Helping Patrons by Making Content and Services Accessible

Timothy Creagan, Senior Accessibility Specialist

U.S. Access Board

Transportation Librarians' Roundtable

August 11, 2022

U.S. Access Board – Identity & Mission

- Independent federal agency

- About 30 staff

- Governing Board
  - 13 Presidential appointees
  - 12 Federal agency members

- Budget: over $9 million

- Establish accessibility guidelines & standards

- Provide technical assistance & training on these guidelines and standards
  - ADA, Section 508, Section 255, Medical Diagnostic Equipment

- Enforce the ABA Standards

- Be a Coordinating body among federal agencies

What is "Section 508"?

- Section 508 of the Rehabilitation Act (29 U.S.C. § 794d), as amended by the Workforce Investment Act of 1998 (P.L. 105-220) requires federal agencies to procure, develop, maintain and use **information and communication technology** (ICT) that is accessible to people with disabilities (PWD)

- **Information and Communication Technology (ICT)** -Information technology and other equipment, systems, technologies, or processes, for which the principal function is the creation, manipulation, storage, display, receipt, or transmission of electronic data and information, as well as any associated content

Today's Overview of Accessible ICT - Why is it important? -

Applying Section 508:

- Accessible Content – websites, documents, services
- Resources

EO 14035: Diversity, Equity, Inclusion, and Accessibility (DEIA)

EO 14035: Diversity, Equity, Inclusion, and Accessibility (DEIA)

Purpose:

To promote Diversity, Equity, Inclusion, and **<u>Accessibility</u>** in the federal workforce

- Make the Federal Government a model employer of people with disabilities

- Federal workspaces - physical and digital - must be accessible (as required by the ABA and Rehabilitation Act)

- Federal agencies must maximize accessibility to reduce the need for reasonable accommodations

- Government-wide DEIA Strategic Plan includes an "Accessibility Roadmap"

- All federal agencies must develop and maintain their own DEIA strategic plans

Accessibility Standards

- Section 508 of the Rehabilitation Act (2017)

- WCAG 2.0 Success Criteria and Conformance Requirements (2008)

Accessible ICT – What are the standards?

- Section 508 of the Rehabilitation Act (29 U.S.C. § 794d)
  - Originally published 2000, **Revised** 2017, effective 2018
- WCAG 2.0 Success Criteria and Guidelines, Level A and AA (2008)

Applies to:

- ICT that is **procured, developed, maintained, or used** by federal executive branch agencies

- Text of standards: www.access-board.gov/ict

Can an entity choose to follow Section 508 voluntarily ?

Yes, an entity may <u>choose</u> to provide accessible content, even if not required to do:

- Example 1: The Federal Reserve System reports to the legislative branch or Congress, so they are NOT an executive branch agency. However, they DO Have an accessibility policy to ensure that their website is accessible: federalreserve.gov/accessibility.htm

- Example 2: Title II (state and local governments) or Title III (public accommodations and commercial facilities) entities under the Americans with Disabilities Act (ADA).

Section 508 Standards - Organization

Chapter 1 – Application and Administration

Chapter 2 – Scoping

Chapter 3 – Functional Performance Criteria (FPC)

