

Assess the Accessibility of PDFs



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Introduction

Use this document to determine the accessibility of PDFs.

Tools

The list below contains links to the applications used in this tutorial to assess PDFs:

- [Natural Reader](#)
- [PDF Accessibility Checker \(PAC\)](#)
- [Colour Contrast Analyser \(CCA\)](#)
- [Adobe Reader](#)

Further Assistance

If the PDF being assessed does not meet one or more of the accessibility criteria described below, please consult with the campus office serving students with disabilities for assistance in obtaining an accessible version of the PDF. Providing this access in a timely manner is critical for student success.



Text Access

Text access allows users to enable text-to-speech functionality so that the text may be read aloud.

What to do

Listen to the text

Tool(s) to use

[Adobe Reader](#) and [Natural Reader](#)

How to use

1. Open the PDF in Adobe Reader



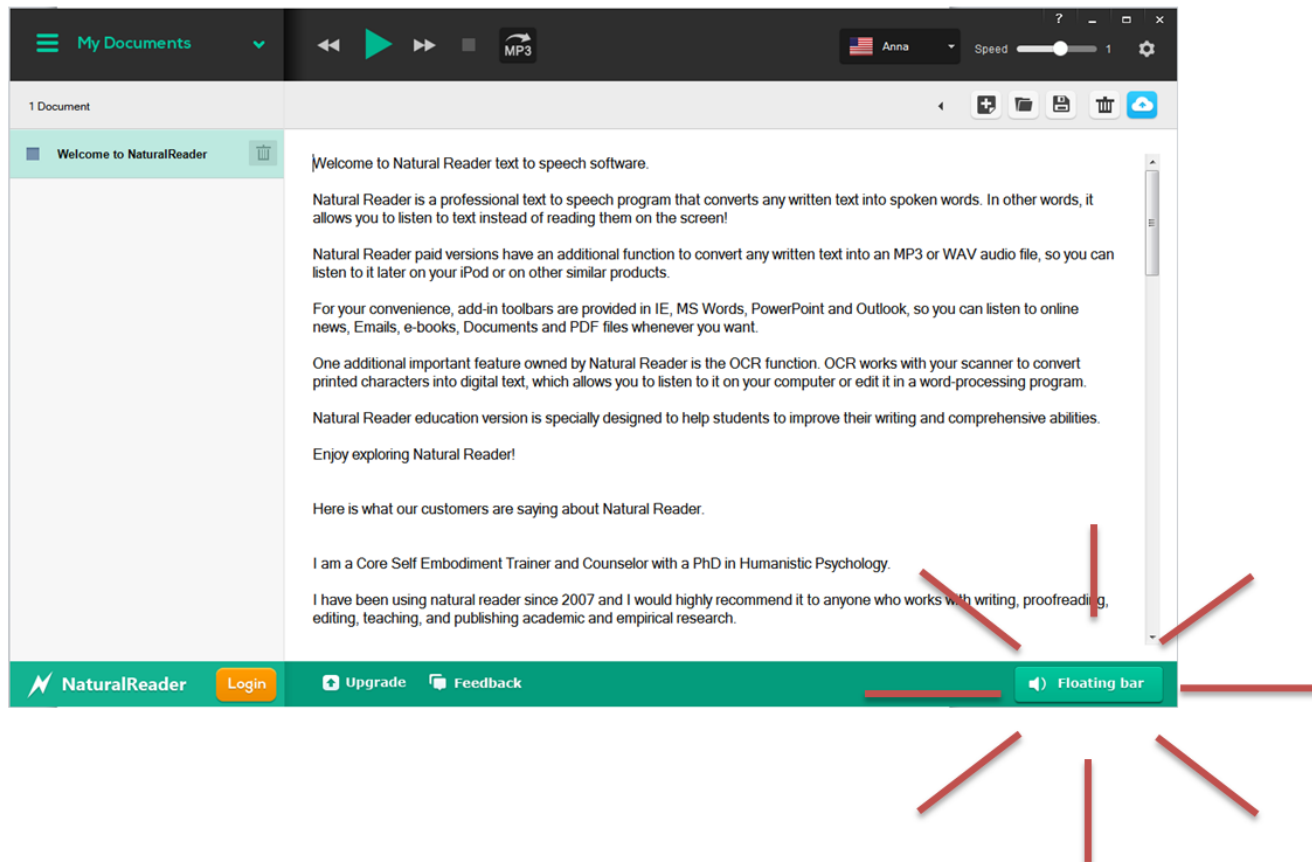


2. Open Natural Reader.



3. Select the **Floating Bar** button.





4. Select text in the material to be read aloud.



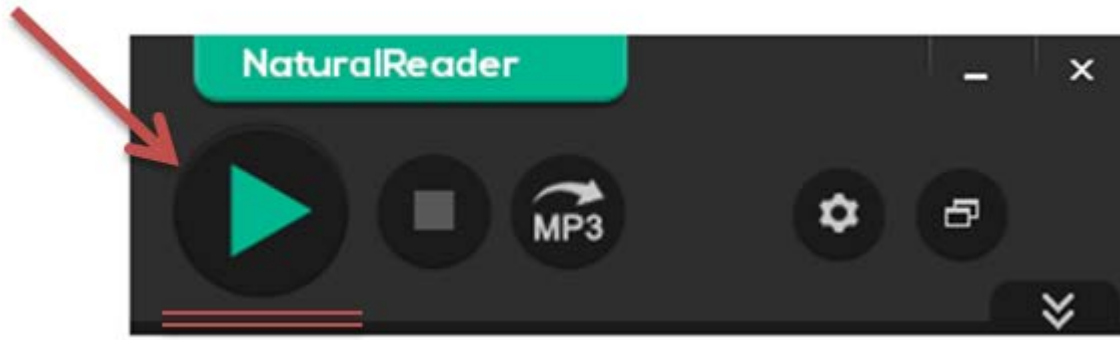
In this month's Chair Corner, Kevin advances three central tenets to being politically savvy: Visibility, Centrality and Relevance. I'd like to propose two more: **Challenges and Results**.

What do I mean by these?

We are all very adept at certain things, and for actuaries, virtually anything technical falls into this. These skills are so natural to us that we tend to forget they are anything special. As a result, we tend to underplay them.

Note: If the text is selectable letter by letter, then this is a good indication that the text is digital. ✓

5. If needed, enable the computer's sound and adjust it to a safe volume level to listen to Natural Reader.
6. On the Natural Reader Floating Bar, select the **Play** button to hear the text read aloud.



What is the Result?

- ✓ If the text can be heard using Natural Reader, then it is digital text that assistive technology may be able to access.
- ✗ If the text is not selectable or cannot be read aloud by a Text to Speech technologies such as Natural Reader, then the text is not digital and assistive technologies may not be able to access that information.

Reading Order

Reading order corresponds to visual layout.

What to do

Check the reading order

Tool(s) to use

[Adobe Reader](#)'s Read Out Loud Tool

How to use

Adobe Reader has a built in text to speech reader called Read Out Loud. Read Out loud will read the order of content based on its structure.

