

A c c e s s i b l e E l e c t r o n i c D o c u m e n t

A E D C O P

C o m m u n i t y O f P r a c t i c e

DRAFT

**Section 508 Basic Training
PDF (Portable Document Format)**

Version 0.1

September 2015

Introduction

In October 2012, subject matter experts from several federal agencies developed an Accessible Electronic Document Community of Practice (AED COP) with the goal of improving accessible content, advancing the field of accessibility, and creating accessible artifacts reusable across many agencies.

Federal agencies and other institutions create millions of documents each year. Making documents accessible is important so that individuals with disabilities can access information. Individuals with disabilities may include, but are not limited to: Blind or Low Vision, Deaf or Hard of Hearing, Physical Disability and Intellectual Disability.

Assistive technology (AT) is used by individuals to help them understand electronic information. For example, screen readers or text-to-speech software is one tool available and assists individuals who are blind, have low vision, or a learning disability. This technology interprets words on the page and translates them to a computerized voice that reads the information. Accessible documents work in partnership with assistive technology to ensure individuals with disabilities have access to information.

As you share your PDF document, it might be helpful to think about the concept of comparable access. When you adhere to the following accessibility requirements, you are providing a document that allows individuals with disabilities 1) to access the important information that you are publishing and 2) to gain access to information in a comparable way as their non-disabled peers.

About the Draft Section 508 Basic Testing Guide – PDF

This document contains the minimum requirements to test whether a PDF document is Section 508 accessible and acceptable for posting to a website. This information includes how to inspect your PDF using Adobe Acrobat XI professional.

This document does NOT contain information on how to author accessibly. However, it is a best practice to test your source document in the authoring tool (such as MS Word or Adobe InDesign) prior to testing the PDF in Adobe Acrobat XI Professional. For other AED COP Section 508 Basic Authoring and Testing Guides, visit

<http://www.section508.gov/content/learn/best-practice-library>.

Please send review comments and feedback to Holly.Anderson@ed.gov.

There are 5 preconditions and 19 requirements devided into 6 categories

Preconditions

- A. PDF Portfolio
- B. Adobe LiveCycle
- C. Tagged PDF
- D. Scripts
- E. Scanned Document

Document Properties

- 1. Scanned Pages
- 2. Descriptive Filename
- 3. Assistive Technology Access
- 4. Document Language

Structure Tags

- 5. Tags
- 6. Decorative Content
- 7. Headers, Footers & Watermarks
- 8. Headings
- 9. Lists
- 10. Section Language

Objects

- 11. Images
- 12. Data Tables
- 13. Links and Controls
- 14. Forms

Color

- 15. Color and Other Sensory Characteristics
- 16. Color Contrast

Miscellaneous

- 17. Audio, Video and Multimedia
- 18. Flashing Objects
- 19. Alternative Accessible Version

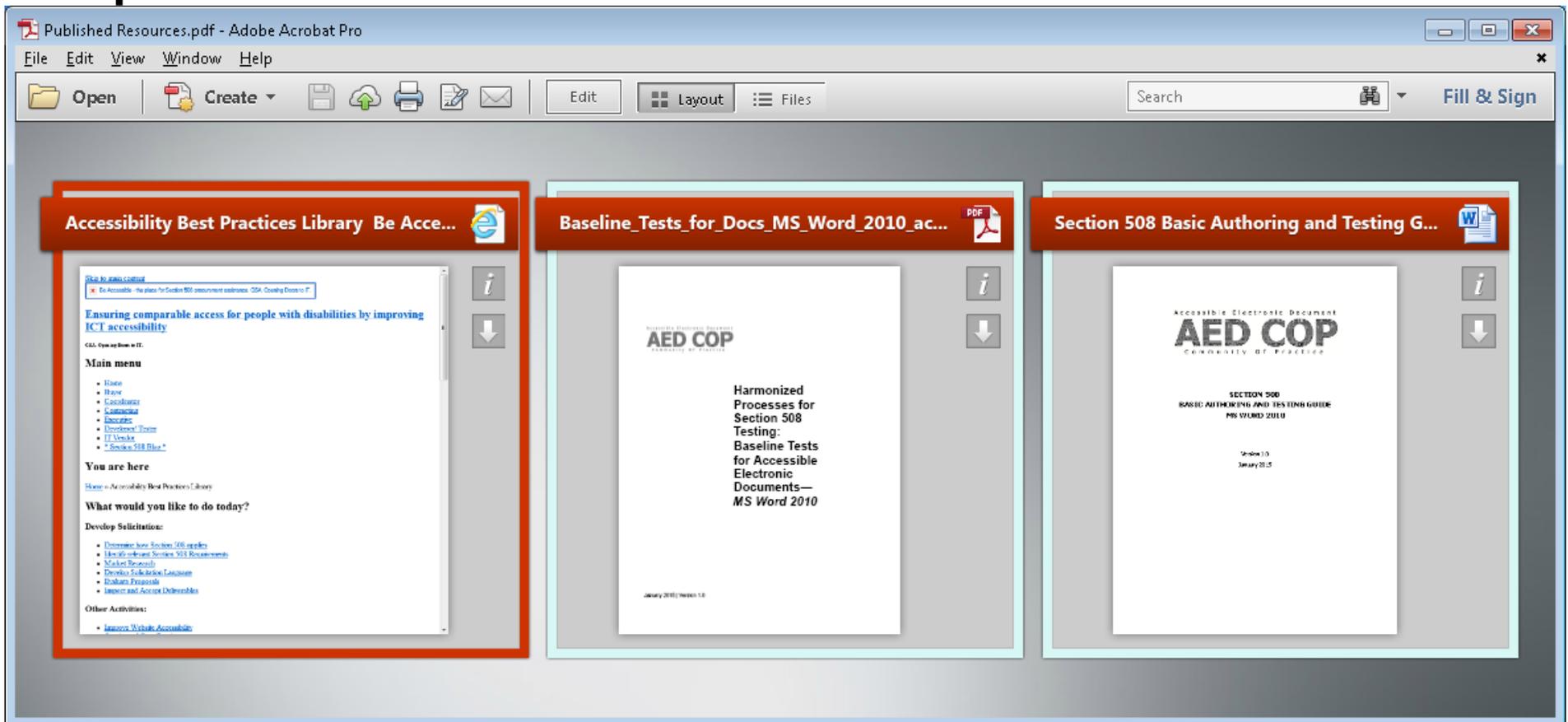
This document does NOT cover:

- PDFs produced from Adobe LiveCycle (See Precondition B)
- PDFs without Tags (See Precondition C)
- PDFs with Scripts (See Precondition D)

A. PDF Portfolio

A PDF Portfolio is a collection of documents combined into one PDF file. Collections may include a variety of document types, like PDF and MS Word. Each document must be tested separately and with the appropriate test process.

