

Quick Guide

# PAC: PDF Accessibility Checker

Version 1.2

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

PAC is a free tool to review of the accessibility of PDF documents and Forms. It serves as a tool for experts and testers.

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# 1 Overview "PAC – PDF Accessibility Checker"

Congratulations on using "PAC: PDF Accessibility Checker". You have chosen an evaluation tool which will support you when creating high quality accessible PDF documents and PDF forms and which will make your work much easier.

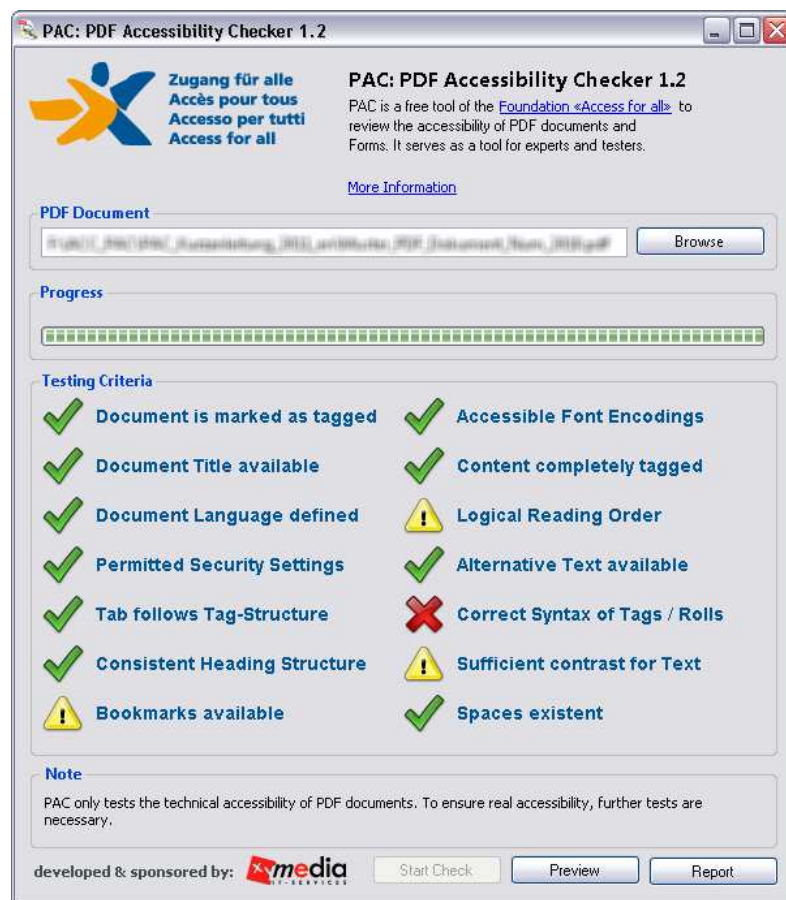
## 1.1 Tagged PDF documents

Tags are the foundation of accessible PDF documents. They deliver the structural information, which enables assistive technology, such as screen readers, to

- Properly recognise different text elements, such as headings, lists, graphics and tables.
- Read the document following the correct reading order.

Many authoring systems are capable of producing tagged PDF documents. Unfortunately, however, the quality of those automatically generated tagged documents is often insufficient, which makes additional visual as well as technical checks inevitable.

## 1.2 Checking PDF-Accessibility using PAC



The most important features of "PDF Accessibility Checker" are:

- 1 The **BUTTON: START TESTING** runs the most important accessibility

checks on the PDF document:

See [Chapter 3: "Accessibility Checks \(Page 8\)"](#) for a detailed explanation.

- 2 The **BUTTON: PREVIEW** displays the document the way a blind person would read it:

See [Chapter 4: "Preview as the blind would read \(Page 13\)"](#) for a detailed explanation.

- 3 The **BUTTON: REPORT** creates a test report:

See [Chapter 5: "Report \(Page 16\)"](#) for details.