Chapter 4 – Hardware

Chapter 5 – Software

Chapter 6 – Support Documentation and Services

Chapter 7 – Referenced Standards
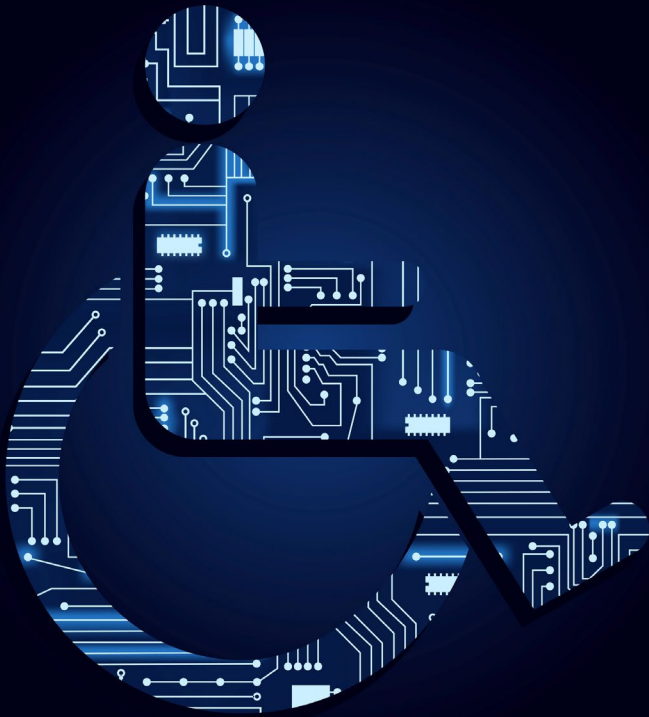
E103.4 Defined Terms
"ICT" and "IT"

ICT – (Information and Communication Technology)

Information technology and other equipment, systems, technologies, or processes, for which the principal function is the creation, manipulation, storage, display, receipt, or transmission of electronic data and information, as well as any associated content.

Some Examples - computers and peripheral equipment; information kiosks and transaction machines; telecommunications equipment; software; applications; Web sites; videos; and, **electronic documents**.

IT (Information Technology) – same meaning as 40 U.S.C. 11101(6)

Requirements for 508 ICT

- Electronic Content
- Support Documentation & Services

Public Facing – external

Public Facing [E205.2]

- Content made available by an agency to members of the general public.

- **Use:** WCAG 2.0 Level A and AA Success Criteria to make accessible

- **Examples include:**
  - an agency Web site
  - blog post, or
  - social media pages

Agency Official Communication –internal [205.3]

Categories:

A.   An emergency notification;

B.   An initial or final decision adjudicating an administrative claim or proceeding;

C.   An internal or external program or policy announcement;

D.   A notice of benefits, program eligibility, employment opportunity, or personnel action;

E.   A formal acknowledgement of receipt;

F.   A survey questionnaire;

G.   A template or form;

H.   Educational or training materials; or

I.   Intranet content designed as a Web page.

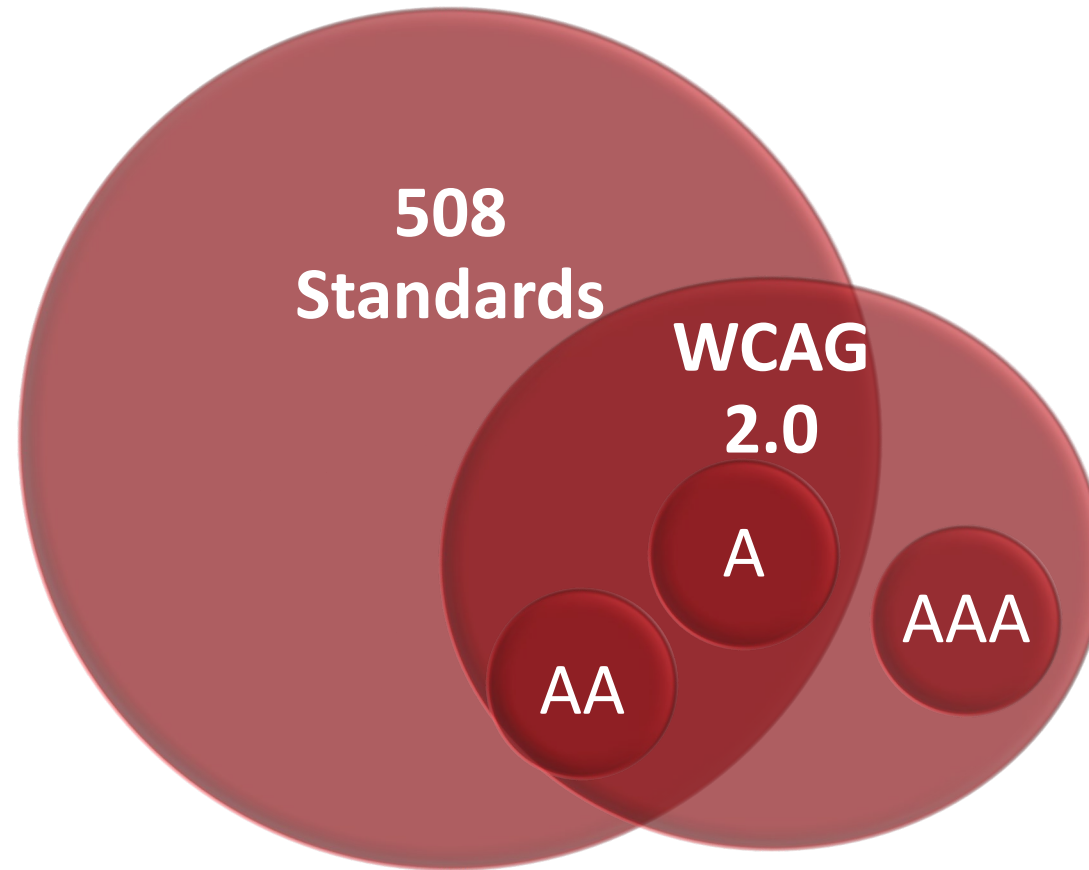**Use** WCAG 2.0 Level A and AA Success Criteria