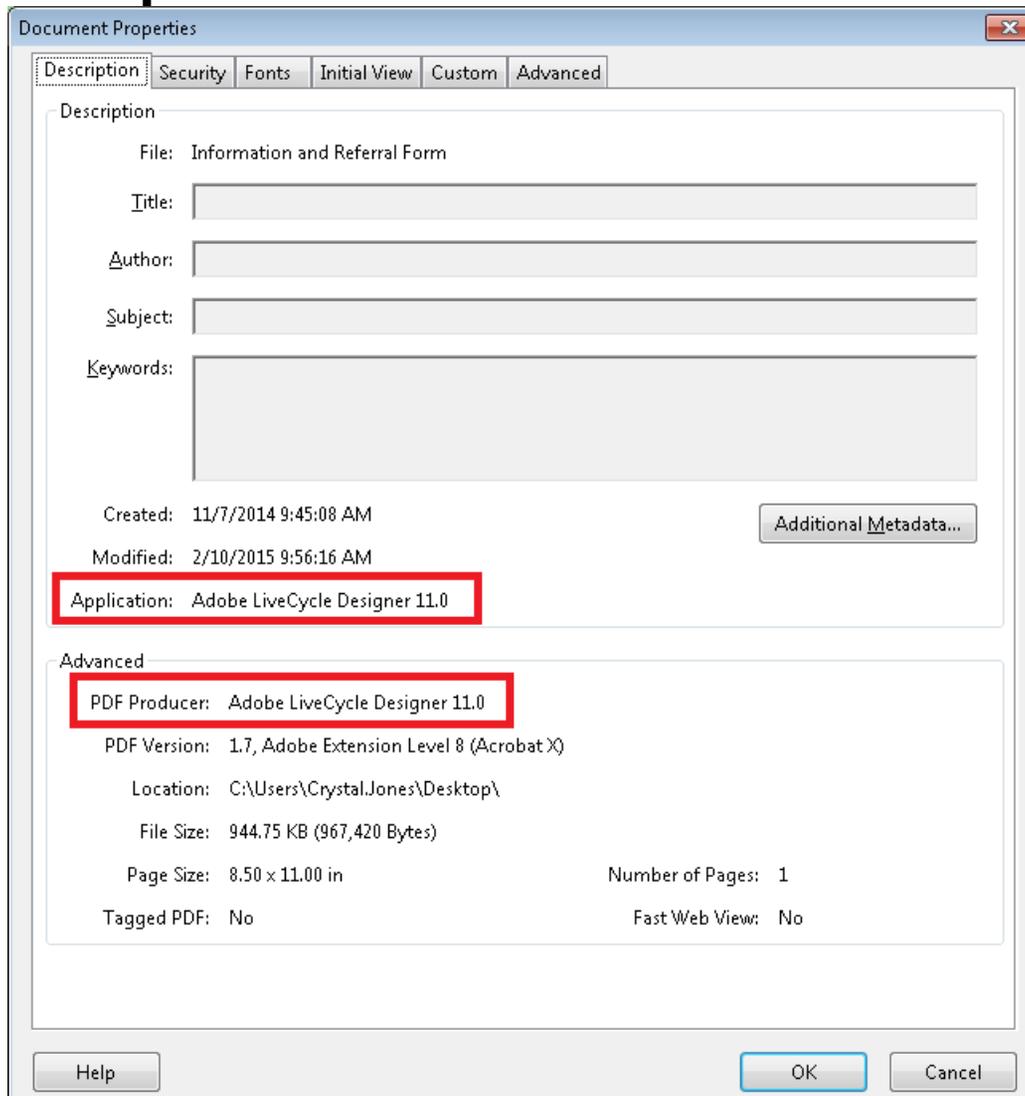
Example



B. Adobe LiveCycle

You cannot verify the accessibility of Adobe LiveCycle documents in Adobe Acrobat Professional.