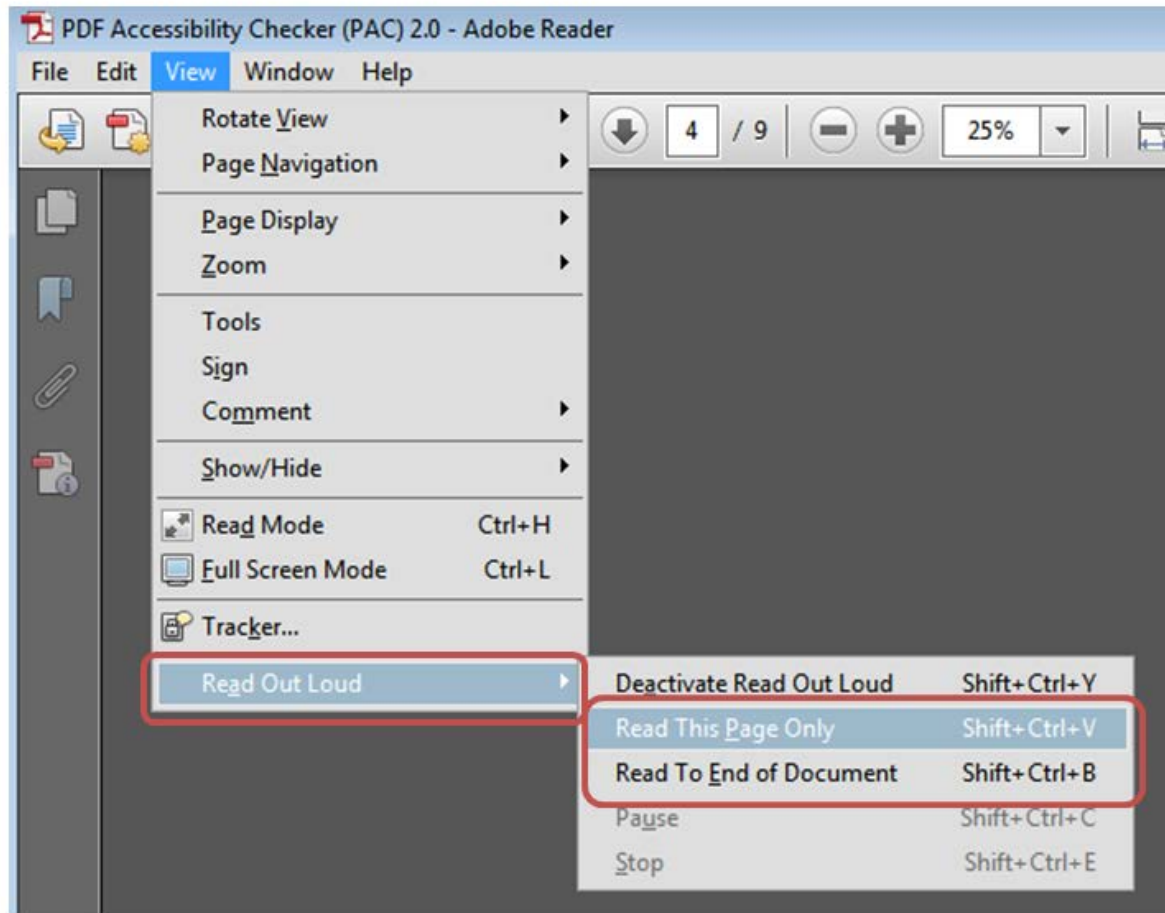
1. Save the PDF on the computer



2. Open the PDF in Adobe Reader



3. The Read Out Loud features are located in the **View** menu under the **Read Out Loud** submenu.



4. Select **Activate Read Out Loud**

5. Select options to **Read This Page Only** or **Read To End of Document**

What is the Result?

- ✓ If the order of the content read by Read Out Loud matches the order of the content in the PDF, then the content will be conveyed to assistive technology users in a logical order.
- ✗ If the order of the content read by Read Out Loud does not match the order of the content, then the content will be conveyed to assistive technology users in the wrong order.

Structural Markup and Navigation

The document includes structural markup, such as headings and lists, which can be used for navigation by assistive technology.

What to do

Assess the structure of the document by looking for headings, lists and tables.

Tool(s) to use

[PDF Accessibility Checker \(PAC\)](#)

How to use it

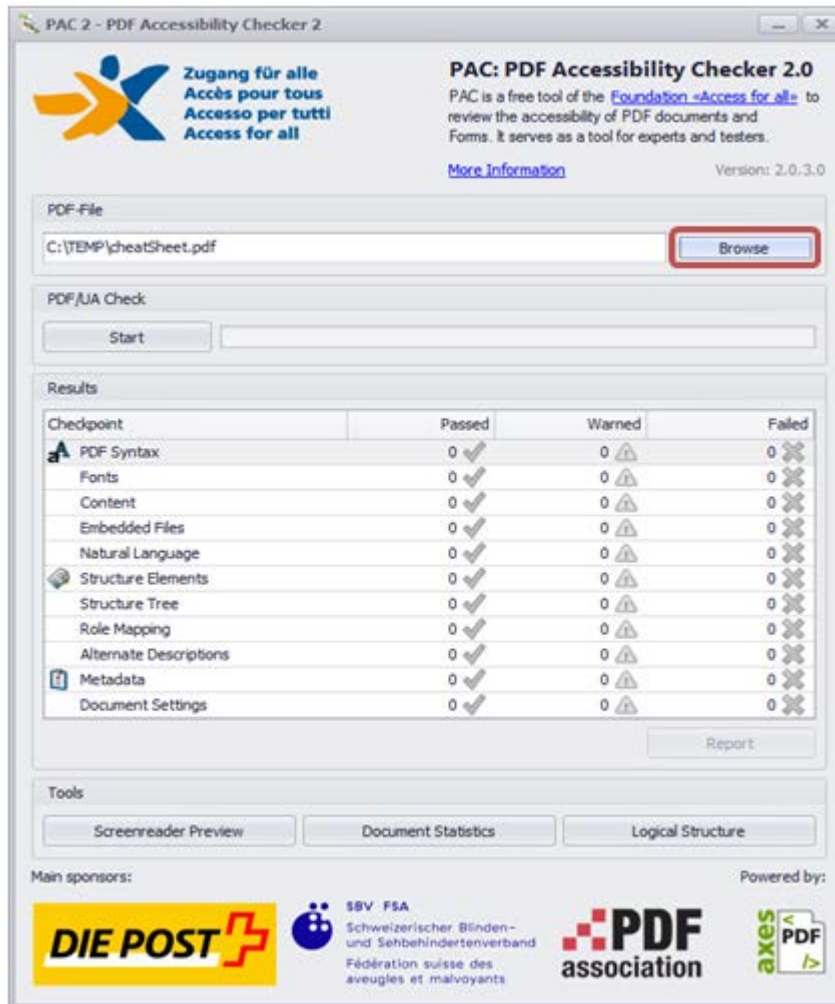
1. Save the PDF on the computer



2. Open the **PDF Accessibility Checker**



3. Select the **Browse** button and select the saved PDF



4. Select the **Start** button

PAC 2 - PDF Accessibility Checker 2

 **Zugang für alle
Accès pour tous
Accesso per tutti
Access for all**

PAC: PDF Accessibility Checker 2.0
PAC is a free tool of the [Foundation «Access for all»](#) to review the accessibility of PDF documents and Forms. It serves as a tool for experts and testers.
[More Information](#) Version: 2.0.3.0

PDF-File
C:\TEMP\cheatSheet.pdf Browse

PDF/JA Check
Start



Results

Checkpoint	Passed	Warned	Failed
 PDF Syntax	0 ✓	0 ⚠	0 ✗
Fonts	5 ✓	0 ⚠	0 ✗
Content	4,914 ✓	0 ⚠	22 ✗
Embedded Files	0 ✓	0 ⚠	0 ✗
Natural Language	2,106 ✓	0 ⚠	0 ✗
 Structure Elements	56 ✓	0 ⚠	0 ✗
Structure Tree	519 ✓	0 ⚠	1 ✗
Role Mapping	553 ✓	0 ⚠	0 ✗
Alternate Descriptions	1,076 ✓	0 ⚠	0 ✗
 Metadata	1 ✓	0 ⚠	2 ✗
Document Settings	2 ✓	0 ⚠	1 ✗