Support Documentation and Services [Chapter 6]

- Documentation
  - Ex: ICT admin and user manuals
  - Explain accessibility and AT compatibility features
  - Use WCAG 2.0 Level A and AA Success Criteria

- Services
  - Ex: help desk, training services
  - Accessibility and AT compatibility features
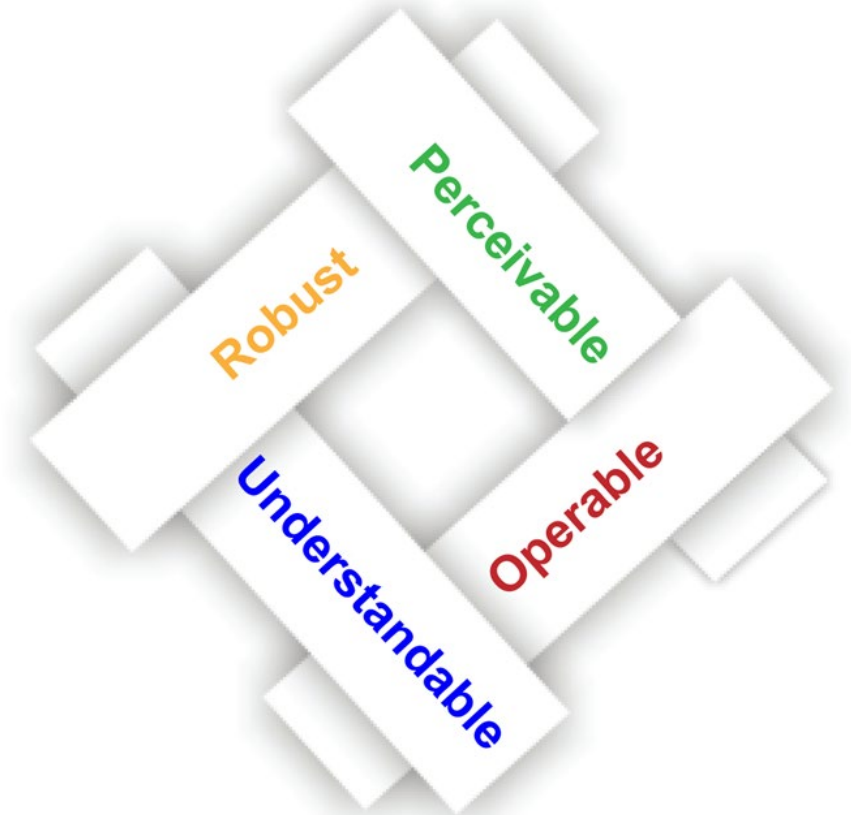 - Accommodation of communication needs

