

Accessibility Audit

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# **SensusAccess Accessibility Audit**

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## **1 Introduction**

This document summarises the results of the formal accessibility audit of the SensusAccess service. The audit was conducted during the period December 1 – December 14, 2014, by Sensus ApS. The service was accessed from <http://www.robobrace.org/web3/>

Chapter 2 includes a summary of the audit.

Chapter 3 describes the background for and methodology of the accessibility audit.

Chapter 4 includes the full accessibility audit.

## 2 Summary

This section summarizes the key findings of the accessibility audit.

All functionalities are accessible from the keyboard. This includes all essential functions such as selecting elements in menus, uploading documents, error identification and receipt.

The few graphic elements that the service contains, are all correctly described for screen readers. Screen reader users or other users who do not see the content of the images rely on the alternate text.

The programmatic reading sequence is also correct, which gives screen reader users the correct reading sequence.

At the time audit, the SensusAccess complies with the WCAG 2.0 guidelines at level AA.

## 3 Objective and Methodology

The objectives of an accessibility audit are (1) to establish the accessibility status of a web based solution and (2) to identify any accessibility issues within the solution.

This web page has been audited in accordance with Web Content Accessibility Guidelines (WCAG 2.0) from World Wide Web Consortium ([www.w3.org/TR/WCAG20](http://www.w3.org/TR/WCAG20)) at level AA. These guidelines are generally accepted by the European Union, the EU member states as well as the governments of most other countries. The Danish Agency for Digitization also bases its guidelines for public websites on the WCAG 2.0 guidelines at AA level (<http://www.digst.dk/Moedet-med-borgeren/It-tilgaengelighed/Standarder-krav-og-anbefalinger/Standard-for-tilgaengelighed>)

The accessibility audit was conducted by experienced web accessibility experts from Sensus. Sensus has advised on digital accessibility and conducted formal accessibility audits since 1995.

The term "WCAG 2.0" is used to refer to the Web Content Accessibility Guidelines. The term "W3C" is used to refer to World Wide Web Consortium.

The accessibility audit includes:

- A manual analysis of the web solution with documentation of the test results and examples of non-compliance. The analysis is conducted according to WCAG 2.0.
- Automatic validation of the entire web solution according to WCAG 2.0.
- Validation according to the specification of the stated mark-up language (e.g. HTML, XHTML, XML).

## 3.1 Tools

The tools used for the audit are listed below:

Tool	Description	URL
W3C HTML validator	Official validation tool from <a href="#">W3C</a> . Validation according to the specification of the stated mark-up language (e.g. HTML, XHTML, XML).	<a href="http://validator.w3.org/">validator.w3.org/</a>
AIS Toolbar	Validation tool and toolbar used as support in the evaluation process.	<a href="http://www.wat-c.org/tools/CCA/1.1/CCA1.1.zip">http://www.wat-c.org/tools/CCA/1.1/CCA1.1.zip</a>
Firefox Web Developer Extensions	Validation tool and toolbar used as support in the evaluation process.	<a href="https://addons.mozilla.org/da/firefox/addon/5809">https://addons.mozilla.org/da/firefox/addon/5809</a> <a href="https://addons.mozilla.org/da/firefox/addon/60">https://addons.mozilla.org/da/firefox/addon/60</a>
ColourChecker	Color contrast analyzer tool. Firefox extension.	<a href="https://addons.mozilla.org/en-US/firefox/addon/7391/">https://addons.mozilla.org/en-US/firefox/addon/7391/</a>
Colour Contrast Analyzer	Color contrast analyzer tool with pipette color picker.	<a href="http://www.wat-c.org/tools/CCA/1.1/CCA1.1.zip">http://www.wat-c.org/tools/CCA/1.1/CCA1.1.zip</a>
Colour Contrast Check	Color contrast analyzer tool using the HEX color code.	<a href="http://www.snook.ca/technical/colour_contrast/colour.html">http://www.snook.ca/technical/colour_contrast/colour.html</a>
Wave	Validation tool and toolbar used for support in the evaluation process.	<a href="http://www.htmlhelp.com/tools/validator/">http://www.htmlhelp.com/tools/validator/</a>
SortSite accessibility module by Electrum	Validation tool testing entire web pages according to some of the success criteria from <a href="#">WCAG 2.0</a> from <a href="#">W3C</a> .	<a href="http://www.powermapper.com/">http://www.powermapper.com/</a>
Internet Explorer	Browser.	<a href="http://www.microsoft.com/windows/downloads/ie/getitnow.msp">http://www.microsoft.com/windows/downloads/ie/getitnow.msp</a>
Firefox	Browser.	<a href="http://www.mozilla.com/en-US/firefox/">http://www.mozilla.com/en-US/firefox/</a>