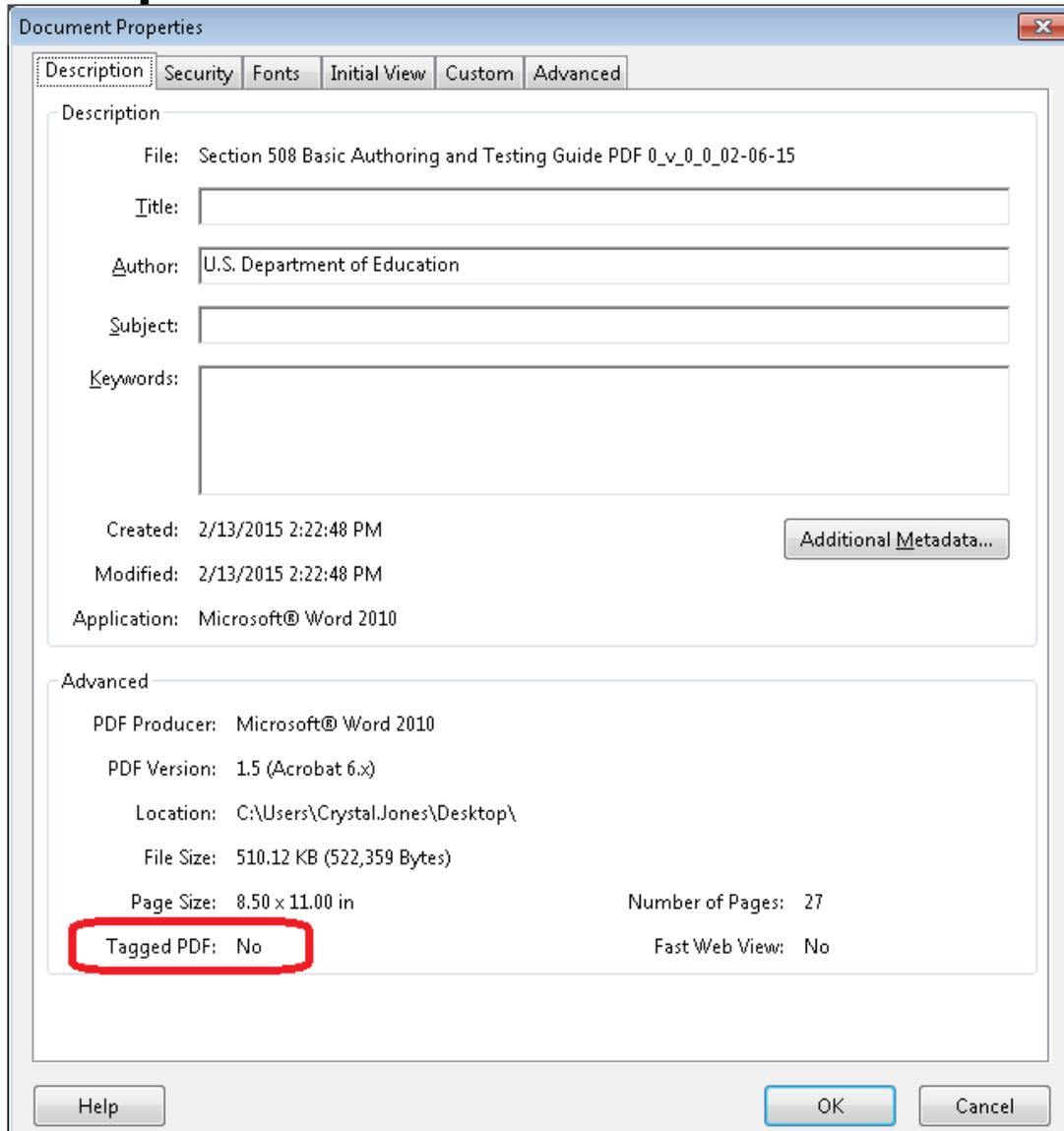
Example



C. Tagged PDF

To check for Section 508 accessibility, the document must be a “Tagged PDF.”

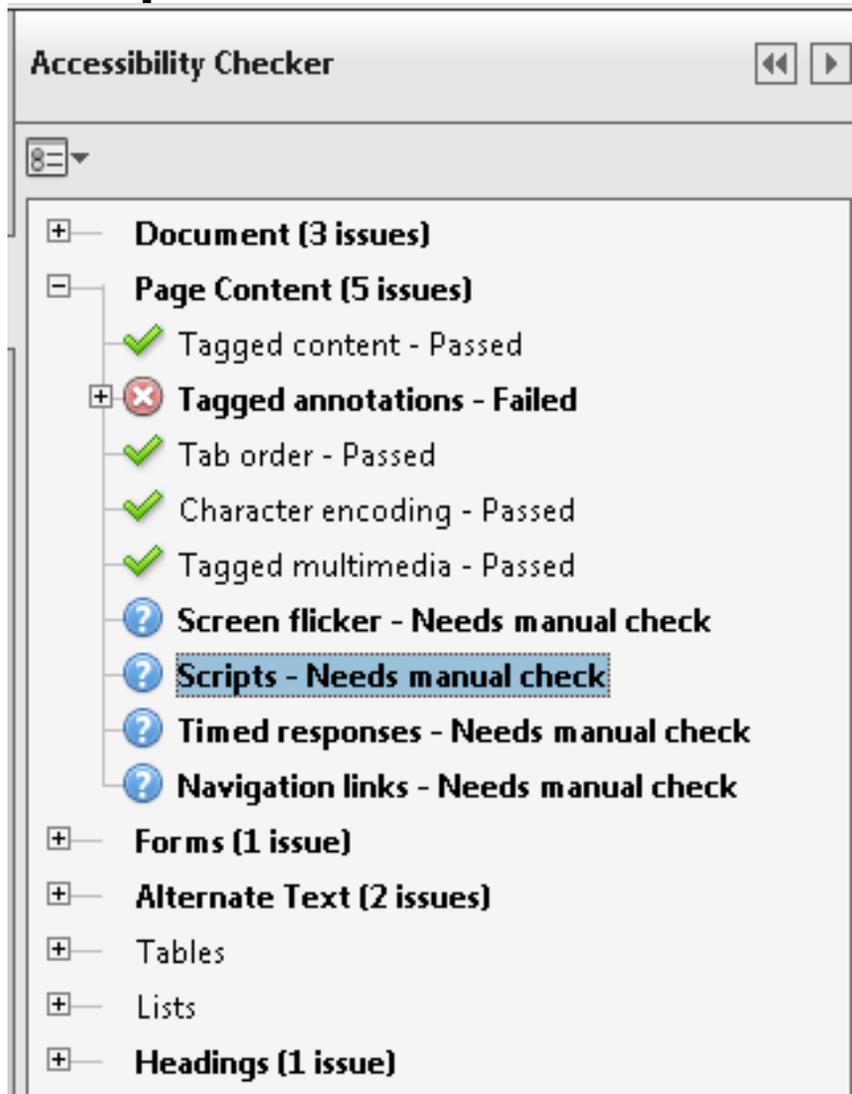
Example



D. Scripts

Adding programming (Scripts) to a document effectively turns it into a software application. Software applications should be tested using software testing methods.