WCAG 2.0 Incorporated By Reference (IBR) into Section 508

Web Content Accessibility Guidelines (WCAG) 2.0 -- Organization

- www.w3.org/TR/WCAG20

- 4 Principles [**P**erceivable, **O**perable, **U**nderstandable, **R**obust] – **P O U R**

  - 12 Guidelines
    - ❖ 38 Success Criteria (Requirements)
      - ➢ 25 SC at Level A
      - ➢ 13 SC at Level AA

      - o 24 SC at Level AAA (Not Required for Section 508/ADA – not counted)

  - Links to Hundreds of Techniques and Failures (Not Required)

E205.4: 38 WCAG 2 Level A & AA SC

Principle/Level	Perceivable	Operable	Understandable	Robust
Level A	1.1.1 Non-text Content 1.2.1 Audio-only and Video-only (Pre.) 1.2.2 Captions (Pre.) 1.2.3 Audio Description or Media Alternative (Pre.) 1.3.1 Info and Relationships 1.3.2 Meaningful Sequence 1.3.3 Sensory Characteristics 1.4.1 Use of Color 1.4.2 Audio Control	2.1.1 Keyboard 2.1.2 N o Keyboard Trap 2.2.1 Timing Adjustable 2.2.2 Pause, Stop, Hide 2.3.1 Three Flashes or Below Threshold 2.4.1 Bypass Blocks 2.4.2 Page Titled 2.4.3 Focus Order 2.4.4 Link Purpose (In Context)	3.1.1 Language of Page 3.2.1 On Focus 3.2.2 On Input 3.3.1 Error Identification 3.3.2 Labels or Instructions	4.1.1 Parsing 4.1.2 Name, Role, Value
Level AA	1.2.4 Captions (Live) 1.2.5 Audio Description (Pre.) 1.4.3 Contrast (Minimum) 1.4.4 Resize text 1.4.5 Images of Text	2.4.5 Multiple Ways 2.4.6 Headings and Labels 2.4.7 Focus Visible	3.1.2 Language of Parts 3.2.3 Consistent Navigation 3.2.4 Consistent Identification 3.3.3 Error Suggestion 3.3.4 Error Prevention (Legal, Financial, Data)	*(Note: There are NO Robust SCs at Level AA)*

Accessible content

WCAG 2.0 SC & 508

Document Accessibility

WCAG 2.0 Success Criteria
help to make a document
accessible -

Example:
Use of color contrast
SC 1.4.3 Contrast (Minimum)

SC 1.4.3 Contrast (Minimum)

"The visual presentation of text and images of text has a contrast ratio of at least 4.5:1 …" (Level AA)

Problems: color contrast

► Examples of why a specific numerical value is important:

Sentence with Color Contrast	Sentence without color contrast
Does this text contrast with the white background?	Does this text contrast with the white background?
One common problem is that typical red text on white background is hard to read but is not prohibited.	One common problem is that typical red text on white background is hard to read but is not prohibited.

Darker red still catches the eye while being much better for many people with low vision.