## 4 Full accessibility audit

This section includes the full accessibility audit. The section is structured according to the 38 success criteria from WCAG 2.0, level AA conformance. For each success criterion an example of any problem is documented together with suggestions on how to improve or resolve the issue. The examples in the sections are meant to illustrate accessibility issues on the entire web page. They may occur in other places on the web page where similar type of content is present.

### 4.1 Principle 1: Perceivable

Information and user interface components must be presentable to users in ways they can perceive.

#### 4.1.1 Guideline: Text Alternatives

Provide text alternatives for any non-text content so that it can be changed into other forms people need, such as large print, Braille, speech, symbols or simpler language.

<b>WCAG 1.1.1 level A</b>	<b>Non-text content</b>
	<p>All non-text content that is presented to the user has a text alternative that serves the equivalent purpose, except for the situations listed below.</p> <ul style="list-style-type: none"><li>• <b>Controls, Input:</b> If non-text content is a control or accepts user input, then it has a name that describes its purpose. (Refer to Guideline 4.1 for additional requirements for controls and content that accepts user input.)</li><li>• <b>Time-Based Media:</b> If non-text content is time-based media, then text alternatives at least provide descriptive identification of the non-text content. (Refer to Guideline: Time-based Media for additional requirements for media.)</li><li>• <b>Test:</b> If non-text content is a test or exercise that would be invalid if presented in text, then text alternatives at least provide descriptive identification of the non-text content.</li><li>• <b>Sensory:</b> If non-text content is primarily intended to create a specific sensory experience, then text alternatives at least provide descriptive identification of the non-text content.</li><li>• <b>CAPTCHA:</b> If the purpose of non-text content is to confirm that content is being accessed by a person rather than a computer, then text alternatives that identify and describe the purpose of the non-text content are provided, and alternative forms of CAPTCHA using output modes for different types of sensory perception are provided to accommodate different disabilities.</li><li>• <b>Decoration, Formatting, Invisible:</b> If non-text content is pure decoration, is used only for visual formatting, or is not presented to users, then it is implemented in a way that it can be ignored by assistive technology.</li></ul>
Compliant	All non-text content must have a text equivalent that describes the same purpose as the non-text content. Many users are affected by non-compliance of this success criterion such as users

<b>WCAG 1.1.1 level A</b>	<b>Non-text content</b>
	with different visual impairments, users using a text browser and users with images disabled in their browser.  The service complies with this criterion.

#### 4.1.2 Guideline: Time-based Media

Provide alternatives for time-based media.

<b>WCAG 1.2.1 level A</b>	<b>Audio-only and Video-only (Prerecorded)</b>
	For prerecorded audio-only and prerecorded video-only media, the following are true, except when the audio or video is a media alternative for text and is clearly labeled as such:  <b>Prerecorded audio-only:</b> An alternative for time-based media is provided that presents equivalent information for prerecorded audio-only content. <b>Prerecorded video-only:</b> Either an alternative for time-based media or an audio track is provided that presents equivalent information for prerecorded video-only content.
Not found	Prerecorded audio-only or prerecorded video-only were not found on the web page during this audit.

<b>WCAG 1.2.2 level A</b>	<b>Captions (Prerecorded)</b>
	Captions are provided for all prerecorded audio content in synchronized media, except when the media is a media alternative for text and is clearly labeled as such.
Not found	Prerecorded audio content in synchronized media was not found on the web page during this audit.

<b>WCAG 1.2.3 level A</b>	<b>Audio Description or Media Alternative (Prerecorded)</b>
	An alternative for time-based media or audio description of the prerecorded video content is provided for synchronized media, except when the media is a media alternative for text and is clearly labeled as such.
Not found	Prerecorded, time-based media were not found on the web page during this audit.



<b>WCAG 1.2.4 level AA</b>	<b>Captions (Live)</b>
Captions are provided for all live audio content in synchronized media	
Not found	Live, audio content was not found on the web page during this audit.