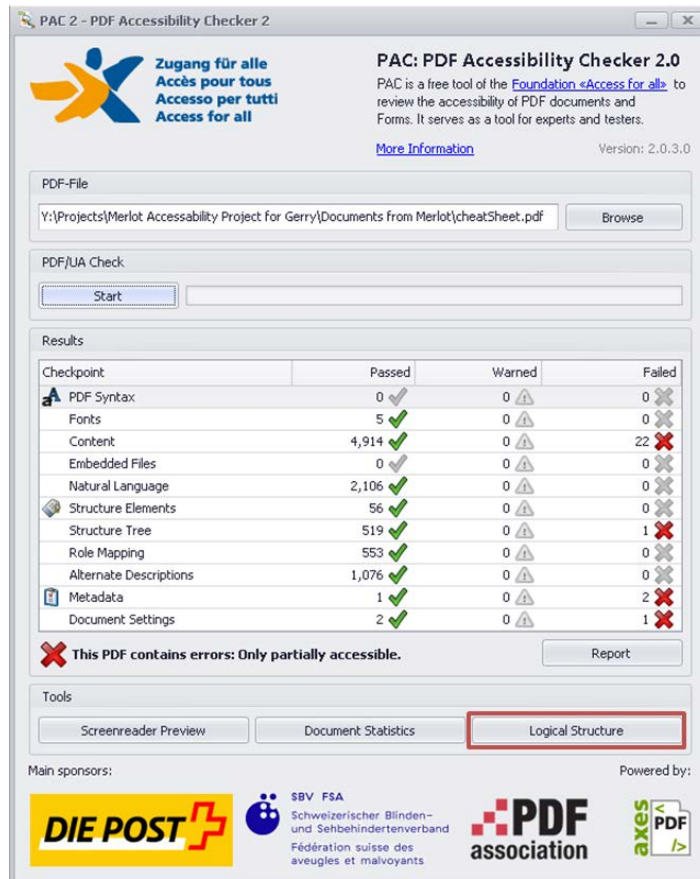
 **This PDF contains errors: Only partially accessible.** Report

Tools
Screenreader Preview Document Statistics Logical Structure

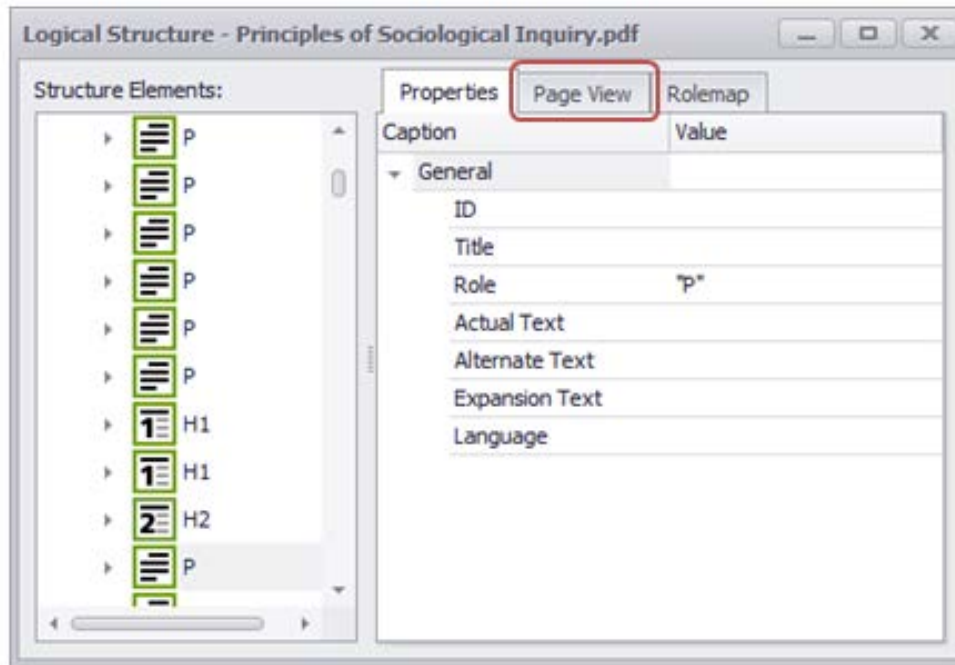
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5. Select the **Logical Structure** button



6. Select the Page View tab



7. Use the keyboard's down and up arrow keys or use the mouse to move through each element in the **Structure Elements** section. Observe the highlighted content and its corresponding element.

Logical Structure - Principles of Sociological Inquiry.pdf

Structure Elements: Properties Page View Rolemap

Chapter I
Introduction

Research Methods for Everyday Life

Do you like to know things? Do you ever wonder what other people know or how they know what they do? Have you ever made a decision, and do you plan to make decisions in the future? If you answered yes to any of these questions, then you will probably find the information in this book—particularly the information on research methods—very useful. If you answered no to all of them, I suspect that you will have reconsidered by the time you finish reading this text. Let's begin by focusing on the information in this chapter. Here we'll consider the variety of ways that we know things and what makes social scientific knowledge unique. We'll also consider why any of this might matter to you and preview what's to come in later chapters.

1.1 How Do We Know What We Know?

LEARNING OBJECTIVES

1. Define research methods.
2. Identify and describe the various ways of knowing presented in this section.
3. Understand the weaknesses of nonsystematic ways of knowing.
4. Define ontology and epistemology and explain the difference between the two.

If I told you that the world is flat, I'm hoping you would know that I'm wrong. But how do you know that I'm wrong? And why did people once believe that they knew that the world was flat? Presumably the shape of the earth did not change dramatically in the time that we went from "knowing" one thing about it to knowing the other; however, something certainly changed our minds. Understanding both what changed our minds (science) and how might tell us a lot about what we know, what we think we know, and what we think we can know.

This book is dedicated to understanding exactly how it is that we know what we know. More specifically, we will examine the ways that sociologists come to know social facts. Our focus will be on one particular way of knowing: social scientific research methods. Research methods are a systematic process of inquiry applied to learn something about our social world. But before we take a closer look at research methods, let's consider some of our other sources of knowledge.

Different Sources of Knowledge

What do you know about only children? Culturally, our stereotype of children without siblings is that they grow up to be rather spoiled and unpleasant. We might think that the social skills of only children will not be as well developed as those of people who were reared with siblings. However, sociological research shows that children who grow up without siblings are no worse off than their counterparts with siblings when it comes to developing good social skills (Bobbitt-Zeher & Downey, 2010). [1] Sociologists consider precisely these types of assumptions that we take for granted when applying research methods in their investigations. Sometimes we find that our assumptions are correct. Often as in this case, we learn that the thing that everyone seems to know to be true isn't so true after all. [2]

Many people seem to know things without having a background in sociology. Of course, they may have been trained in other social science disciplines or in the natural sciences, or perhaps they read about findings from scientific research. However, there are ways we know things that don't involve scientific research methods. Some people know things through experiences they've had, but they may not think about those experiences systematically; others believe they know things based on selective observation or overgeneralization; still others

Saylor URL: <http://www.saylor.org/books>







Saylor.org 3

Page 3

What is the Result?

- ✓ The structural markup may be used for navigation if the content type in PAC'S Page View is

represented in **Structure Elements** pane:

-  ^{H1} - Heading 1
-  ^{H2} - Heading 2
-  ^{H3} - Heading 3
-  ^P - Paragraph
-  ^L - List
-  - Table

✗ The structural markup may not be used for navigation if the content type in PAC'S Page View is not correctly represented in **Structure Elements:**.