Sample tool – Color Contrast Analyzer (CCA)

Foreground colour *(black)*

RGBa ↕ | rgb(0, 0, 0)

Background colour *(white)*

HEX ↕ | #FFFFFF

▼ **Sample preview**

example text showing contrast

WCAG 2.1 results
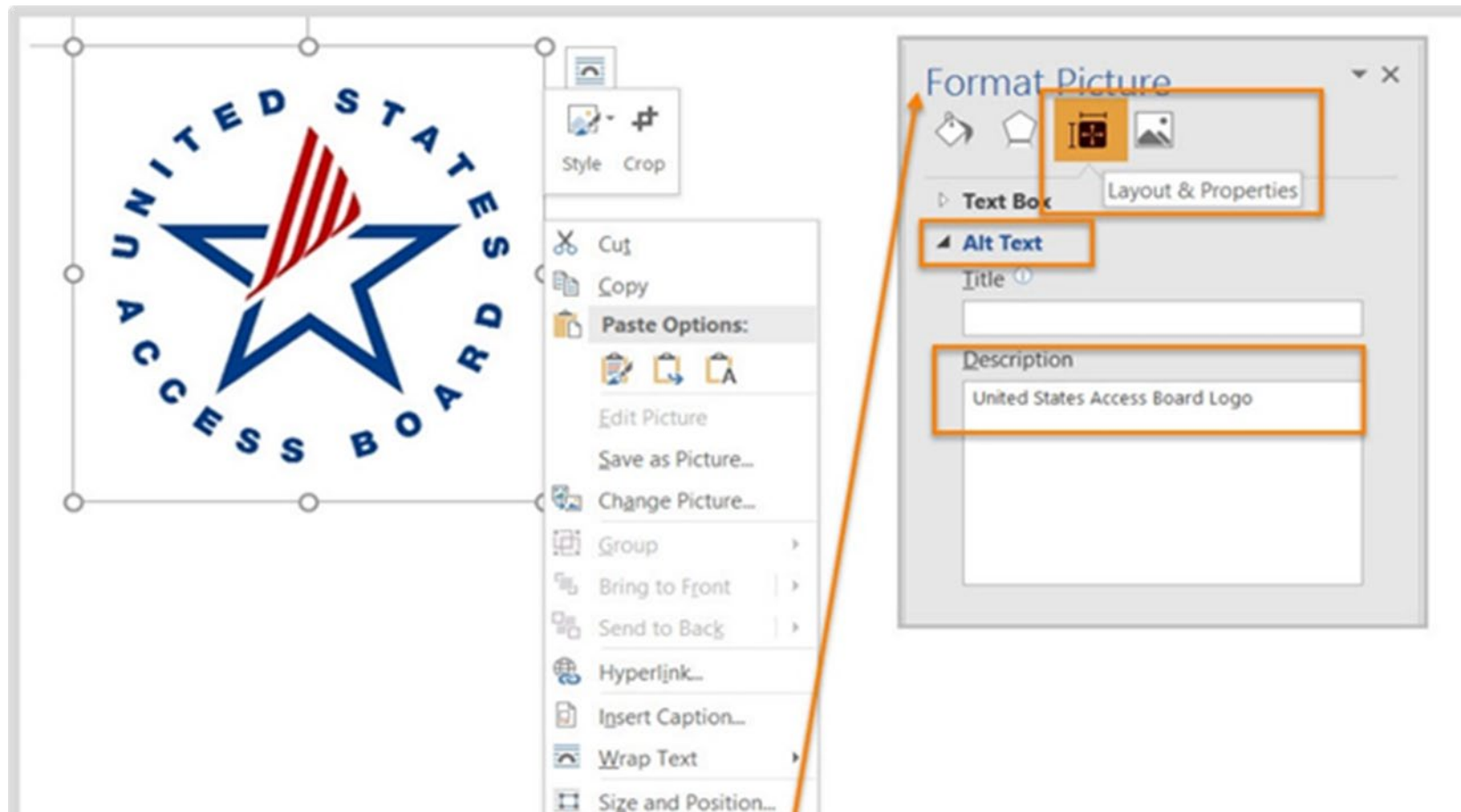
Contrast ratio
21:1

▶ **1.4.3 Contrast (Minimum) (AA)**

✓ Pass (regular text)   ✓ Pass (large text)

▶ **1.4.6 Contrast (Enhanced) (AAA)**

✓ Pass (regular text)   ✓ Pass (large text)

▶ **1.4.11 Non-text Contrast (AA)**

✓ Pass (UI components and graphical objects)

Creating Accessible Documents

- **WORD** – image with alternative text
- **PDF** – tag tree structure
- **Presentations** – Slide layout reading order

WORD – a **meaningful** image with alternative text

Alt text for a <u>decorative</u> image

- **Instruction:** Select an image or object that is just for decoration, "right click (or Shift+F10)>Format Picture
  - (Note: could say Format Object, Format Shape, etc.)>Layout & Properties icon>Alt Text," and read the "Description" field.