<b>WCAG 1.2.5 level AA</b>	<b>Audio Description (Prerecorded)</b>
Audio description is provided for all prerecorded video content in synchronized media.	
Not found	Prerecorded video content in synchronized media was not found on the web page during this audit.

### 4.1.3 Guideline: Adaptable

Create content that can be presented in different ways (for example simpler layout) without losing information or structure.

<b>WCAG 1.3.1 level A</b>	<b>Info and Relationships</b>
Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text.	
Compliant	<p>This success criterion relate to e.g.:</p> <ul style="list-style-type: none"> <li>• Use &lt;a&gt;-tags for links, &lt;strong&gt; or &lt;em&gt; for special or emphasized text, &lt;q&gt; or &lt;blockquote&gt; for quotes</li> <li>• Separation of style and content for instance by using style sheet for presentation</li> <li>• Use table markup to present tabular information</li> <li>• Use the label element to explicitly associate the label with the form control. Use &lt;fieldset&gt; and &lt;legend&gt; to group related controls e.g. radio buttons or check boxes</li> <li>• Use structural mark up for lists, e.g. &lt;ol&gt; and &lt;ul&gt;</li> <li>• Structure the content on each pages using heading elements h1-h6.</li> </ul> <p>The service complies with this criterion.</p>

<b>WCAG 1.3.2 level A</b>	<b>Meaningful Sequence</b>
When the sequence in which content is presented affects its meaning, a correct reading sequence can be programmatically determined.	
Compliant	The service complies with this criterion.

<b>WCAG 1.3.3 level A</b>	<b>Sensory Characteristics:</b>
Instructions provided for understanding and operating content do not rely solely on sensory characteristics of components such as shape, size, visual location, orientation, or sound.	
Compliant	No use of sensory characteristics as sole mean of instructing the user was found during this audit.

#### 4.1.4 Guideline: Distinguishable

Make it easier for users to see and hear content including separating foreground from background.

<b>WCAG 1.4.1 level A</b>	<b>Use of Color</b>
Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	
Compliant	The service complies with this criterion.

<b>WCAG 1.4.2 level A</b>	<b>1.4.2 Audio Control</b>
If any audio on a Web page plays automatically for more than 3 seconds, either a mechanism is available to pause or stop the audio, or a mechanism is available to control audio volume independently from the overall system volume level.	
Not found	Audio that plays automatically is not found on the web page during this audit.

<b>WCAG 1.4.3 level AA</b>	<b>Contrast (Minimum)</b>
<p>The visual presentation of text and images of text has a contrast ratio of at least 4.5:1, except for the following:</p> <p><b>Large Text:</b> Large-scale text and images of large-scale text have a contrast ratio of at least 3:1;</p> <p><b>Incidental:</b> Text or images of text that are part of an inactive user interface component, that are pure decoration, that are not visible to anyone, or that are part of a picture that contains significant other visual content, have no contrast requirement.</p> <p><b>Logotypes:</b> Text that is part of a logo or brand name has no minimum contrast requirement.</p>	
Compliant	The service complies with this criterion.

<b>WCAG 1.4.4 level AA</b>	<b>Resize text</b>
<p>Except for captions and images of text, text can be resized without assistive technology up to 200 percent without loss of content or functionality.</p>	
Compliant	All text appears to be scalable up to 200 % by use of the browser built-in scaling tool without loss of content or functionality.

<b>WCAG 1.4.5 level AA</b>	<b>Images of Text</b>
<p>If the technologies being used can achieve the visual presentation, text is used to convey information rather than images of text except for the following:</p> <p><b>Customizable:</b> The image of text can be visually customized to the user's requirements;</p> <p><b>Essential:</b> A particular presentation of text is essential to the information being conveyed.</p>	
Compliant	Images of text were not found during the audit. The service complies with this criterion.

## 4.2 Principle 2: Operable

User interface components and navigation must be operable.

## 4.2.1 Guideline: Keyboard Accessible

Make all functionality available from a keyboard.

WCAG 2.1.1 level A	Keyboard
All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes, except where the underlying function requires input that depends on the path of the user's movement and not just the endpoints.	
Compliant	All elements can be reached with keyboard alone. The service complies with this criterion.