For example, if the **Paragraph** icon is the only element that appears in the **Structure Elements:** pane when headings and lists are apparent in the **Page View**, assistive technology users will not have the structure of the content correctly conveyed to them. These readers may miss the importance of the content in the document.

Tables

Data tables include markup that identifies row and column headers.

What to do

Assess the structure of the tables in a PDF.

Tool(s) to use

[PDF Accessibility Checker \(PAC\)](#)

How to use

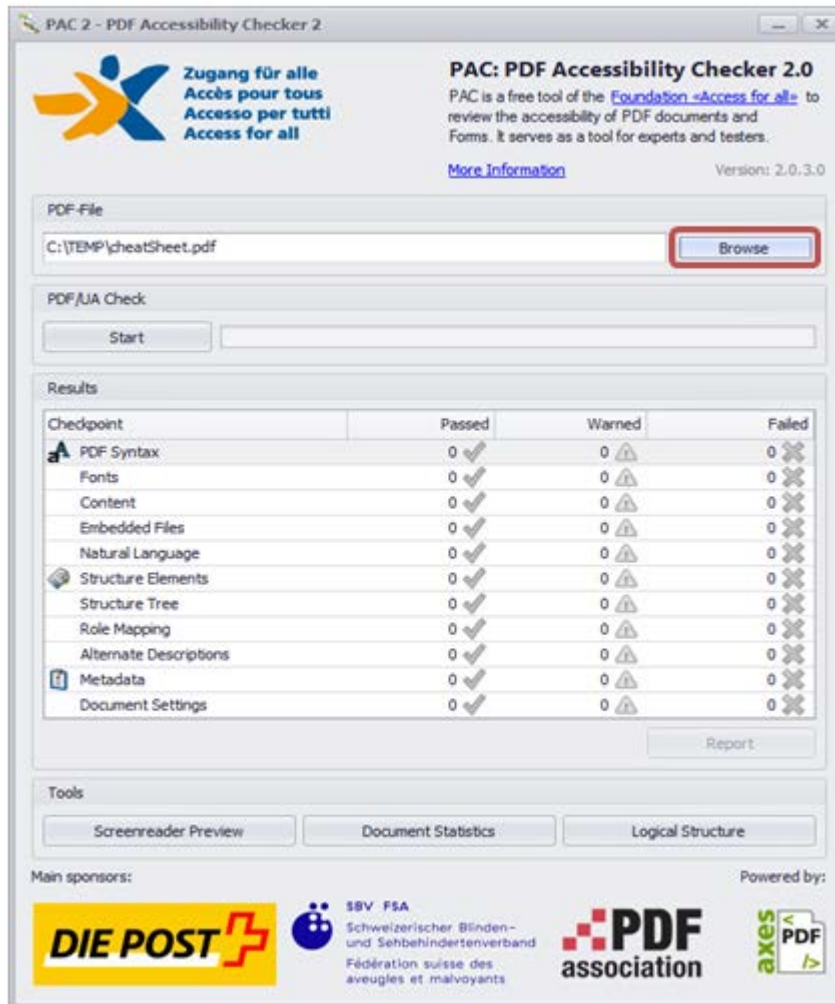
1. Save the PDF on the computer



2. Open the **PDF Accessibility Checker**



3. Select the **Browse** button and select the saved PDF




4. Select the **Start** button



5. Select the **Logical Structure** button

PAC 2 - PDF Accessibility Checker 2

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[More Information](#) Version: 2.0.3.0

PDF-File
Y:\Projects\Merlot Accessibility Project for Gerry\Documents from Merlot\cheatSheet.pdf





PDF/UA Check

Results

Checkpoint	Passed	Warned	Failed
PDF Syntax	0 ✓	0 ⚠	0 ✗
Fonts	5 ✓	0 ⚠	0 ✗
Content	4,914 ✓	0 ⚠	22 ✗
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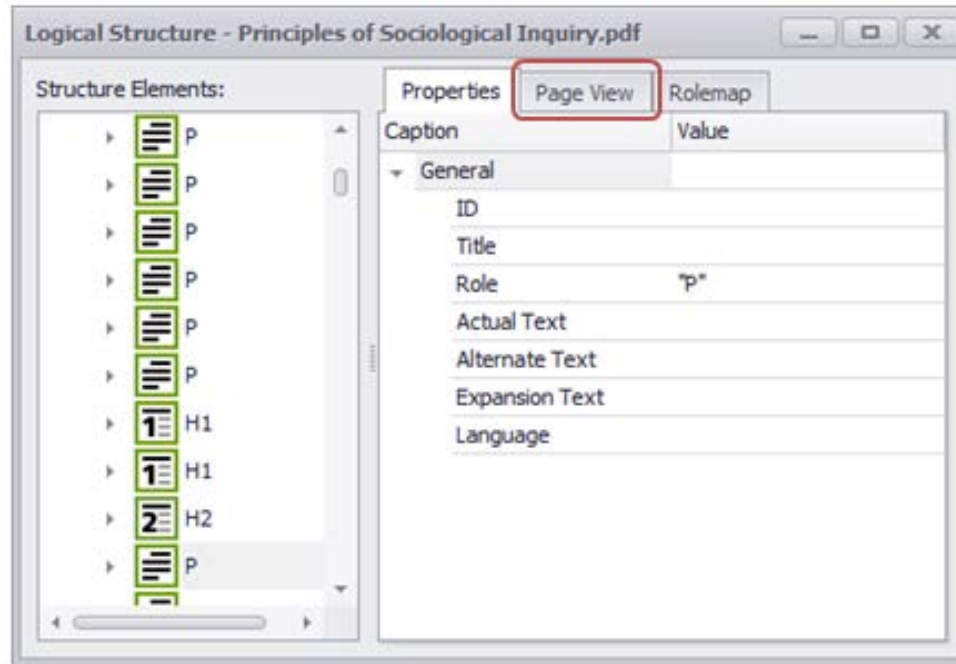
This PDF contains errors: Only partially accessible.

Tools

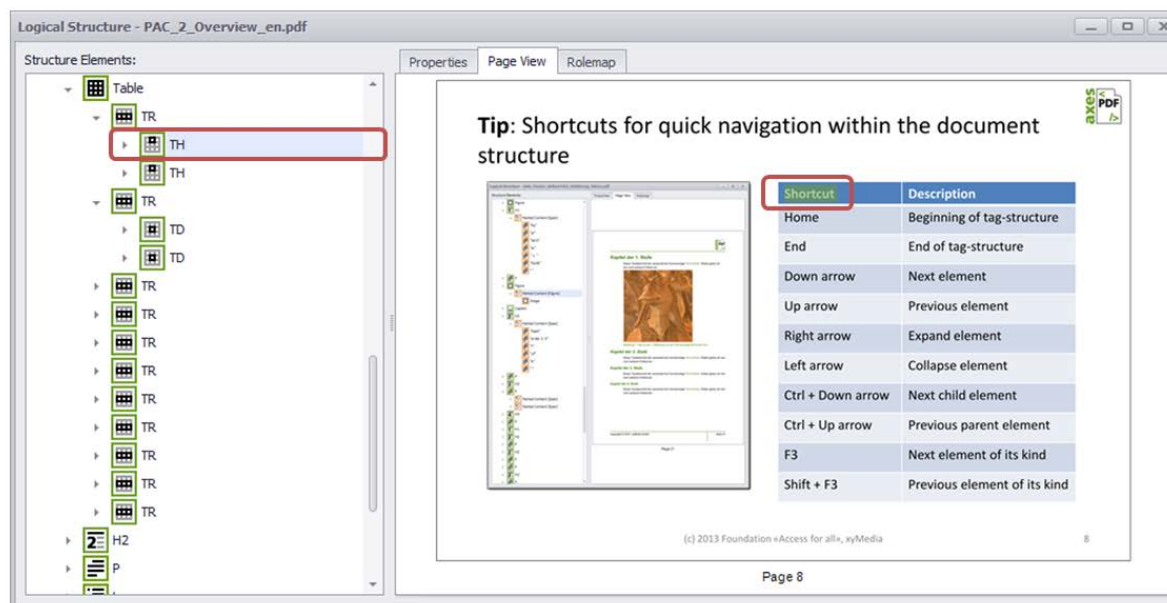
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6. Select the **Page View** tab





7. Scroll to the section of the document that contains a table and expand the nested lists in **Structure Elements**: to display the table structure. Each corresponding part of the table will highlight in the **Page View**.