- **Test:** Does the "Description" field of decorative image or objects contain blank spaces between quotes? If not, the document fails this test.

- Decorative Content – alternative text using "quote space space quote."

Decorative Content – alternative text using "quote - space - space - quote."

PDF Terminology
"PDF"= Portable Document Format

- WHAT: Electronic document file type -that can be viewed, printed, and electronically submitted.

- THREE key components:
  1. <u>Physical view</u> - which is the physical representation of text and graphics aka "Print View."

  2. <u>Content view</u> - which is the layer of the PDF where the actual document content resides.

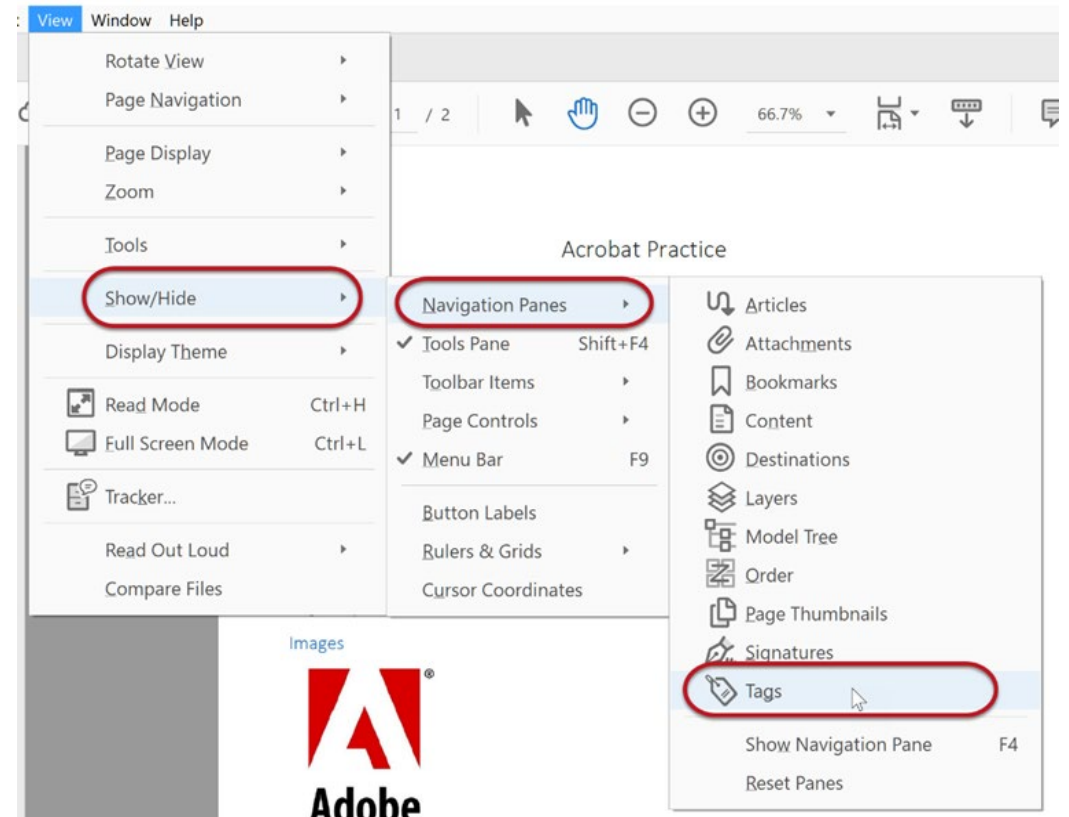**3. <u>Tags Structure Tree</u> - which establishes the PDF content structure and logical reading order.**

Structure: <u>Tags Structure Tree</u> of a PDF

- Establishes the PDF content structure and logical reading order for assistive technology.