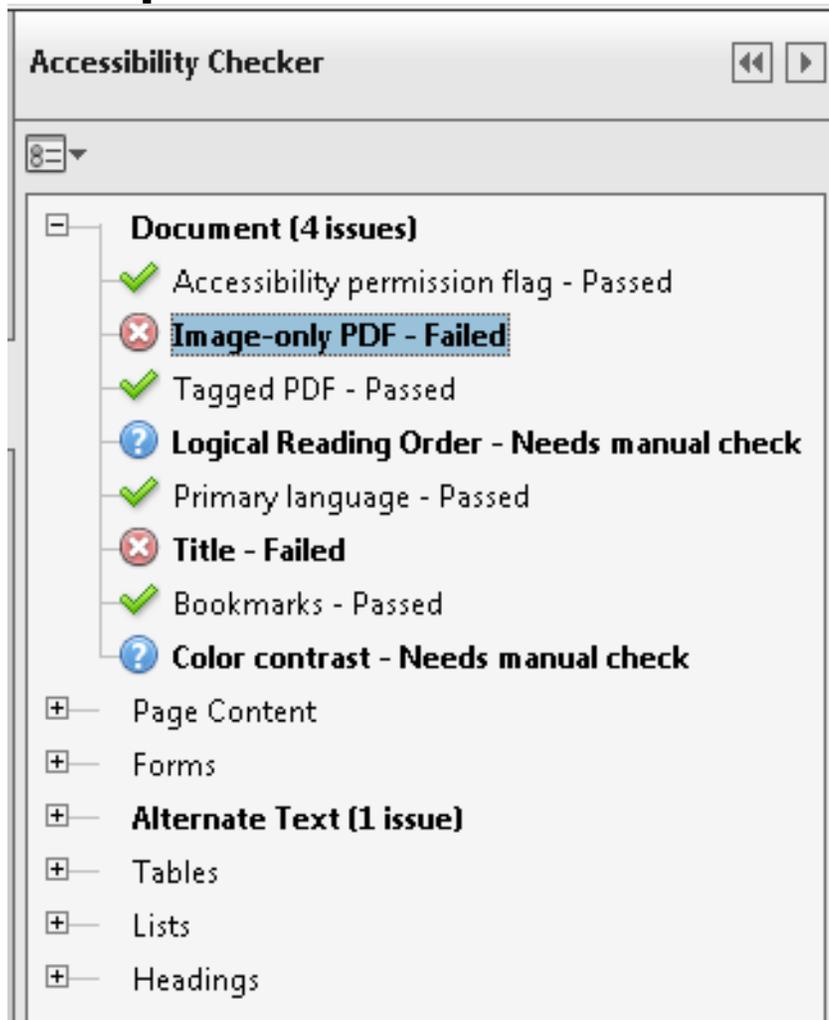
Example



E. Scanned Document

Because of software limitations, scanned documents require additional steps to ensure accessibility. If you need to distribute a scanned document, then first consult your agency's scanned document policy.

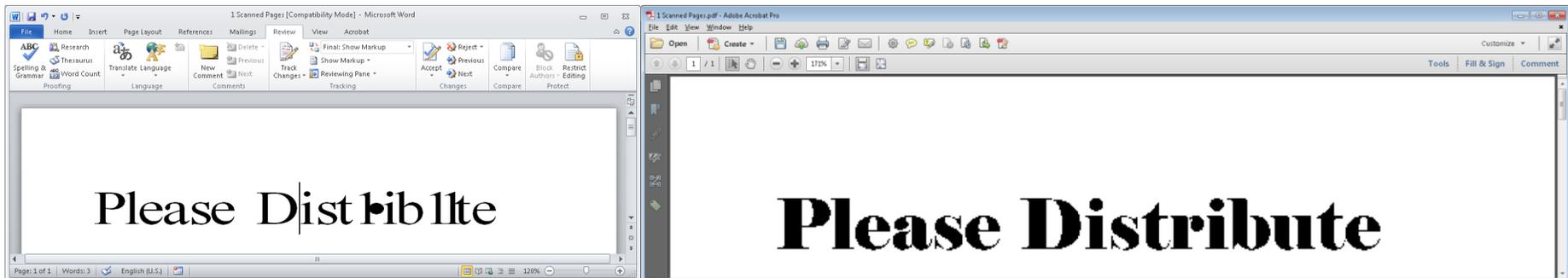
Example



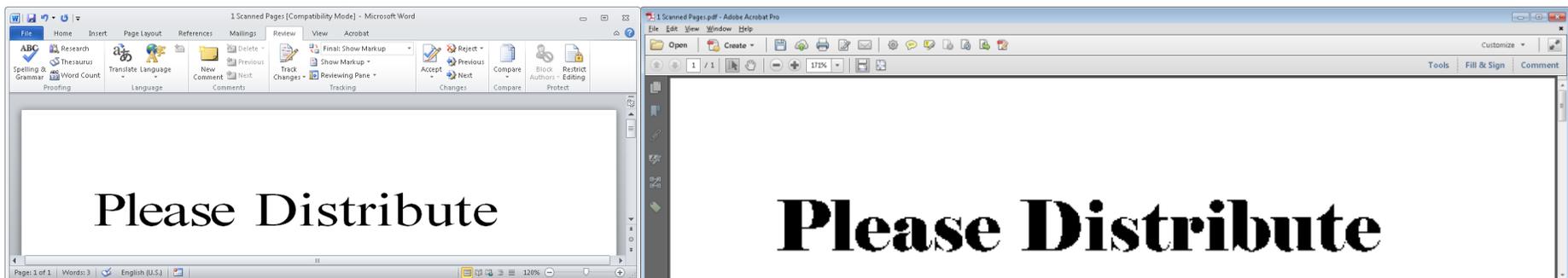
1. Scanned Pages

All or part of a PDF may be compiled from scanned pages. When you see a scanned page, you are actually looking at a picture of the original page. Screen readers cannot infer meaning from just a picture, so these pages must be accompanied by text. Optical Character Recognition software may be used to recognize the text in the PDF and embed this text into the page. Make sure the texts match.

Inaccessible Example



Accessible Example



2. Descriptive Filename

A descriptive filename that identifies the document or its purpose helps everyone (including people with disabilities) locate, open, and switch between documents.