What is the Result?

✓ The PDF has proper structural markup for its tables that can be used for navigation if the following icons are present (when applicable):

-  Table
-  TH - Table Header used for data table headers

Assistive technology users may be able to navigate through properly structured tables.

✗ The page does not have a proper structural markup for tables if:

- Layout tables, tables that do not have relational data, have table headers.
- Data tables, tables with interrelated information, do not have headers.

Users of assistive technology may not be able to navigate through the table and may not understand its content.

Hyperlinks

Allows users to understand a link's destination and what the name of the resource is that they are linking to.

What to do

Verify that links have a recognizable meaning and are functional.

Tool(s) to use

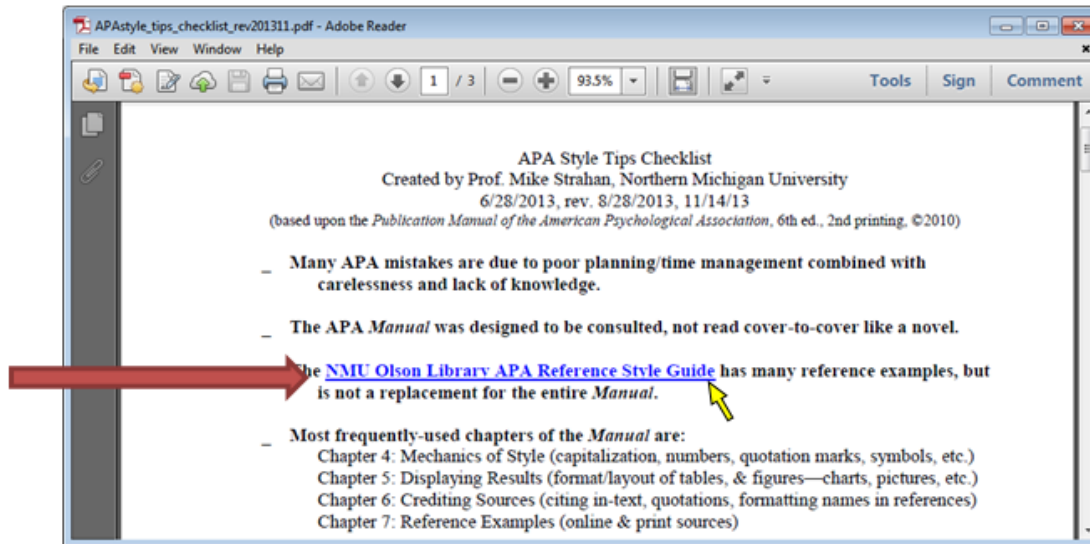
[Adobe Reader](#)

How to use

1. Open the document in Adobe Reader



2. Browse through the document and look for links.



http://library.nmu.edu/guides/userguides/APAstyle_tips_checklist_rev201311.pdf

3. Manually check the links by selecting them.
4. Verify that the link goes to the expected destination. A well labeled link provides the user with information such as a meaningful name of a document, or name of a website.

What is the Result?

- ✓ All users may be able to use the links included in a document if they are understandable and work properly. The hyperlinks in a document are operable and understandable if:
 - The links go to their appropriate destination.
 - The link text for the link clearly states where it will lead. A link labeled “Word doc” does not tell a person where it is linking to, especially when taken out of context of the text around it.

Below is a list of links that do not have meaningful names:

“Click here”

“Next document”

“New document”

“here”

“Link”

- Links are well labeled if the link text is understandable when extracted from the surrounding text.
- Many users navigate a page by listing the links without the surrounding text.

✗ Users may not be able to use the links included in a document if they are not understandable or do not work as expected. Hyperlinks are not useful to users if:

- Links are broken
- Links do not have meaningful text
- Link text is “Click here”, “About”, “More Info”, “More”, etc.
- Links do not look different from its surrounding text

Color as Information

When information is conveyed using color, a second technique is necessary for users that cannot perceive colors.

What to do

Look for content that conveys meaning through the use of only color.

Tool(s) to use

[Adobe Reader](#)

How to use

1. Read through the content and look for instructions or descriptions that require readers to interpret colors.



POSITION REQUISITION AND APPROVAL PROCESS

6.1.2 The recruiter can also enter a candidate directly. Typically this is done either when an employee refers someone or when the recruiter proactively searches for candidates on various job boards. The recruiter would fill in the form below. **Items in RED are required fields.**

SOURCING INFO	
Method	Select
Source	Select
(enter source if not in list above) >>	
Job Folder	Select
Additional Active Folder	
Additional Inactive Folder	There are no inactive folders.
Create and Attach NEW Folder	

GENERAL INFO		RESUME
First		
MI		
Last	Dow	
Email Address		
Home Phone	Phone # (format: 000-000-0000)	
Cell Phone		
Work Phone		
Address1		
Address2		
City		

What is the Result?

✓ Users may visibly perceive information and instruction when alternative distinguishing features are

used such as:

- The use of Strong, larger, or italic font is used in combination or instead of color
- The use of symbols, such as asterisk (*) or pound (#), is used in combination or instead of color.
- The use of an underline or pattern is used in combination or instead of color.

Using any of these alternatives may be beneficial to users with colorblindness.

✗ Users may not be able to visibly perceive information and instruction if they are color dependent.

Users with colorblindness may not be able to obtain information from the document because alternatives to color are not used.

Color Contrast

High contrast helps users distinguish between text and the background on which the text appears. Tools can test for the proper contrast ratio of 4.5:1 provided between the text (foreground) and its background.

What to do

Analyze the color contrast between text and its background.

Tool(s) to use

[Colour Contrast Analyser](#) (CCA)

How to use

1. Open the document in Adobe Reader.



2. Open the Colour Contrast Analyser.



1. Scan the page for text with color combinations other than black text with white backgrounds (and vice versa). Below is an example that can be used.

Jeopardy!

The Students	The Journey	The Law	Anything Goes
<u>\$100</u>	<u>\$100</u>	<u>\$100</u>	<u>\$100</u>
<u>\$200</u>	<u>\$200</u>	<u>\$200</u>	<u>\$200</u>
<u>\$300</u>	<u>\$300</u>	<u>\$300</u>	<u>\$300</u>
<u>\$400</u>	<u>\$400</u>	<u>\$400</u>	<u>\$400</u>
<u>\$500</u>	<u>\$500</u>	<u>\$500</u>	<u>\$500</u>

<http://www.merlot.org/merlot/downloadFile.htm?fileName=Nanabek%2fIntroductory+Inclusion+jea.gm.pptx>

pptx

- Using the CCA's **Foreground Colour Sampler**, select the color of the text by placing the cross hair in the center of the letter.



Jeopardy!



- To analyze the contrast, use the **Background Colour Sampler** and place the crosshair just outside of the letter previously selected.