## 2 Installation instructions

### 2.1 System requirements

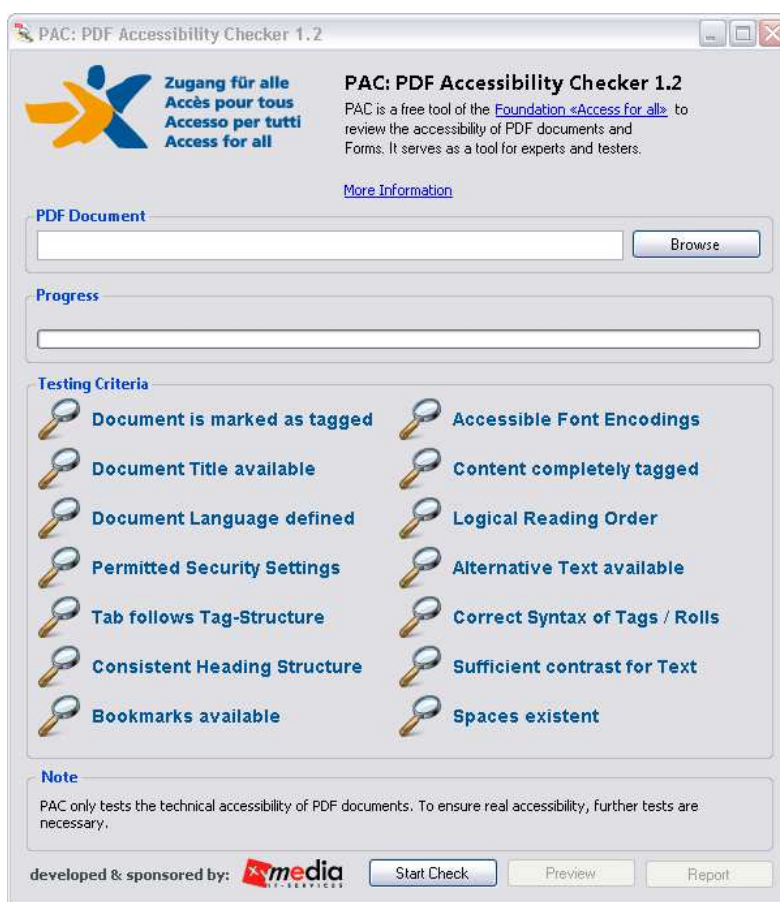
The following system requirements have to be met:

- Windows XP, Vista, Windows 7
- Adobe® Reader Version 8 or later
- Mozilla Firefox 3 or later, Internet Explorer 6 or later or Google Chrome
- Microsoft .NET Framework 2.0 SP2 or later

### 2.2 Installation

You do not need to have administrative privileges to install this software.

Just extract the contents of "PAC\_EN.zip" in a folder of your choice. Then, Double-clicking "PAC.exe" will start the "PAC: PDF Accessibility Checker" application.



### 2.3 Uninstallation

To uninstall "PDF Accessibility Checker", simply delete the application executable.