Nondescriptive Filename	Descriptive Filename
Untitled1.pdf	OMBReport387_2102014_v2.pdf
Document!.pdf	Chapter6FY2016Justification.pdf
Presentation1.pdf	2015Security_Training.pdf

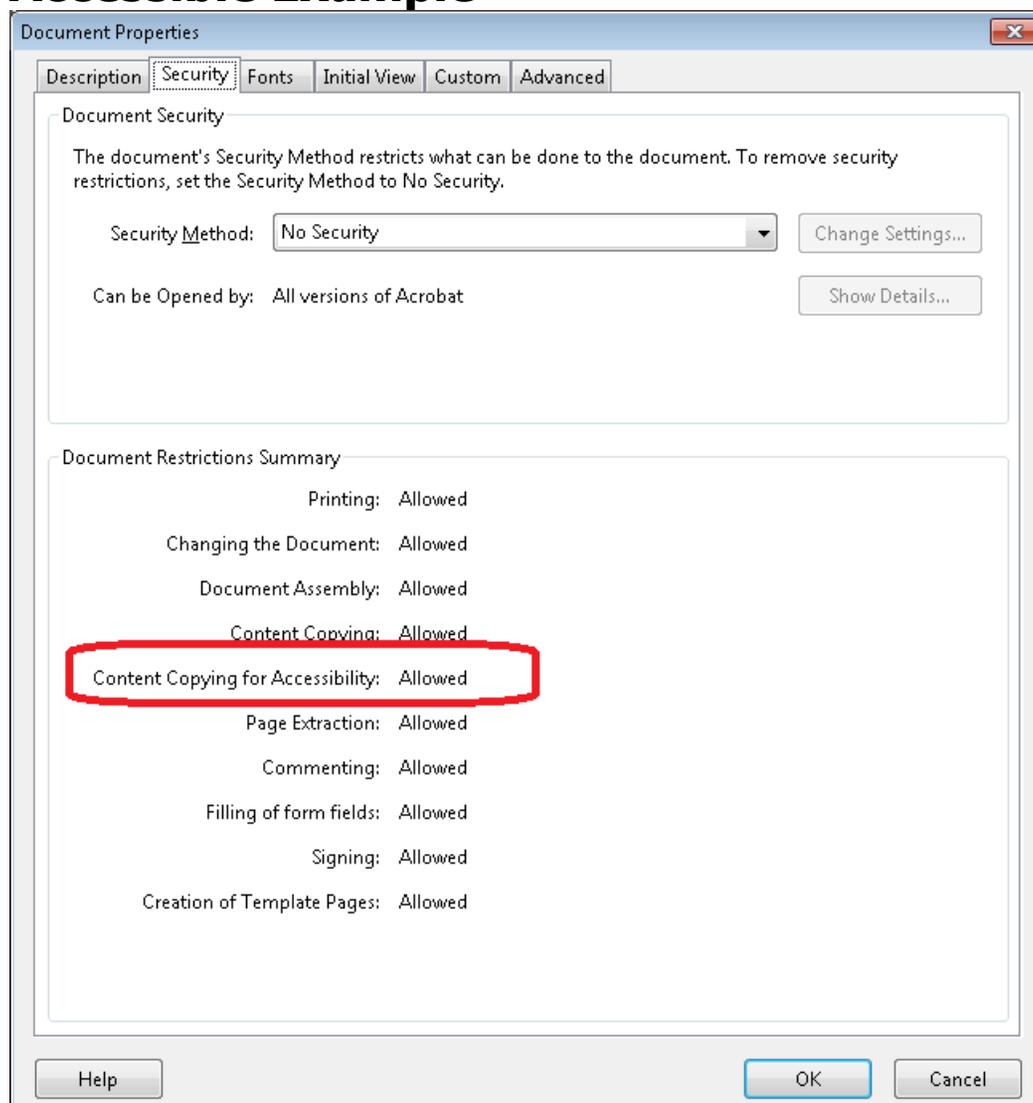
Accessible Example

Let's use this document.

3. Assistive Technology Access

Security settings can prevent users from changing content and enable features, like saving form data; however, these security settings may block AT access to content.