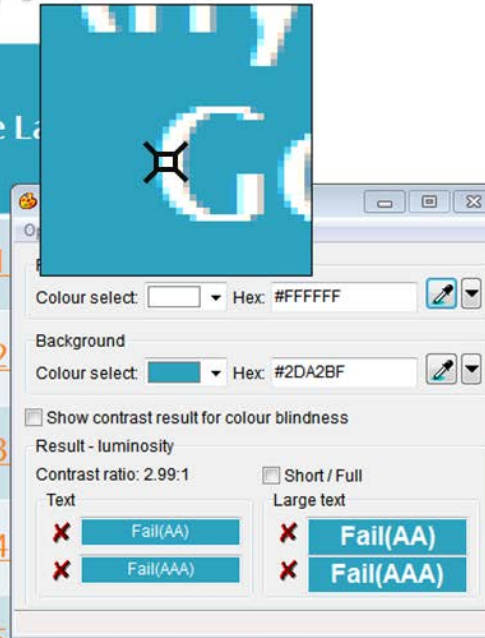
Jeopardy!



Note: Use the **Colour Contrast Analyser**. Do not assume that the contrast is accessible without using a color contrast analyzing tool. Sometimes, the contrast between text and background may appear like it should pass a color contrast test, but when tested, fails due to low contrast.

Jeopardy!

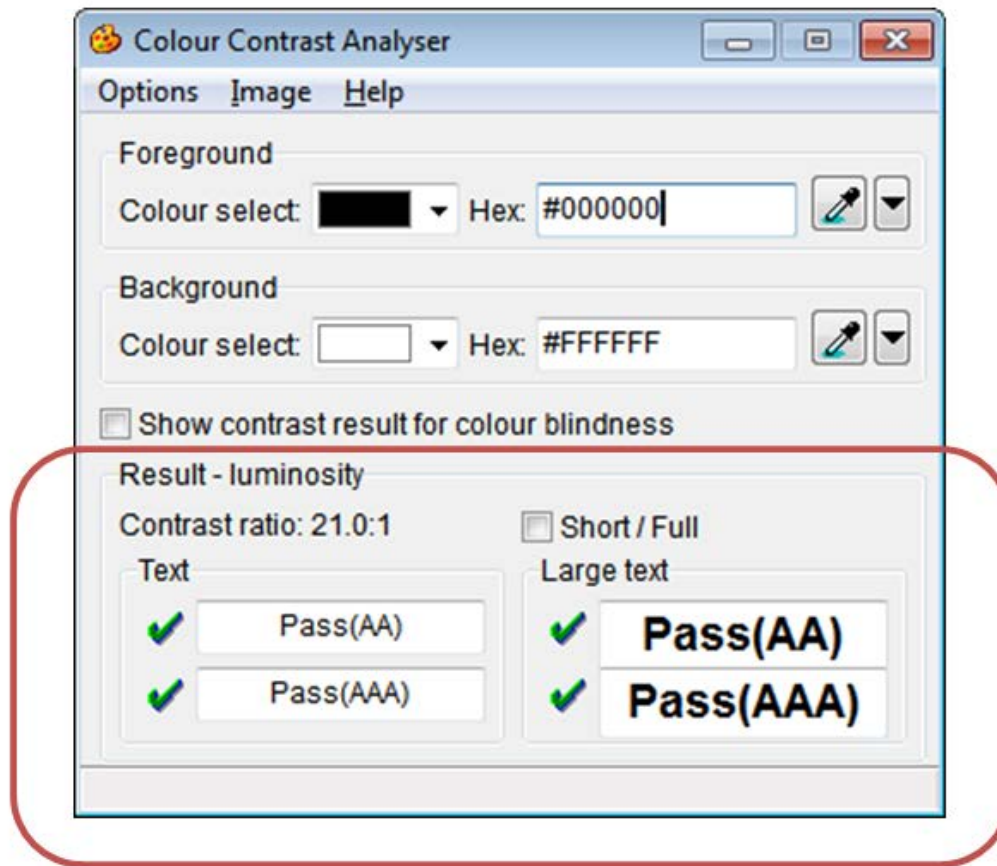
The Students	The Journey	The La
<u>\$100</u>	<u>\$100</u>	<u>\$100</u>
<u>\$200</u>	<u>\$200</u>	<u>\$200</u>
<u>\$300</u>	<u>\$300</u>	<u>\$300</u>
<u>\$400</u>	<u>\$400</u>	<u>\$400</u>
<u>\$500</u>	<u>\$500</u>	<u>\$500</u>



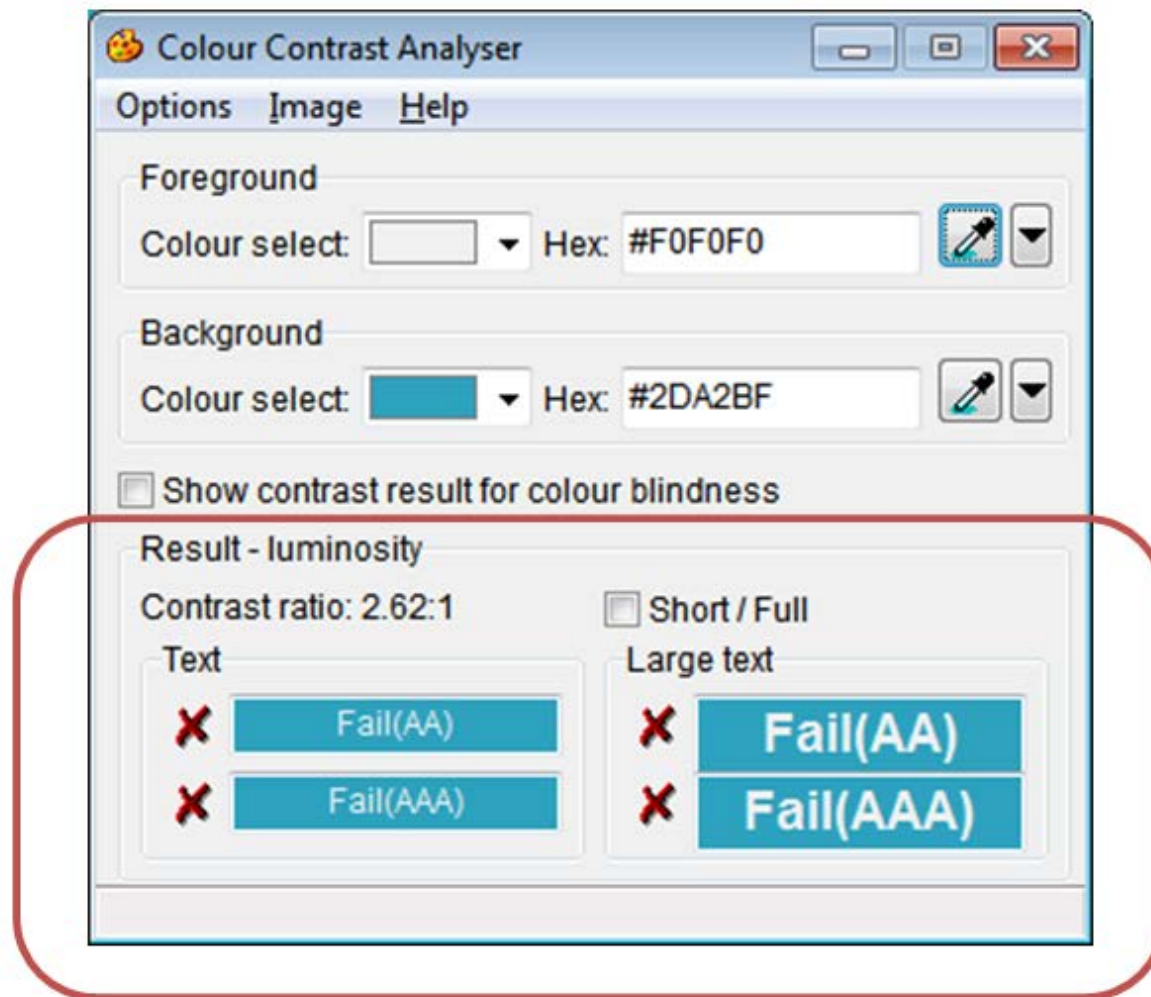
5. Review the **Results** at the bottom of the CCA.