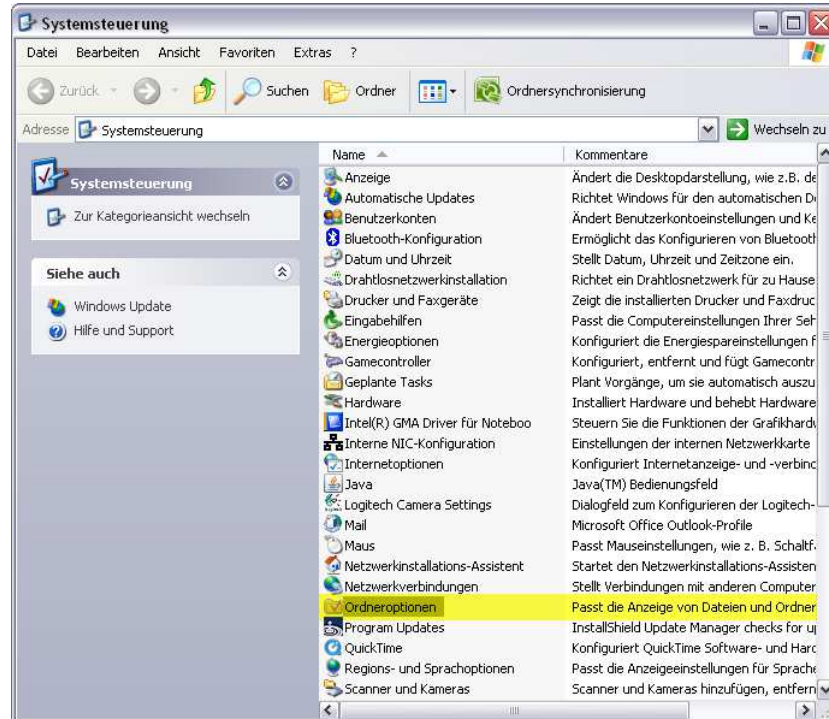
## 2.4 Further settings

### 2.4.1 Microsoft Internet Explorer

In order to fully use PAC with Internet Explorer, you have to associate PDF files with either "Adobe Reader" or "Acrobat Professional" in windows.

#### 2.4.1.1 Associating in Windows XP

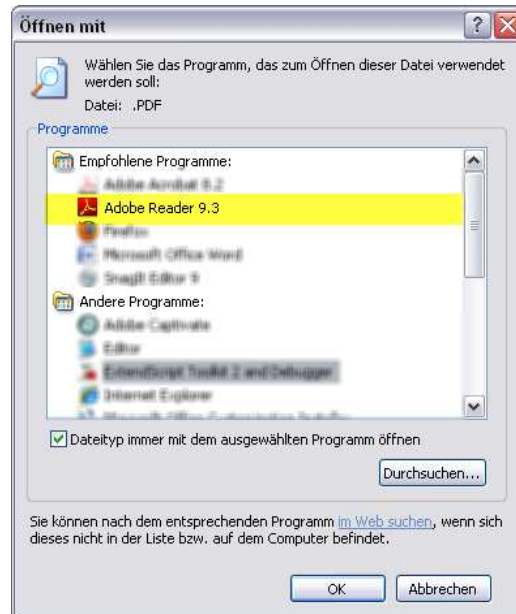
Step 1: Go to **CONTROL PANEL > FOLDER OPTIONS**



Step 2: In the **WINDOW: FOLDER OPTIONS**, select the **PAGE: FILE TYPES**.

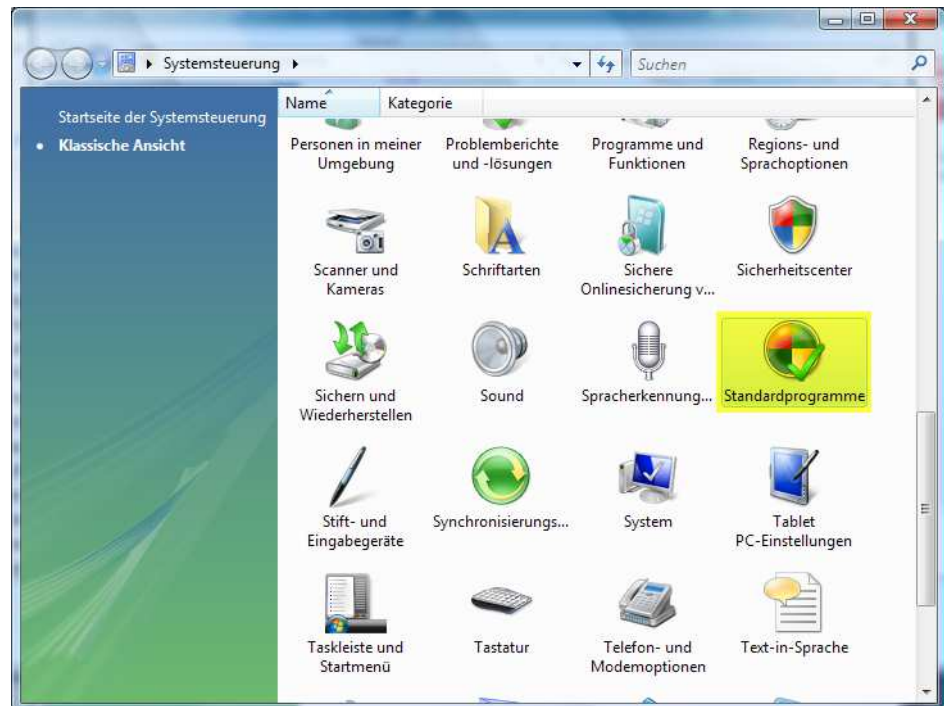


Step 3: The **BUTTON: CHANGE...** will allow you to associate the corresponding application to the file.