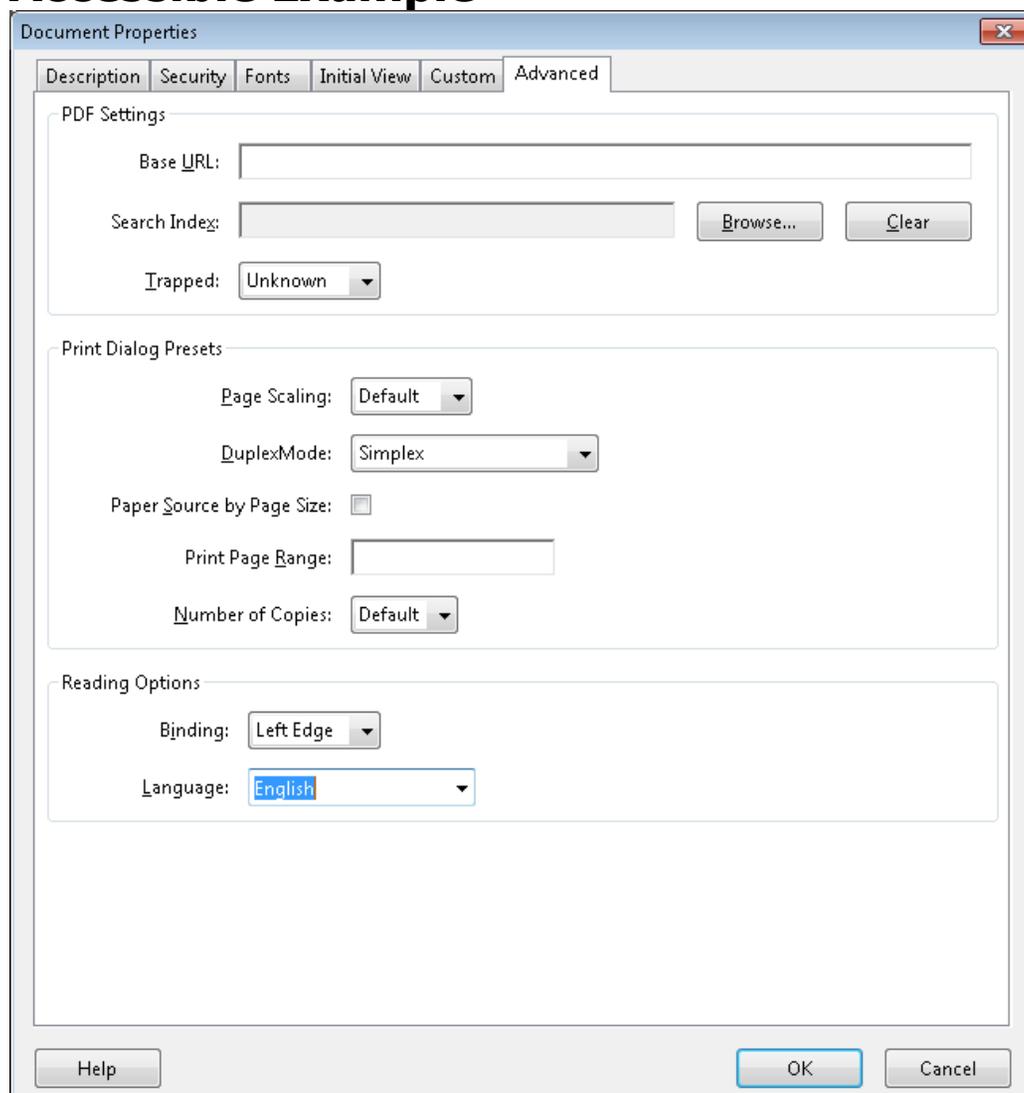
Accessible Example



4. Document Language

Screen readers access the language setting in Document properties to provide the appropriate pronunciation for the document.

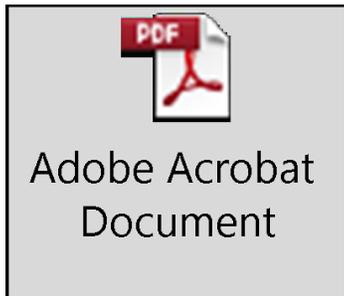
Accessible Example



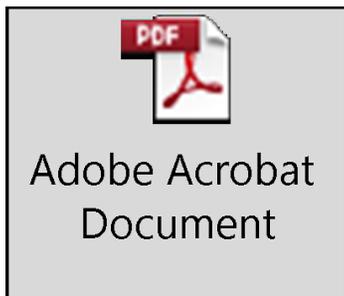
5. Tags

Screen readers rely on tags to interpret the document structure (headings, paragraphs, lists, images, data tables, forms, and other objects). All meaningful text and objects must correspond to a tag and the order of tags must follow the visual/logical order.

Inaccessible Example



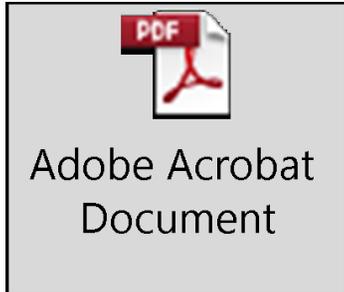
Accessible Example



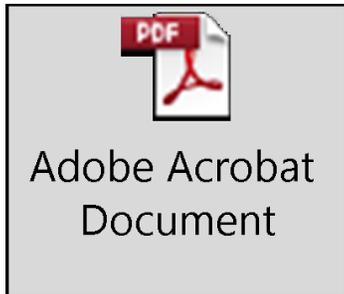
6. Decorative Content

Decorative content should be set to Artifact, so screen readers can skip over ornamental images and redundant text.

