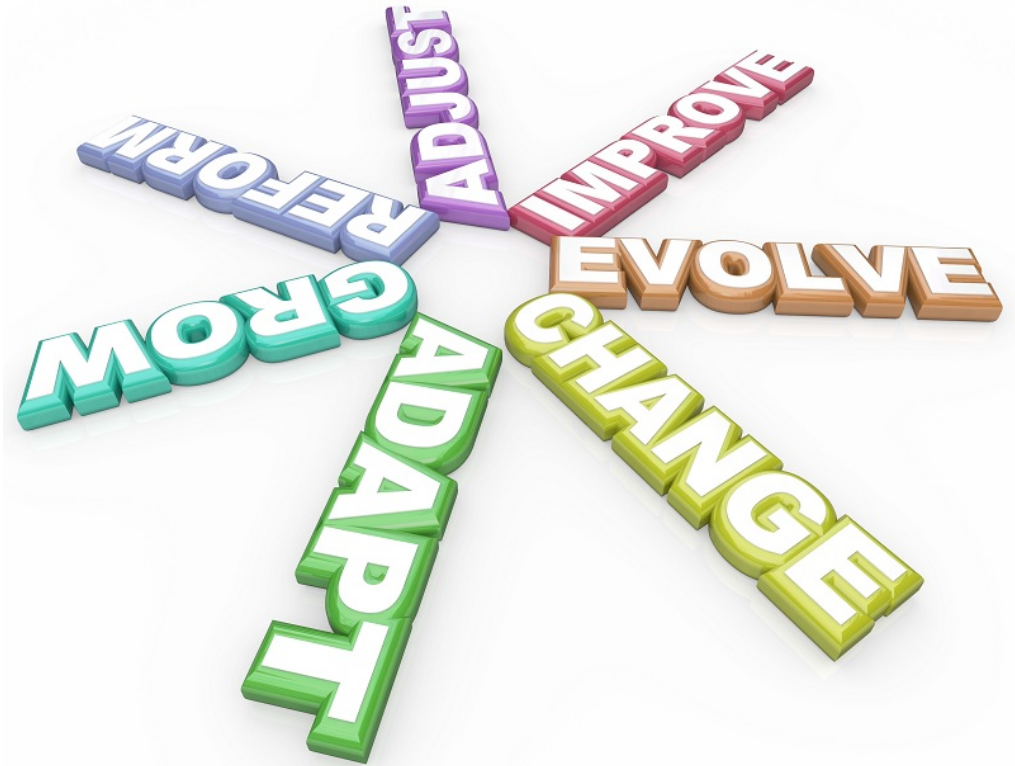
ISO 19005

ISO 15930

ISO 24517

ISO 14289

- Goals for PDF 2.0
 - Enhance
 - Refine
 - Deprecate
 - Standardize
- Democratize PDF
 - Industry experts
 - Committee owned
 - Active process



- Enhancing PDF
 - Rich Media: Video, Audio, 3D (PRC) & Digital Signatures: PAdES
 - Document Parts (DPart), Long Term Signature Validation, Associated Files
 - Document Requirements, Barcodes
 - Tagged PDF: MathML 3.0, Document Markup, Redactions
 - And more...
- Refining PDF
 - Enhance descriptions and language
 - Add previously implied normative language
- Corrections
 - Fix typos
 - Conversion mistakes

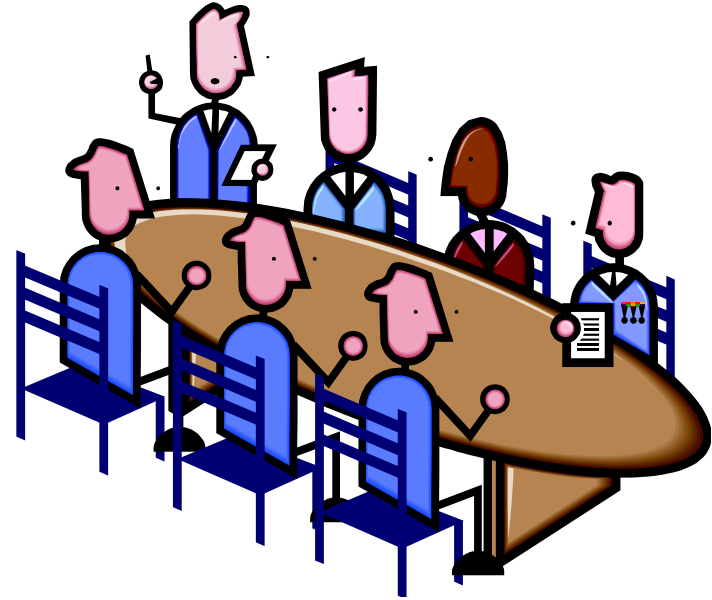


PDF 2.0 — Deprecate & Standardize

- Additive standard
 - Replaced mechanisms – Info dictionary, platform file specifications
 - PDF 2.0 enhancements – Insecure cryptography, Accessibility permission
 - Unused features – Sound & Movie, Form XObject names
- Continue de facto to de jure
 - Adobe JavaScript
 - Rich Text
- Update references
 - Newer standards
 - Where appropriate



- ISO 32000-2
 - Four Committee Drafts
 - First Draft International Standard
- Participation
 - Active standard
 - Additional committee members
 - Still time to make a difference



Wrap Up

Snapshots

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"Okay, folks, that's a wrap!"

Too many standards – Too little time?

- Many paths lead to standards creation
 - Standards support many industries, particularly those that are regulated
 - Well-formed standards are long-lasting, have low barriers to entry, and are often referenced by other standards
- PDF support is ubiquitous *and* PDF is an international (ISO) standard
 - Billions of existing files
 - Thousands of software products, including open source
 - Provides broader functionality than any other document format
 - Established strongly in publishing, archiving, engineering, and other industries

고맙습니다 谢谢 תודה!
mahalo *děkuji*

Thank You

شكرا *köszönöm* *gracias*
Ευχαριστώ *merci*
どうもありがとう *danke*

Vielen Dank! **BARIKA DA**
muchas gracias **THANK YOU**
Thank you
JE VOUS EN REMERCE!
Hartelijk bedankt 谢谢 **Abarka**
Gracie Danke **Merci beaucoup**
Danke
I ni ce kosebe **Many Thanks**
شكرا جزى *Vielen herzlichen Dank*

Questions





Adobe