### 2.4.1.2 Associating in Windows Vista

Step1: Go to **CONTROL PANEL > DEFAULT PROGRAMS.**



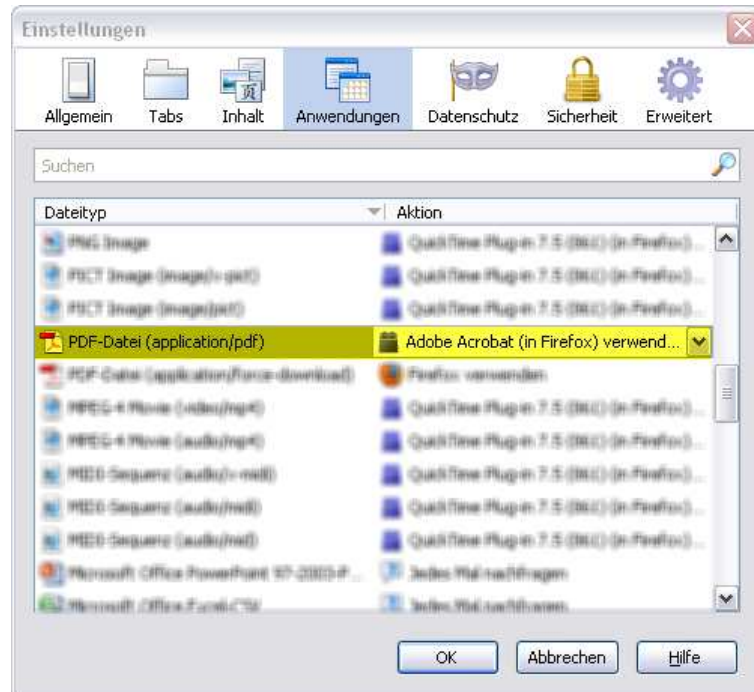






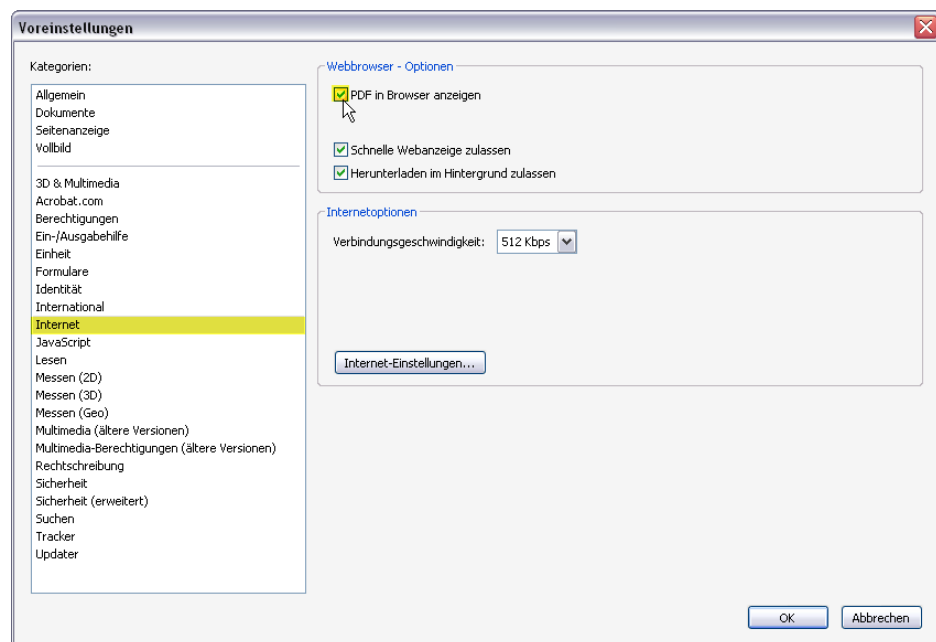
## 2.4.2 Mozilla Firefox

For Mozilla Firefox, additional settings have to be configured. Under **TOOLS > SETTINGS** and by selecting the **PROGRAMS TAB**, configure the browser according to the figure below:



