

UNIVERSITY OF BERGEN

WEB ACCESSIBILITY IN CLARIN

**CLARIN CENTRE MEETING
UTRECHT, JUNE 14, 2023**

TONE MERETE BRUVIK, UNIVERSITY OF BERGEN LIBRARY

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PROGRAMME

- Introduction to Web Accessibility
- Tools and techniques for testing
- A look at the CLARIN site – how are we doing?
- A look at the CLARINO site – what is done there?
- Summary



Welcome

- I am Tone Merete Bruvik. I work at the University of Bergen Library as a system developer. I am not a researcher.
- I am relatively new to the field of web accessibility, but have been working on this for the last year. At the library I have tested all our web services and made accessibility statements for them.
- And during this work I have found that many tools and services in the Digital Humanities are lacking in accessibility.



Introduction to Web Accessibility



For whom is this important?

- Visual challenges: blindness, colour blindness, low vision...
- Auditory: deafness, hearing loss...
- Motoric: paralysis, tremors...
- Cognitive: dyslexia, epilepsy, learning difficulties, dementia...

- Might be permanent, but also temporary:
 - using a phone in bright sunlight
 - noisy environment
 - with a broken arm
 - after a concussion



Law, rules and recommendations

- EUs Web Accessibility Directive (WAD) - <https://digital-strategy.ec.europa.eu/en/policies/web-accessibility-directive-standards-and-harmonisation>
- Web Content Accessibility Guidelines (WCAG 2.1) - <https://www.w3.org/TR/WCAG21/>
- What services? Websites, documents and self-service machines.
- Typically, rules are stricter for public services, and there might be exceptions for services which are only available for certain groups.
- The implementation of WAD and WCAG may differ, but in the Nordic countries it looks like all of them has put WAD into law.



WCAG – The Principles

1. **Perceivable** - Information and user interface components must be presentable to users in ways they can perceive.
2. **Operable** - User interface components and navigation must be operable.
3. **Understandable** - Information and the operation of user interface must be understandable.
4. **Robust** - Content must be robust enough that it can be interpreted reliably by a wide variety of user agents, including assistive technologies.



1. Perceivable

1.1 Text Alternatives

1.1.1 Non-text Content

1.2 Time-based Media

1.2.1 Audio-only and Video-only (Pre-recorded)

1.2.2 Captions (Pre-recorded)

1.2.3 *Audio Description or Media Alternative (Pre-recorded)*

1.2.4 *Captions (Live)*

1.2.5 *Audio Description (Pre-recorded)*

1.2.6 *Sign Language (Pre-recorded)*

1.2.7 *Extended Audio Description (Pre-recorded)*

1.2.8 *Media Alternative (Pre-recorded)*

1.2.9 *Audio-only (Live)*

1.3 Adaptable

1.3.1 Info and Relationships

1.3.2 Meaningful Sequence

1.3.3 Sensory Characteristics

1.3.4 Orientation

1.3.5 Identify Input Purpose

1.3.6 *Identify Purpose*

1.4 Distinguishable

1.4.1 Use of Colour

1.4.2 Audio Control

1.4.3 Contrast (Minimum)

1.4.4 Resize text

1.4.5 Images of Text

1.4.6 *Contrast (Enhanced)*

1.4.7 *Low or No Background Audio*

1.4.8 *Visual Presentation*

1.4.9 *Images of Text (No Exception)*

1.4.10 Reflow

1.4.11 Non-text Contrast

1.4.12 Text Spacing

1.4.13 Content on Hover or Focus

Italic: Optional in Norway

2. Operable

2.1 Keyboard Accessible

- 2.1.1 Keyboard
- 2.1.2 No Keyboard Trap
- 2.1.3 *Keyboard (No Exception)*
- 2.1.4 Character Key Shortcuts

2.2 Enough Time

- 2.2.1 Timing Adjustable
- 2.2.2 Pause, Stop, Hide
- 2.2.3 *No Timing*
- 2.2.4 *Interruptions*
- 2.2.5 *Re-authenticating*
- 2.2.6 *Timeouts*

2.3 Seizures and Physical Reactions

- 2.3.1 Three Flashes or Below Threshold
- 2.3.2 *Three Flashes*
- 2.3.3 *Animation from Interactions*

2.4 Navigable

- 2.4.1 Bypass Blocks
- 2.4.2 Page Titled
- 2.4.3 Focus Order
- 2.4.4 Link Purpose (In Context)
- 2.4.5 Multiple Ways
- 2.4.6 Headings and Labels
- 2.4.7 Focus Visible