- Displays tags used e.g. Headers <H>, Paragraphs <P>, Lists <List>, and Tables <Table>.
  - To view the Tags Structure Tree, access the Tags Pane by selecting the View menu and then selecting **Show/Hide** > **Navigational Panes** > **Tags**.

- Selecting the arrow symbol to the left of the tag, will expand the tag and its child element, which is the content on the page with which the tag is associated.
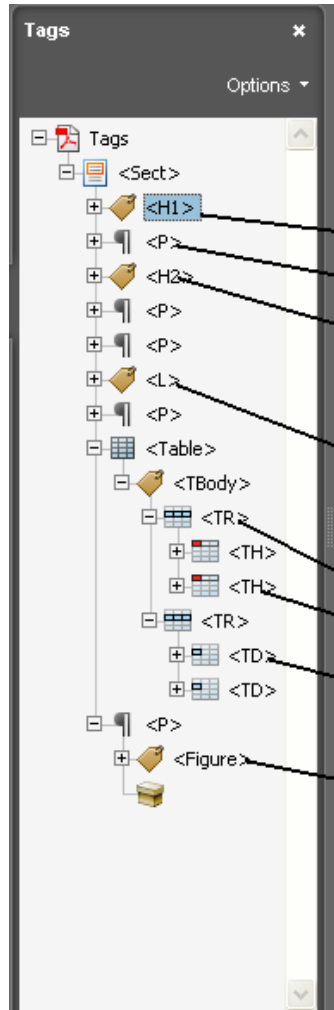
Accessing the Tags Structure Tree of a PDF

View > Show/Hide > Navigation Panes > Tags.