## 2.4.3 Adobe Reader

Use the menu bar and go to **EDIT > PREFERENCES > GENERAL...** and select the **CATEGORY: INTERNET**. Then, configure the program according to the figure below.



## 3 Accessibility Checks

### 3.1 Check 1: Document is marked as tagged

This check evaluates if the document is marked as containing tags. This is necessary because some viewers and screen readers don't recognise tags within a PDF document unless it specifically contains this flag.

<b>WCAG 2.0</b>	Principle 1: Perceivable
<b>ISO 32000-1:2008</b>	Table 321, Key 'Marked'

### 3.2 Check 2: Document Title available

This check evaluates if a title has been set for the PDF document. A title helps the user to gain better orientation.

<b>WCAG 2.0</b>	Principle 2: Operable Guideline 2.4: Navigable Success Criterion 2.4.2: Page Titled
<b>ISO 32000-1:2008</b>	Table 317, Key 'Title'

### 3.3 Check 3: Document Language defined

This check evaluates if a language has been assigned to the PDF document. This is necessary for screen readers to use the correct pronunciation when reading the PDF document.

<b>WCAG 2.0</b>	Principle 3: Understandable Guideline 3.1: Readable Success Criterion 3.1.1: Language of Page
<b>ISO 32000-1:2008</b>	Table 28, Key 'Lang'

### 3.4 Check 4: Accessible Security Settings

This check evaluates if the security settings of the PDF document allow assistive technology to access the tag structure. If the security settings of a PDF document are too restrictive, assistive technology can't access the document anymore and thus are useless.

<b>WCAG 2.0</b>	Principle 1: Perceivable
<b>ISO 32000-1:2008</b>	Table 22, Bit-Position 5 und 10

### 3.5 Check 5: Tab follows Tag-Structure

This check evaluates if all pages of the PDF document are configured so that when using the Tab key, the performed jumps follow the tag structure.

This ensures that the user, when sequentially navigating through the document using the Tab key, will get the information consistently in the same order as they're defined in the document structure.

<b>WCAG 2.0</b>	Principle 2: Operable Guideline 2.4: Navigable Success Criterion 2.4.3: Focus Order
<b>ISO 32000-1:2008</b>	Table 30, Key 'Tabs'

### 3.6 Check 6: Consistent Heading Structure

This check evaluates the structure of the document. The following three cases will produce a warning:

- if the document has no assigned headings
- if the structure of the document does not begin with heading level 1
- if heading levels are skipped over in the document structure

A consistent structure helps the user to navigate through the document more specifically. Also, an inconsistent structure may confuse assistive technology, presenting an illogical hierarchy of headings to the user.

<b>WCAG 2.0</b>	Principle 4: Robust Guideline 4.1: Compatible
<b>ISO 32000-1:2008</b>	Table 335, Key 'H1-H6'

### 3.7 Check 7: Bookmarks available

This check evaluates if the document contains bookmarks.

Bookmarks provide the user with an easier way to navigate the document.

<b>WCAG 2.0</b>	Principle 2: Operable Guideline 2.4: Navigable
<b>ISO 32000-1:2008</b>	Table 28, Key 'Outlines'

### 3.8 Check 8: Accessible Font Encodings

This check evaluates if all font characters within tagged text blocks can be converted into distinct Unicode characters.

In PDF documents, fonts can use a variety of encodings. As for assistive technologies, the used fonts are of no relevance, they are not familiar with the various encodings. Therefore, Adobe Reader / Adobe Acrobat converts all font characters into the Unicode system before passing them to the assistive technology. If a translation table is missing for a certain font, non-interpretable characters are passed to the assistive technology.