2.4.8 *Location*

2.4.9 *Link Purpose (Link Only)*

2.4.10 *Section Headings*

2.5 Input Modalities

- 2.5.1 Pointer Gestures
- 2.5.2 Pointer Cancellation
- 2.5.3 Label in Name
- 2.5.4 Motion Actuation
- 2.5.5 *Target Size*
- 2.5.6 *Concurrent Input Mechanisms*



3. Understandable

3.1 Readable

- 3.1.1 Language of Page
- 3.1.2 Language of Parts
- 3.1.3 *Unusual Words*
- 3.1.4 *Abbreviations*
- 3.1.5 *Reading Level*
- 3.1.6 *Pronunciation*

3.2 Predictable

- 3.2.1 On Focus
- 3.2.2 On Input
- 3.2.3 Consistent Navigation
- 3.2.4 Consistent Identification
- 3.2.5 *Change on Request*

3.3 Input Assistance

- 3.3.1 Error Identification
- 3.3.2 Labels or Instructions
- 3.3.3 Error Suggestion
- 3.3.4 Error Prevention (Legal, Financial, Data)
- 3.3.5 *Help*
- 3.3.6 *Error Prevention (All)*



4. Robust

4.1 Compatible

4.1.1 Parsing

4.1.2 Name, Role, Value

4.1.3 Status Messages



Introductions to tools and techniques for testing



Tools

- *WAVE Evaluation Tool*, free plug-in to web browsers.
- *Siteimprove*, from free plug-ins to high-cost professional tools for large sites.
- *Accessibility Insights*, free plug-in with Integration to Git, reporting facilities and testing management.
- *Lighthouse* (included in many web browsers) may report on accessibility issues.
- *Colour Contrast Analyser (CCA).app*
- A simple checklist in Excel.
- *Pa11y*: Several free tools, including integration with CI.
- More tools and literature: see the *A11y project* resource list:
<https://www.a11yproject.com/resources>



Testing

- Tools are great to start with – but tools can't find more than half of the problems.
- User testing is best, but not easy to setup, takes time, and will probably include external help.
- But a little care helps to avoid the most common errors.



web accessibility evaluation tool

Styles: OFF ON

Summary

Summary Details Reference Order Structure Contrast

3 Errors	4 Contrast Errors
35 Alerts	21 Features
47 Structural Elements	39 ARIA

View details

The research infrastructure for language as social and cultural data

CLARIN is a digital infrastructure offering data, tools and services to support research based on language resources.

<https://www.clarin.eu/> tested with Wave tool, 25.05.2023



contentsearch.clarin.eu

UB | UIB | SAMLA | Gmail | CLARINO | Norske stadnann | Forskning | Arkiver | Sign out (Tone Me...) | Innstillinger | Dagbok - Polar Fl... | Andre bokmerker

powered by WebAIM

Styles: OFF ON

Summary

Summary | Details | Reference | Order | Structure | Contrast

219 Errors	2 Contrast Errors
11 Alerts	4 Features
209 Structural Elements	283 ARIA


View details >

The following apply to the entire page:

-
- Content Search *tabindex=-1*
- Aggregator *tabindex=-1*
- Help *tabindex=-1*

Text layer CQL query: Elephant

Search for: Any Language ▾ Text layer Contextual Query Language (CQL) ▾ +/- in 207 selected collec
and show up to 10 hits per endpoint *role="form"*



<https://contentsearch.clarin.eu/> tested with Wave tool, 25.05.2023

Testing the CLARIN site

Important issues	WCAG references	CLARIN site
Give alternative text to graphics and pictures.	1.1.1	No
Use regions like header, main and footer.	1.3.1	Yes
Underline your links!	1.4.1	No
Good contrast!	1.4.3	No
Does it work on phones and laptops?	1.4.10	Yes
Is the site operable using keyboard only?	2.1.1	No
Tell the language	3.1.1, 3.1.2	Yes, and no

WCAG 2.1 testing of CLARIN site

- Using a simple spreadsheet.
- Fails on 14 of 47 criteria.
 - Tested only around 10 pages more or less randomly.
 - 8 criteria are not tested.