https://webaim.org/techniques/acrobat/acrobat

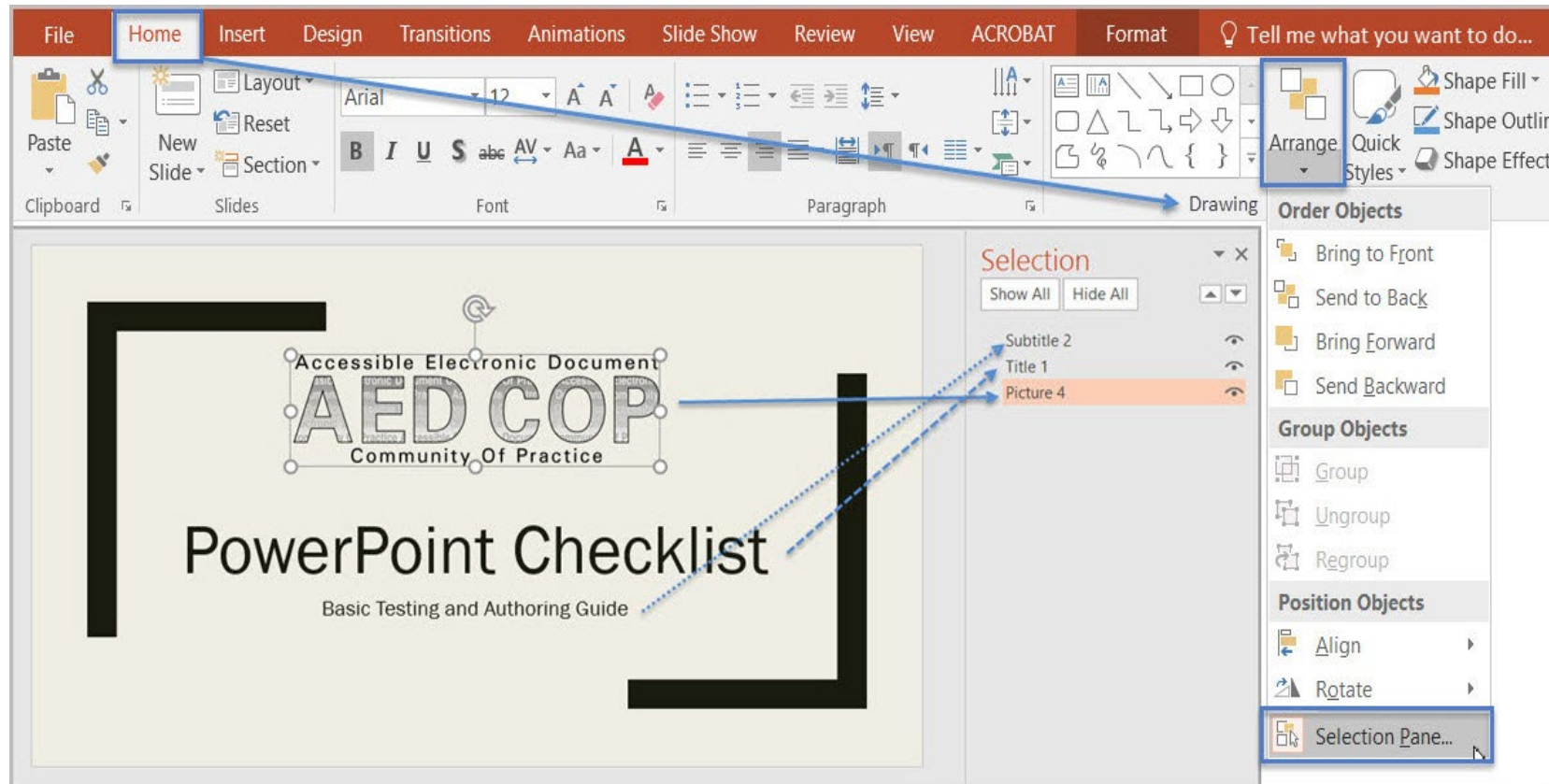# Example of a Tags Structure Tree in a document

Presentation: Text Formatting:
Does the reading order match the visual layout?

How to test:

- Open the Selection pane:
  ("Home tab > Drawing > Arrange>Selection Pane").

  - The first object on the slide will display at the <u>bottom </u>of the Selection Pane.
  - Starting <u>from the bottom and moving to the top</u>, select each object to view the reading order on the slide.

- **Test:** Does the selection of each object match the visual reading order of the slide? If not, the document fails this test.

- **Figure:** Example of selected and subsequent objects matching the slide layout reading order

Example of selected and subsequent objects matching the slide layout reading order

Resources

Resources - Standards

- **www.Access-board.gov** – Access Board website
  - Section 508 Standards & ICT Testing Baseline

- **www.w3.org/TR/WCAG20/** WCAG 2.0 materials

- **www.Section508.gov** –FAQs, Best Practices - accessible documents , Acquisitions, 508 PM contact list

508 Resources – Practice information

- Bimonthly Section 508 Best Practices Webinar Series
  - **www.accessibilityonline.org/cioc-508**
  - "ICT Guidance for Implementing Accessibility into DEIA Plans in the Federal Workforce" July 26th
- Archives (**www.accessibilityonline.org/cioc-508/archives/**)

- Testing for Web
  - Trusted Tester (**www.dhs.gov/trusted-tester**)
  - ICT Testing Baseline for Web (**ictbaseline.access-board.gov**)

Accessible WORD, PDF and Presentations

- **https://www.section508.gov/create/documents**

- **https://www.section508.gov/create/pdfs/authoring-guides/**

- **https://www.section508.gov/create/presentations/authoring-guides/**

U.S. Access Board

E-mail: **508@access-board.gov**
ta@access-board.gov

www.access-board.gov