<b>WCAG 2.0</b>	Principle 1: Perceivable
<b>ISO 32000-1:2008</b>	Section 9.10.2: Mapping Character Codes to Unicode Values

### 3.9 Check 9: Content completely tagged

This check evaluates if all contents of the PDF document are tagged. Contents which specifically have been set as background (and thus won't be interpreted or read by a screen reader) are also accepted as tagged content.

Not tagged content are not or wrongly interpreted by assistive technologies. Therefore, all content has to be tagged.

<b>WCAG 2.0</b>	Principle 1: Perceivable
<b>ISO 32000-1:2008</b>	Section 14.8: Tagged PDF

### 3.10 Check 10: Logical Reading Order

This check evaluates the logic of the PDF document's reading order and warns when possible errors are detected. Not every warning, however, necessarily means that there's really an error.

The logical reading order defines the sequence in which the content of the document is passed to the assistive technologies. If set incorrectly, a screen reader will read the text in the wrong order.

<b>WCAG 2.0</b>	Principle 1: Perceivable Guideline 1.3: Adaptable Success Criterion 1.3.2: Meaningful Sequence
<b>ISO 32000-1:2008</b>	Section 14.7: Logical Structure

### 3.11 Check 11: Alternative Text available

This check evaluates if all tagged non-text elements contain an alternative text.

In order for non-text contents, such as graphics, to be perceived by the blind, an alternative text containing an appropriate description has to be made available.

<b>WCAG 2.0</b>	Principle 1: Perceivable Guideline 1.1: Text Alternatives Success Criterion 1.1.1: Non-text Content
<b>ISO 32000-1:2008</b>	Section 14.9.3: Alternate Descriptions

### 3.12 Check 12: Correct Syntax Tags / Rolls

This check evaluates if all tags and rolls within the PDF document correspond to the ISO standard and if they have been used correctly.

Assistive technologies follow the defined ISO standards. The tag structure, therefore, can only be interpreted correctly if those standards are being followed.

<b>WCAG 2.0</b>	Principle 4: Robust Guideline 4.1: Compatible Success Criterion 4.1.1: Parsing
<b>ISO 32000-1:2008</b>	Section 14.8.4: Standard Structure Types

### 3.13 Check 13: Sufficient contrast for Text

This check evaluates if the visual presentation of tagged text has a sufficient contrast ratio according to the WCAG 2.0 standard.

Due to the high complexity of colour value calculations transparency, shadings, patterns and soft masks are currently excluded from this check. Only the ICC profile sRGB is completely supported. For all other ICC profiles, the alternative colour space is used.

<b>WCAG 2.0</b>	Principle 1: Perceivable Guideline 1.4: Distinguishable Success Criterion 1.4.3: Contrast (Minimum)
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### 3.14 Check 14: Spaces existent

This check evaluates if the visual spaces in a PDF document are also contained within the content and the tag tree.

Some PDF Generators think it not necessary to include invisible spaces to be passed into the PDF document. For assistive technologies, however, those spaces are inevitable.

<b>WCAG 2.0</b>	Principle 3: Understandable Guideline 3.1: Readable
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## 4 Preview as the blind would read

This view

- Shows how a screen reader interprets the document and in which order the text would be read.
- Is useful for Service providers and customers to visually evaluate how the content, the tags and the reading order of the accessible PDFs have been established.

### 4.1 Displaying without tags

This view shows the document's tagged text elements and in which order the screen reader will present it to blind readers.