Inaccessible Example



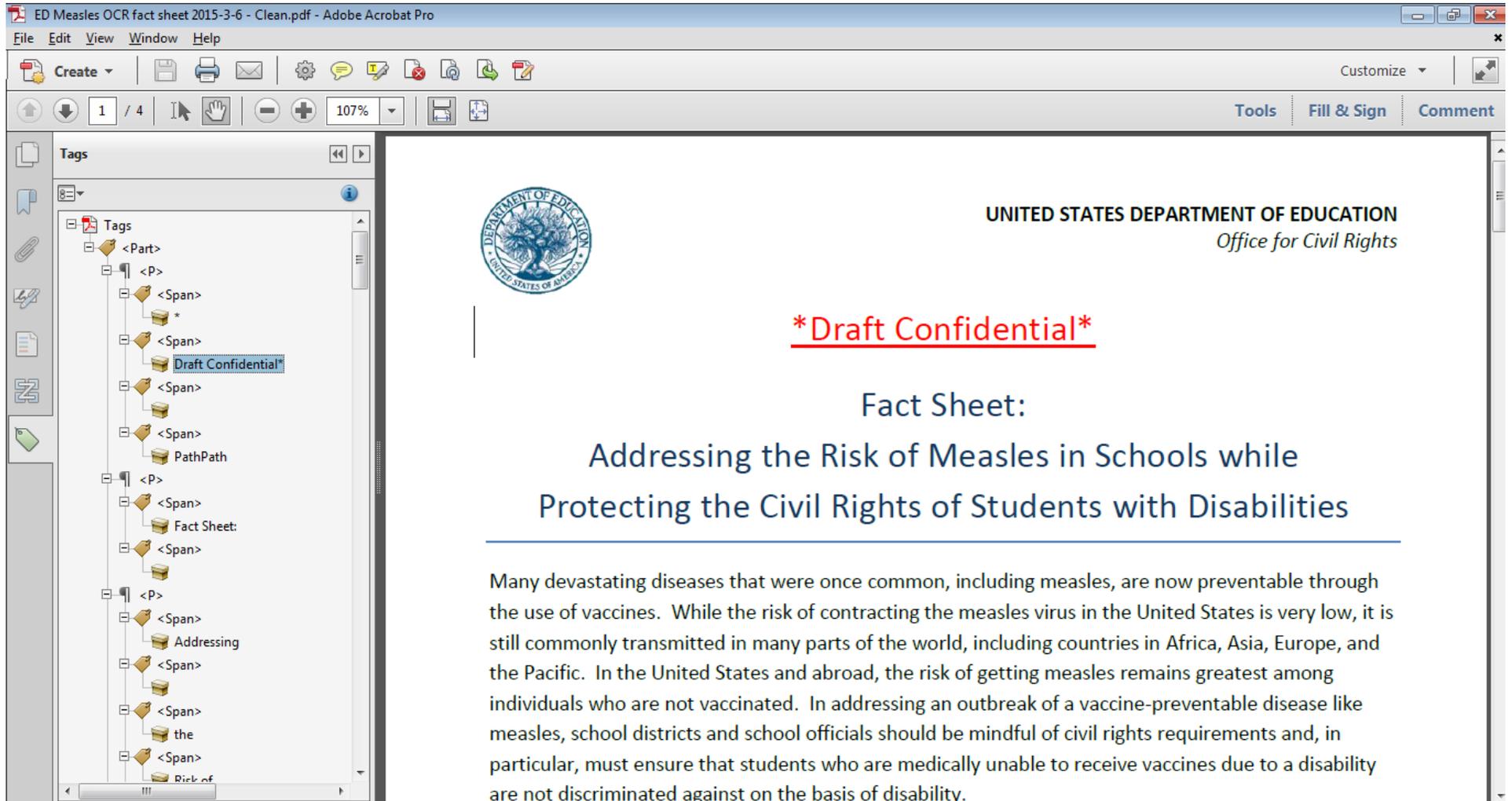
Accessible Example



7. Headers, Footers & Watermarks

Vital information in headers, footers or watermarks must correspond to a tag at or near the start of the related information or screen readers will skip over it.

Accessible Example



The screenshot shows the Adobe Acrobat Pro interface. The main window displays a PDF document with the following content:

- United States Department of Education logo (top left).
- UNITED STATES DEPARTMENT OF EDUCATION
Office for Civil Rights (top right).
- *Draft Confidential* (center, red text, underlined).
- Fact Sheet:
Addressing the Risk of Measles in Schools while
Protecting the Civil Rights of Students with Disabilities (center, blue text).
- Many devastating diseases that were once common, including measles, are now preventable through the use of vaccines. While the risk of contracting the measles virus in the United States is very low, it is still commonly transmitted in many parts of the world, including countries in Africa, Asia, Europe, and the Pacific. In the United States and abroad, the risk of getting measles remains greatest among individuals who are not vaccinated. In addressing an outbreak of a vaccine-preventable disease like measles, school districts and school officials should be mindful of civil rights requirements and, in particular, must ensure that students who are medically unable to receive vaccines due to a disability are not discriminated against on the basis of disability.

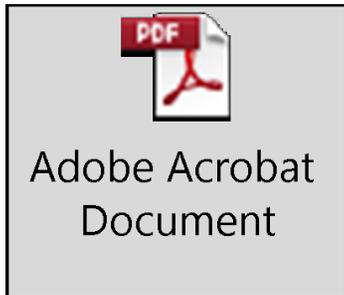
The 'Tags' panel on the left shows the document's structure, including a 'Draft Confidential' tag highlighted in blue.

8. Headings

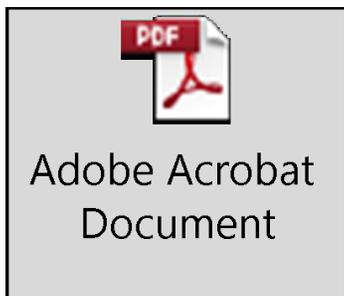
Headings are used to break-up content and make finding information easier. AT cannot infer meaning from just formatting, like bold or underline, so:

- 1) Visual headings must correspond to a heading tag and
- 2) Heading tags must match the visual outline.

Inaccessible Example



Accessible Example



9. Lists

Screen readers cannot infer meaning from just symbols and indents. List tags create a structure that screen readers can identify.

Inaccessible Example

Bucket List

1. Spend at least 6 months traveling around the world.
2. Experience a solar eclipse.
3. Live in another country for a year.
4. Go skydiving.
5. Get more buckets.

Accessible Example

Bucket List

1. Spend at least 6 months traveling around the world.
2. Experience a solar eclipse.
3. Live in another country for a year.
4. Go skydiving.
5. Get more buckets.

10. Section Language

When the language of a paragraph differs from the Document Language, screen readers access the language in Tag Properties to provide the appropriate pronunciation for the section. You do not have to check the language for proper names, technical terms, or foreign words that have become part of the vernacular.

Inaccessible Example

Hey diddle diddle,

El gato y el violín,

La vaca saltó sobre la luna,

El pequeño perro rió para ver tal deporte,

Y el plato corrió lejos con la cuchara.

Accessible Example

Hey diddle diddle,

El gato y el violín,

La vaca saltó sobre la luna,

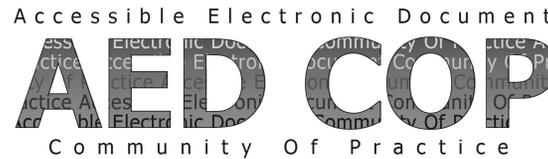
El pequeño perro rió para ver tal deporte,

Y el plato corrió lejos con la cuchara.

11. Images

Screen readers cannot infer meaning from images and other objects (pictures, images of text, charts, diagrams, shapes, icons with hyperlinks, etc). Meaningful images must be accompanied by text that describes the purpose or function.