Guideline	Guideline description	Success Criteria	Is the requirement followed?	Remarks
		1.1.1 Non-text Content	No	as well as other pages. On the page https://vo.clarin.eu/help#processing-resources there are
1.2 Time-based Media	Provide alternatives for time-based media.	1.2.1 Audio-only and Video-only (Pre-recorded)	We don't have this kind of content	
		1.2.2 Captions (Pre-recorded)	Yes	
1.3 Adaptable	Create content that can be presented in different ways (for example simpler layout) without losing information or structure.	1.3.1 Info and Relationships	No	does not have a main part. Layout table used on https://www.clarin.eu/funding, headings here are not
		1.3.2 Meaningful Sequence	Yes	
		1.3.3 Sensory Characteristics	Yes	
		1.3.4 Orientation	Yes	
		1.3.5 Identify Input Purpose	No	Some input fields have not labels.
1.4 Distinguishable	Make it easier for users to see and hear content including separating foreground from background.	1.4.1 Use of Color	No	Links are only marked with colour.
		1.4.2 Audio Control	Yes	
		1.4.3 Contrast (Minimum)	No	are hard to read See https://vo.clarin.eu/help#processing-resources, 50 cases of low contrast.
		1.4.4 Resize text	Yes	
		1.4.5 Images of Text	kind of content	
		1.4.10 Reflow	Yes	
		1.4.11 Non-text Contrast	Yes	
		1.4.12 Text Spacing	No	applications, text do not fit boxes when text spacing is

What have we done at **CLARINO?**



What have we done at CLARINO?

- We have tested all the services on our site (INESS, COMEDI, Corpuscle, Menota, Termportal).
 - Upgraded them if possible.
 - Published accessibility statements.
- Trained the developers and researches.



repo.clarino.uib.no/xmlui/

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The following apply to the entire page:







powered by [WebAIM](#)

web accessibility evaluation tool

Styles: OFF ON

Summary

Summary Details Reference Order Structure Contrast

 17 Errors	 47 Contrast Errors
 41 Alerts	 27 Features
 32 Structural Elements	 0 ARIA

[View details >](#)

Repo CLARINO INESS COMEDI Corpuscle Menota Temporalen CLARIN

The CLARINO Bergen Centre offers:
A repository to search and deposit language data
Online services for treebanks and other corpora
Online editing of CMDI metadata

Welcome to CLARINO Bergen Centre

CLARINO is a Norwegian infrastructure project jointly funded by the Research Council of Norway and a co Norwegian universities and research institutions. Its goal is to implement the Norwegian part of CLARIN. It is to make existing and future language resources easily accessible for researchers and to bring eScience disciplines.

Search [Code](#)







<https://clarino.uib.no/> tested with Wave tool, 25.05.2023



Styles: OFF ON

Summary

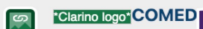
Summary | Details | Reference | Order | Structure | Contrast

 0 Errors	 0 Contrast Errors
 1 Alerts	 7 Features
 17 Structural Elements	 23 ARIA

[View details >](#)

Congratulations! No errors were detected! Manual testing is still necessary to ensure compliance and optimal accessibility.

The following apply to the entire page:



CMDI
Records

[Metadata
Editor](#)

[Groups](#)

[Documentation](#)

[Admin](#)



Signed in as
Tone Merete
Bruvik

h1 Metadata Editor



h2 ^ aria "role='img'" Profile

The profile this record is derived from

Name: corpusProfile
ID: clarin.eu:cr1:p_1407745711925
Fetch date: 2022-02-02T17:06:27Z
Description: Profile for describing corpora of any medium type.

h2 ^ aria "role='img'" Metadata Record

The CMDI record

Edit mode  Show component documentation 

Identifier: TEST_TMB (Click to view OAI-PMH record)
Display name: 
CMD version: 1.2
Self link:
Creator: Tone Merete Bruvik



Are we done?

- No, there are still issues on all our sites.
- The site clarino.uib.no is not very good, waiting for the Dspace upgrade.
- We see that research tools and services are typically not very accessible.
- We will have to do a new check every year.



What about documents?

- Applications like MS Word and PowerPoint have accessibility testing included.
- Take care with graphics. Is it readable in a black and white print?
- Use structure.



Summary



Most important!

- Use good contrast!
- Black and white is not bad!
- Does it work on phones and laptops?
- Give alternative text to graphics and pictures.
- Underline your links and state the purpose in the text of the link!
- State the languages in use!
- Encode your structures!
 - Use regions like header, main and footer.
 - Use headlines hierarchies.





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