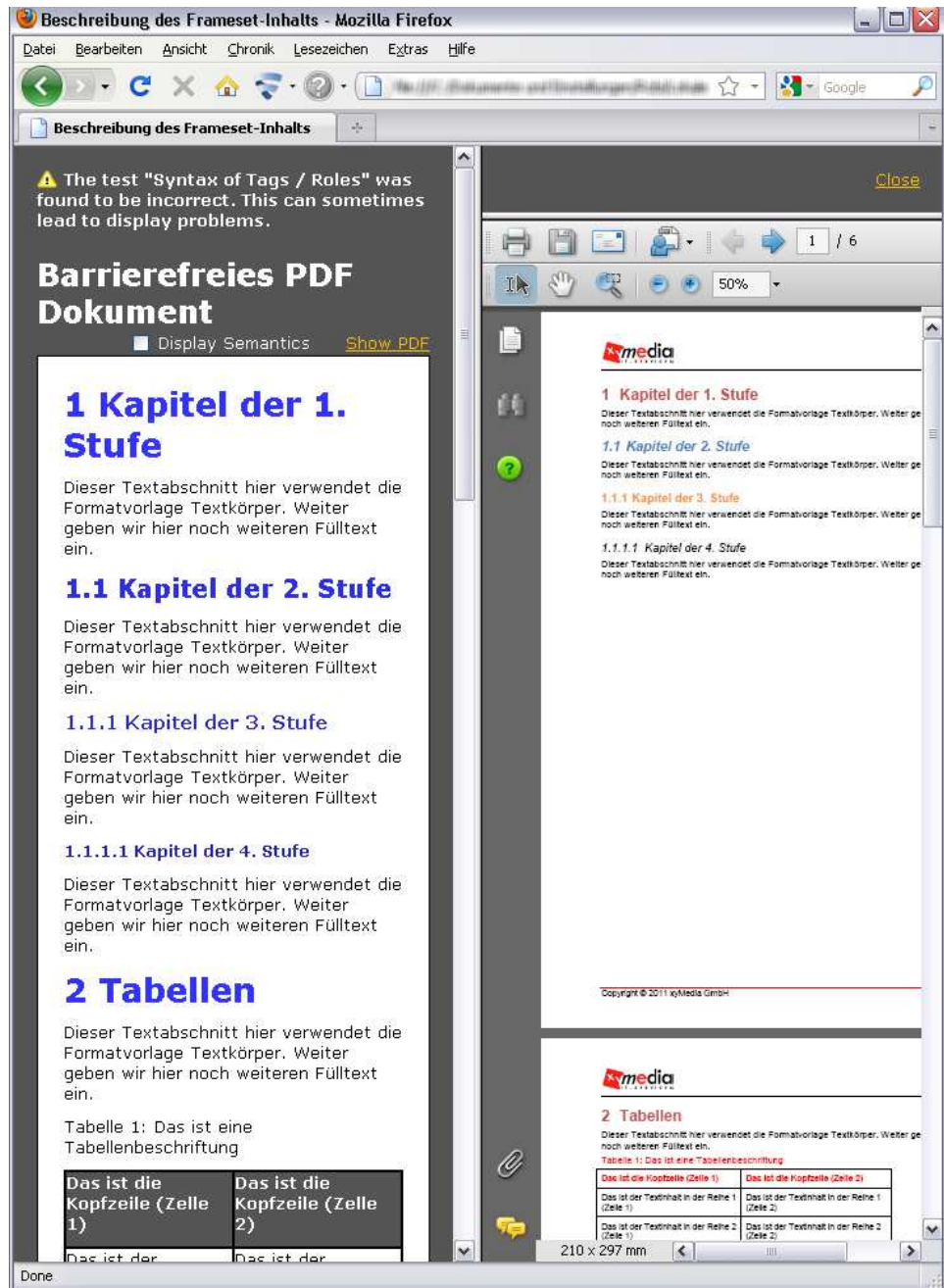
## 4.2 Displaying with tags

If you activate the **CHECKBOX: SHOW SEMANTICS**, the corresponding icons are shown alongside the tagged text elements.



### 4.3 Displaying without tags with PDF Document

If you activate the link **SHOW PDF**, the corresponding PDF Document will appear on the right.



## 5 Report

In the PAC Test Report, every checkpoint, along with its status and corresponding detailed messages, is being displayed. The included links make it possible to easily navigate within the test report. Clicking the linked error messages will open the tested document in your web browser where the most probable location of the error is shown.

**Note:** The settings have to be configured according to the instructions given in [Chapter 2.4: "Further settings Page 4\)"](#).