What is the Result?

- ✓ If there is a green check mark next to the word **Pass (AA)**, then the text and foreground color combination has a high enough contrast that is suitable for most people.



✗ If there is a red x next to the word **Fail (AA)**, then the text and foreground color combination does not have a high enough contrast and people with color blindness may not be able to read the text.





Language

The language used in the document is conveyed to users of assistive technology. This helps with the way the document is read.

What to do

Verify the language set for the PDF

Tool(s) to use

[PDF Accessibility Checker \(PAC\)](#)

How to use

1. Save the PDF on the computer




2. Open the **PDF Accessibility Checker**



3. Select the **Browse** button and select the saved PDF

PAC 2 - PDF Accessibility Checker 2

 **Zugang für alle
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PDF-File
C:\TEMP\cheatSheet.pdf Browse



PDF/UA Check
Start



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Checkpoint	Passed	Warned	Failed
PDF Syntax	0 ✓	0 ⚠	0 ✗
Fonts	0 ✓	0 ⚠	0 ✗
Content	0 ✓	0 ⚠	0 ✗
Embedded Files	0 ✓	0 ⚠	0 ✗
Natural Language	0 ✓	0 ⚠	0 ✗
Structure Elements	0 ✓	0 ⚠	0 ✗
Structure Tree	0 ✓	0 ⚠	0 ✗
Role Mapping	0 ✓	0 ⚠	0 ✗
Alternate Descriptions	0 ✓	0 ⚠	0 ✗
Metadata	0 ✓	0 ⚠	0 ✗
Document Settings	0 ✓	0 ⚠	0 ✗

Report

Tools
Screenreader Preview Document Statistics Logical Structure

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4. Select the **Start** button



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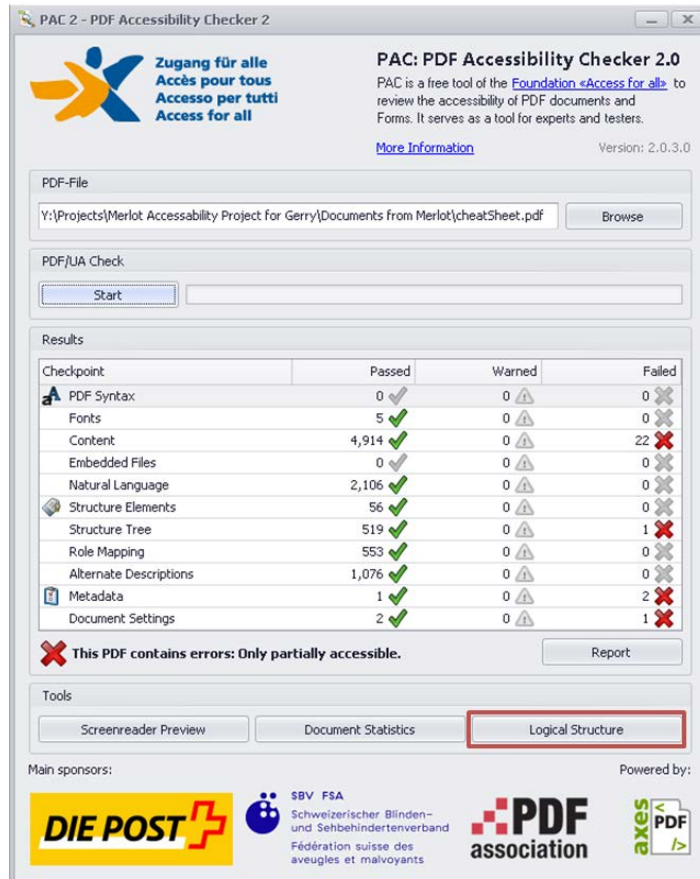
 **This PDF contains errors: Only partially accessible.**

Tools

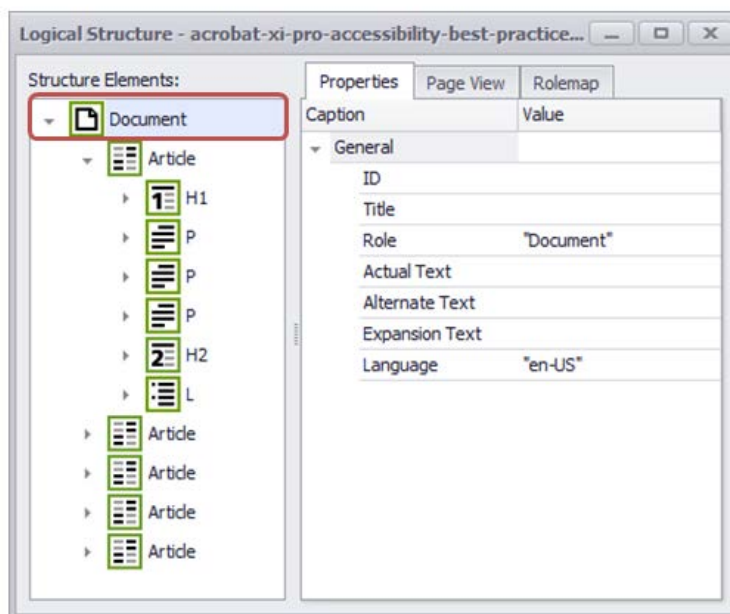
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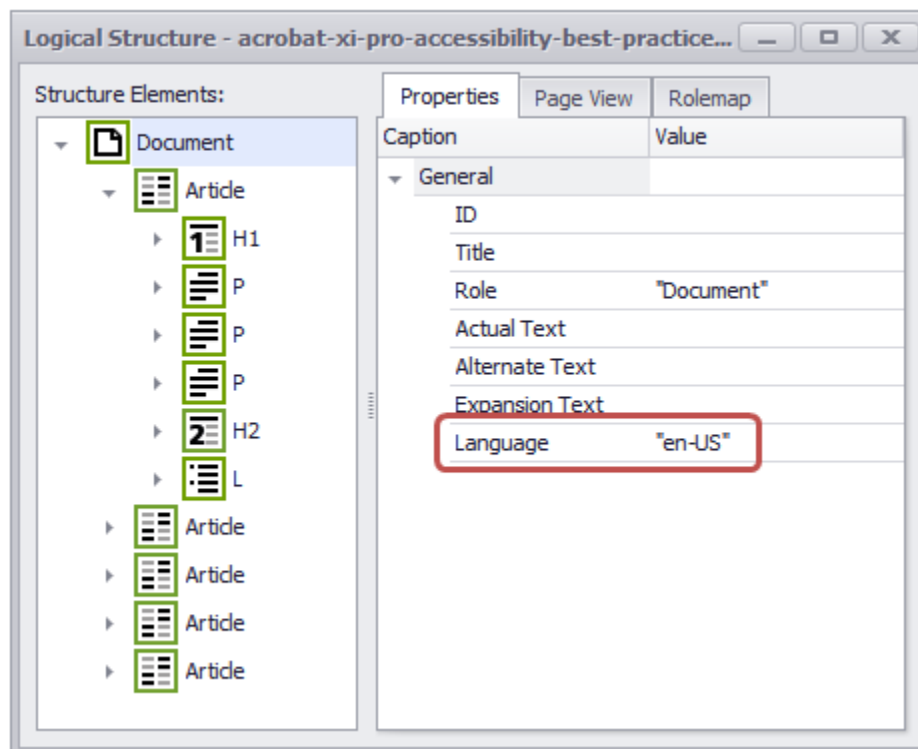
5. Select the **Logical Structure** button



6. In the **Structure Elements:** list on the left, select **Document** at the top.



7. On the **Properties** tab, verify that there is a language specified for the document.



Note: If the document contains content in more than one language, go to that section in the **Structure Elements** list and verify that the language setting is correct. ✓

What is the Result?