WCAG 2.1.2 level A	No Keyboard Trap
If keyboard focus can be moved to a component of the page using a keyboard interface, then focus can be moved away from that component using only a keyboard interface, and, if it requires more than unmodified arrow or tab keys or other standard exit methods, the user is advised of the method for moving focus away.	
Compliant	During the audit no keyboard traps were found.

## 4.2.2 Guideline: Enough Time

Provide users enough time to read and use content.

WCAG 2.2.1 level A	Timing Adjustable
For each time limit that is set by the content, at least one of the following is true: <ul style="list-style-type: none"><li>• <b>Turn off:</b> The user is allowed to turn off the time limit before encountering it; or</li><li>• <b>Adjust:</b> The user is allowed to adjust the time limit before encountering it over a wide range that is at least ten times the length of the default setting; or</li><li>• <b>Extend:</b> The user is warned before time expires and given at least 20 seconds to extend the time limit with a simple action (for example, "press the space bar"), and the user is allowed to extend the time limit at least ten times; or</li><li>• <b>Real-time Exception:</b> The time limit is a required part of a real-time event (for example, an auction), and no alternative to the time limit is possible; or</li><li>• <b>Essential Exception:</b> The time limit is essential and extending it would invalidate the activity; or</li></ul>	

<b>WCAG 2.2.1 level A</b>	<b>Timing Adjustable</b>
<ul style="list-style-type: none"> <li>• <b>20 Hour Exception:</b> The time limit is longer than 20 hours.</li> </ul>	
Compliant	The service complies with this criterion.

<b>WCAG 2.2.2 level A</b>	<b>Pause, Stop, Hide</b>
<p>For moving, blinking, scrolling, or auto-updating information, all of the following are true:</p> <ul style="list-style-type: none"> <li>• <b>Moving, blinking, scrolling:</b> For any moving, blinking or scrolling information that (1) starts automatically, (2) lasts more than five seconds, and (3) is presented in parallel with other content, there is a mechanism for the user to pause, stop, or hide it unless the movement, blinking, or scrolling is part of an activity where it is essential; and</li> <li>• <b>Auto-updating:</b> For any auto-updating information that (1) starts automatically and (2) is presented in parallel with other content, there is a mechanism for the user to pause, stop, or hide it or to control the frequency of the update unless the auto-updating is part of an activity where it is essential.</li> </ul>	
Compliant	Moving, blinks, scrolling or auto-updating information was not found during the audit.

#### 4.2.3 Guideline: Seizures

Do not design content in a way that is known to cause seizures.

<b>WCAG 2.3.1 level A</b>	<b>Three Flashes or Below Threshold</b>
<p>Web pages do not contain anything that flashes more than three times in any one second period, or the flash is below the general flash and red flash thresholds.</p>	
Compliant	Flashing content was not found during the audit.

#### 4.2.4 Guideline: Navigable

Provide ways to help users navigate, find content, and determine where they are.

<b>WCAG 2.4.1 level A</b>	<b>Bypass Blocks</b>
<p>A mechanism is available to bypass blocks of content that are repeated on multiple Web pages.</p>	

<b>WCAG 2.4.1 level A</b>	<b>Bypass Blocks</b>
Compliant	There service has no content to bypass. The service complies with this criterion.

<b>WCAG 2.4.2 level A</b>	<b>Page Titled</b>
Web pages have titles that describe topic or purpose.	
Compliant	All page titles are unique. The service complies with this criterion.

<b>WCAG 2.4.3 level A</b>	<b>Focus Order</b>
If a Web page can be navigated sequentially and the navigation sequences affect meaning or operation, focusable components receive focus in an order that preserves meaning and operability.	
Compliant	The service complies with this criterion.

<b>WCAG 2.4.4 level A</b>	<b>Link Purpose (In Context)</b>
The purpose of each link can be determined from the link text alone or from the link text together with its programmatically determined link context, except where the purpose of the link would be ambiguous to users in general.	
Compliant	The service complies with this criterion.

<b>WCAG 2.4.5 level AA</b>	<b>Multiple Ways</b>
More than one way is available to locate a Web page within a set of Web pages except where the Web Page is the result of, or a step in, a process	
Compliant	The solution is built as a step-by-step process, and require no additional way of navigating.

<b>WCAG 2.4.6 level AA</b>	<b>Headings and Labels</b>
Headings and labels describe topic or purpose.	
Compliant	The service complies with this criterion.