**PAC Audit Report**

**Audit Details**

Version	1.2.0.0
Date	19.04.2011
Time	19:19
File	F:\ACC_PAC\PAC_Kurzanleitung_2011_en\Muster_PDF_Dokument_Num_2010...
Title	Barrierefreies PDF Dokument
Number of Pages	6
Size	58KB

**Summary**

Status	Test	Number of Errors
✓	<a href="#">Document is marked as tagged</a>	No problems have been found.
✓	<a href="#">Document Title available</a>	No problems have been found.
✓	<a href="#">Document Language defined</a>	No problems have been found.
✓	<a href="#">Accessible Security Settings</a>	No problems have been found.
✓	<a href="#">Tab follows Tag-Structure</a>	No problems have been found.
✓	<a href="#">Consistent Heading Structure</a>	No problems have been found.
⚠	<a href="#">Bookmarks available</a>	1 problem has been found.
✓	<a href="#">Accessible Font Encodings</a>	No problems have been found.
✓	<a href="#">Content completely tagged</a>	No problems have been found.
⚠	<a href="#">Logical Reading Order</a>	3 problems have been found.
✓	<a href="#">Alternative Text available</a>	No problems have been found.
✗	<a href="#">Correct Syntax of Tags / Rolls</a>	1 problem has been found.
⚠	<a href="#">Sufficient contrast for Text</a>	1 problem has been found.
✓	<a href="#">Spaces existent</a>	No problems have been found.











**Document is marked as tagged**

Status	Problem
✓	No problems have been found.

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## 6 Icons for Standard PDF tags

### 6.1 Grouping Elements





Icon	Standard PDF tags	Description
	<Document>	Document
	<Part>	Part
	<Art>	Article
	<Sect>	Section
	<Div>	Division
	<BlockQuote>	Block Quote
	<Caption>	Caption
	<TOC>	Table of Contents
	<TOCI>	Table of Contents Item
	<Index>	Index

## 6.2 Block-Level Structure Elements








### 6.2.1 Paragraphlike Elements

Icon	Standard PDF tags	Description
	<H>	Heading
	<H1>	Heading 1
	<H2>	Heading 2
	<H3>	Heading 3
	<H4>	Heading 4
	<H5>	Heading 5
	<H6>	Heading 6
	<P>	Paragraph










### 6.2.2 List Elements

Icon	Standard PDF tags	Description
	<L>	List
	<LI>	List Item
	<Lbl>	Label Element
	<LBody>	List Body




### 6.2.3 Table Elements

Icon	Standard PDF tags	Description
	<Table>	Table
	<TR>	Table Row
	<TH>	Table Header
	<TD>	Table Data
	<THead>	Table Head
	<TBody>	Table Body
	<TFoot>	Table Foot



### 6.3 Inline-Level Structure Elements

Icon	Standard PDF tags	Description
	<Span>	Span
	<Quote>	Quote
	<Note>	Note
	<Reference>	Reference
	<BibEntry>	Bibliography Entry
	<Code>	Code
	<Link>	Link
	<Ruby>	Ruby
	<Warichu>	Warichu




### 6.3.1 Ruby Elements

Icon	Standard PDF tags	Description
	<rt>	Ruby annotation text
	<rp>	Ruby punctuation
	<rb>	Ruby base text


### 6.3.2 Warichu Elements

Icon	Standard PDF tags	Description
	<wt>	Warichu text
	<wp>	Warichu punctuation

### 6.4 Illustration Elements

Icon	Standard PDF tags	Description
	<Figure>	Figure
	<Formula>	Formula
	<Form>	Form

### 6.5 Unknown Tag

Icon	Standard PDF tags	Description
	<...>	unknown Tag



## 7 Support and Feedback

Support and further information can be found at:

[www.access-for-all.ch](http://www.access-for-all.ch)

Please send your bug reports as well as suggestions for improvements directly to:

[pac@access-for-all.ch](mailto:pac@access-for-all.ch)

## 8 Donation

If you like PAC and if you find it useful, we'd appreciate your consideration to donate any amount of your choice. This will support its continuing development and improvement.

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