- ✓ If the document's or section's language is appropriately declared, then the content may be conveyed through assistive technology in the intended language.
- ✗ The document's content may not be correctly conveyed to readers using assistive technology if there is no language declared for the document or content or if the language declared is incorrect.

Resources

[Language Codes](#)



Images

Meaningful images should be described for all users. As authors, consider what message the image is meant to provide. If it is meaningful, a brief description of the intended information should be provided.

What to do

Check the images in the document for alternative text or a description of the image in the surrounding text.

Tool(s) to use

[PDF Accessibility Checker \(PAC\)](#)

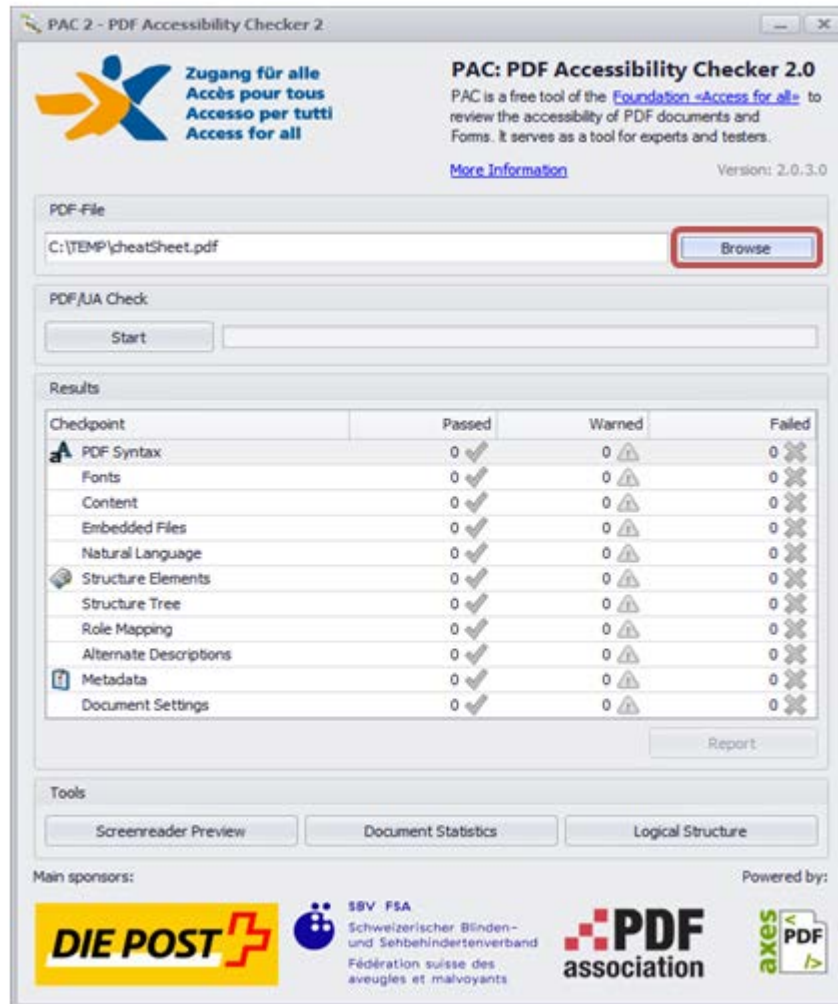
How to use

1. Open the PDF Accessibility Checker





2. Select the **Browse** button and select the saved PDF



3. Select the **Start** button

PAC 2 - PDF Accessibility Checker 2

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Accesso per tutti
Access for all**

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4. Select the **Screenreader Preview** button



PAC 2 - PDF Accessibility Checker 2





































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Accès pour tous
Accesso per tutti
Access for all**


PAC: PDF Accessibility Checker 2.0
PAC is a free tool of the [Foundation «Access for all»](#) to review the accessibility of PDF documents and Forms. It serves as a tool for experts and testers.
[More Information](#) Version: 2.0.3.0

PDF-File
C:\TEMP\cheatSheet.pdf



PDF/UA Check



Results

Checkpoint	Passed	Warned	Failed
 PDF Syntax	0 	0 	0 
Fonts	5 	0 	0 
Content	4,914 	0 	22 
Embedded Files	0 	0 	0 
Natural Language	2,106 	0 	0 
 Structure Elements	57 	0 	0 
Structure Tree	519 	0 	1 
Role Mapping	553 	0 	0 
Alternate Descriptions	1,076 	0 	0 
 Metadata	1 	0 	2 
Document Settings	2 	0 	1 

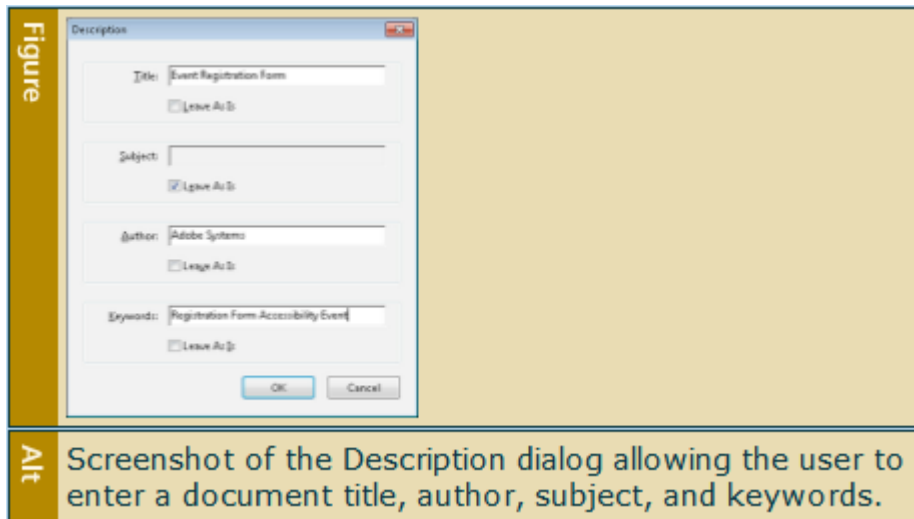
 **This PDF contains errors: Only partially accessible.**

Tools

Main sponsors:   SBV FSA
Schweizerischer Blinden-
und Sehbehindertenverband
Fédération suisse des
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5. Scroll down to where images are in the PDF. Look specifically for beige colored **Figure** and **Alt** sections



What is the Result?

- ✓ If there is text inside the Alt area that describes the image in the document, then assistive technology users will be able to understand the meaning and purpose of the image.

The image has proper descriptions if:

- The alternative text description is short and meaningful. The image may be described to assistive technology users.
- Complex images, charts, and graphs are described in surrounding text for all users to read. Complex images may also be supplemented with a link to additional information.
- Decorative images do not have alternative text descriptions. These images may be ignored by assistive technology which decreases the amount of non-important information the user of assistive technology will hear.

Note: The following images do not need to have alternative text descriptions: ✓

- decorative images
- unimportant images
- important images that are described in a paragraph above or below



- ✗ The document does not have proper alternative text if:
- The **Alt** area is blank for an important image without further explanation in surrounding paragraphs.
 - The **Alt** area does not have a short description of the image's function, meaning or content.
 - The **Alt** Description area contains a web address (unless the image is of a web address).
 - Decorative images have alternative descriptions.