<b>WCAG 2.4.7 level AA</b>	<b>Focus Visible</b>
Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible.	
Compliant	The keyboard focus is visible. The service complies with this criterion.

## 4.3 Principle 3: Understandable

Information and the operation of user interface must be understandable.

### 4.3.1 Guideline: Readable

Make text content readable and understandable.

<b>WCAG 3.1.1 level A</b>	<b>Language of page</b>
The default human language of each Web page can be programmatically determined.	
Compliant	The human language of the page is identified correctly. This is also true when changing language of the service.

<b>WCAG 3.1.2 level AA</b>	<b>Language of Parts</b>
The human language of each passage or phrase in the content can be programmatically determined except for proper names, technical terms, words of indeterminate language, and words or phrases that have become part of the vernacular of the immediately surrounding text	
Compliant	The service complies with this criterion.

## 4.3.2 Guideline: Predictable

Make Web pages appear and operate in predictable ways.

<b>WCAG 3.2.1 level A</b>	<b>On Focus</b>
When any component receives focus, it does not initiate a change of context.	
Compliant	When any component tested during the audit receives focus, it does not initiate a change of context.

<b>WCAG 3.2.1 level A</b>	<b>On Input</b>
Changing the setting of any user interface component does not automatically cause a change of context unless the user has been advised of the behavior before using the component	
Compliant	When any setting tested during the audit receives focus, it does not automatically cause a change of context.

<b>WCAG 3.2.3 level AA</b>	<b>Consistent Navigation</b>
Navigational mechanisms that are repeated on multiple Web pages within a set of Web pages occur in the same relative order each time they are repeated, unless a change is initiated by the user.	
Compliant	The navigational mechanism is consistent.

<b>WCAG 3.2.4 level AA</b>	<b>Consistent Identification</b>
Components that have the same functionality within a set of Web pages are identified consistently.	
Compliant	The service complies with this criterion.

## 4.3.3 Guideline: Input Assistance

Help users avoid and correct mistakes.



<b>WCAG 3.3.1 level A</b>	<b>Error Identification</b>
If an input error is automatically detected, the item that is in error is identified and the error is described to the user in text.	
Compliant	The service complies with this criterion.

<b>WCAG 3.3.2 level A</b>	<b>Labels or Instructions</b>
Labels or instructions are provided when content requires user input.	
Compliant	The service complies with this criterion.

<b>WCAG 3.3.3 level AA</b>	<b>Error Suggestion</b>
If an input error is automatically detected and suggestions for correction are known, then the suggestions are provided to the user, unless it would jeopardize the security or purpose of the content.	
Compliant	The service complies with this criterion.

<b>WCAG 3.3.4 level AA</b>	<b>Error Prevention (Legal, Financial, Data)</b>
<ol style="list-style-type: none"> <li>1. For Web pages that cause legal commitments or financial transactions for the user to occur, that modify or delete user-controllable data in data storage systems, or that submit user test responses, at least one of the following is true:</li> <li>2. <b>Reversible:</b> Submissions are reversible.</li> <li>3. <b>Checked:</b> Data entered by the user is checked for input errors and the user is provided an opportunity to correct them.</li> <li>4. <b>Confirmed:</b> A mechanism is available for reviewing, confirming, and correcting information before finalizing the submission.</li> </ol>	
Compliant	The service complies with this criterion.

## 4.4 Principle 4: Robust

Content must be robust enough that it can be interpreted reliably by a wide variety of user agents, including assistive technologies.

## 4.4.1 Guideline: Compatible

Maximize compatibility with current and future user agents, including assistive technologies.

<b>WCAG 4.1.1 level A</b>	<b>Parsing</b>
In content implemented using markup languages, elements have complete start and end tags, elements are nested according to their specifications, elements do not contain duplicate attributes, and any IDs are unique, except where the specifications allow these features.	
Compliant	The service complies with this criterion.

<b>WCAG 4.1.2 level A</b>	<b>Name, Role, Value</b>
For all user interface components (including but not limited to: form elements, links and components generated by scripts), the name and role can be programmatically determined; states, properties, and values that can be set by the user can be programmatically set; and notification of changes to these items is available to user agents, including assistive technologies.	
Compliant	The service complies with this criterion.