Inaccessible Example



Accessible Example

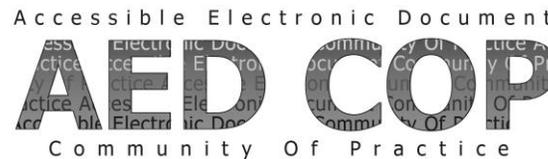
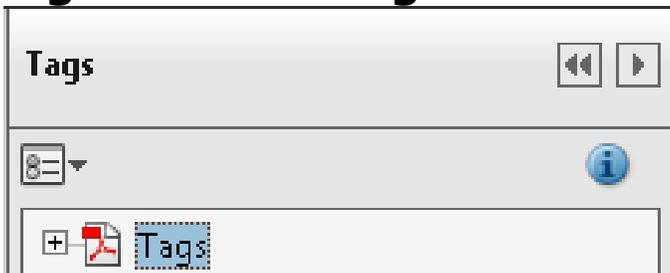


Figure 1: The Tags Pane



As shown in the picture to the right, this document contains paragraph tags (<P>), heading level 1 tags (<H1>), heading level 2 tags (<H2>), and table tags (<Table>).



12. Data Tables

In data tables, header cells are required to describe the data. For AT to interpret this information:

- 1) Data tables must correspond to a table tag <Table>. Images of data tables are not accessible.
- 2) Header cells must be identified with table header cell tags <TH>.
- 3) Complex data tables must have data cells associated with headers cells.

12. Data Tables

Inaccessible Example

ID	NAME	PRICE	Year Ordered
3324	Widget 1	\$6.99	2011
1943	Hammer	\$12.99	2011
2345	Nails	\$4.99	2012
7701	Saw	\$14.99	2014
1234	Drill	\$99.99	2014

ID	NAME	PRICE	Year Ordered
3324	Widget 1	\$6.99	2011
1943	Hammer	\$12.99	2011
2345	Nails	\$4.99	2012
7701	Saw	\$14.99	2014
1234	Drill	\$99.99	2014

ID		Year	
Number	NAME	Ordered	Returned
3324	Widget 1	2011	2011
1943	Hammer	2011	2012
2345	Nails	2012	2012
7701	Saw	2014	2014
1234	Drill	2014	2015

12. Data Tables

Accessible Example

ID	NAME	PRICE	Year Ordered
3324	Widget 1	\$6.99	2011
1943	Hammer	\$12.99	2011
2345	Nails	\$4.99	2012
7701	Saw	\$14.99	2014
1234	Drill	\$99.99	2014

ID		Year	
Number	NAME	Ordered	Returned
3324	Widget 1	2011	2011
1943	Hammer	2011	2012
2345	Nails	2012	2012
7701	Saw	2014	2014
1234	Drill	2014	2015

13. Links and Controls

Links and controls must be:

- 1) Uniquely identified
- 2) Described with the destination, function, and/or purpose in the name or within context.
- 3) In a tab order that matches the visual/logical order of interactive elements (links, controls, and form fields).

Examples of Link Names

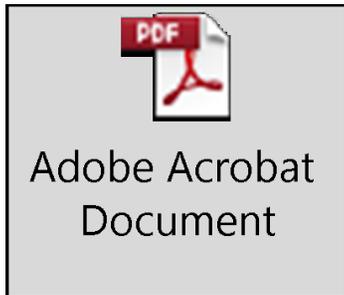
Uniquely Named Link:	...additional details are available on OPM.gov .
Links Determinable within Context:	Further details are listed in the Company Annual Report.
Ambiguous Links Not Determinable Within Context:	Click here / Click here for information about each topic.

14. Forms

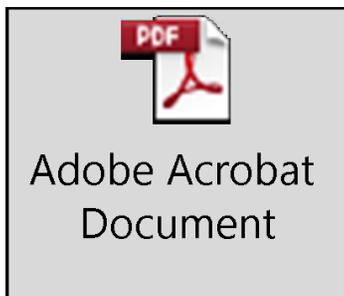
In order to correctly and accurately complete a form, it is necessary to follow instructions, directions and cues, as well as enter information in the correct fields. For AT:

- 1) Each form field must have a tooltip and
- 2) The tab order must match the visual order.

Inaccessible Example



Accessible Example



15. Color and Other Sensory Characteristics

Sensory characteristics (such as color, size, shape, and location) must include text to convey meaning. Without text, individuals who are blind, low vision, or color blind will not have access to comparable information.

Inaccessible example

Project	Status
A	
B	
C	
D	
E	

Accessible example

Project	Status
A	
B	
C	
D	
E	

16. Color Contrast

Having a high level of contrast between foreground and background results in more people being able to see and use the content. The required standards are listed in Table 1.

Table 1: Color contrast ratios by text size or type

Type or Size of Text	Contrast Ratio
Standard	4.5:1
Large Text (14 pt bold or 18 pt regular)	3:1
Incidental text, text overlaid on images, and logotypes	Excluded from requirement

Inaccessible Example

Section 1: Contact Information

Important: Be sure to complete all fields

Accessible Example

Section 2: Account Information

Important: Be sure to complete all fields.

17. Audio, Video and Multimedia

Audio-only, video-only or multimedia objects that contain meaningful information must have additional text and/or descriptions, so that individuals with disabilities have comparable access to the content.

Table 2: Additional information required listed by object type

Type	Also include:	What is this?
Audio-only	Accurate and complete transcript	A transcript is a text version of exactly what is being said in the audio-only file.
Video-only	Accurate and complete text description	A description is a text version of what is being shown in a video-only file.
Multimedia (audio and video)	Accurate, complete, and synchronized captions and audio descriptions	Captions are time-synchronized text version of exactly what is being said and/or a description of the relevant sounds in the multimedia file. Audio descriptions are time-synchronized descriptions of what is being shown in the multimedia file.

18. Flashing Objects

Federal agencies do not typically see flashing objects embedded into documents. Since flashing objects may be a public safety issue for individuals with photosensitive epilepsy and there is not typically a compelling business need, flashing objects should be excluded. If you feel you do have a compelling business need, please contact the AT Team for assistance in ensuring your object flashes below 3Hz.

19. Alternative Accessible Version

Federal agencies have the goal to produce one accessible document for everyone. However, there may be times when this is not feasible. Therefore, it is recommended that you contact the AT Team to ensure an alternative version is necessary as you are still required to create an alternative version that is accessible, up-to-date and has equivalent content.