



MICROASSIST

Adobe User Group Basic Accessible Navigation

By: Hiram Kuykendall, CTO, Microassist

Goals:

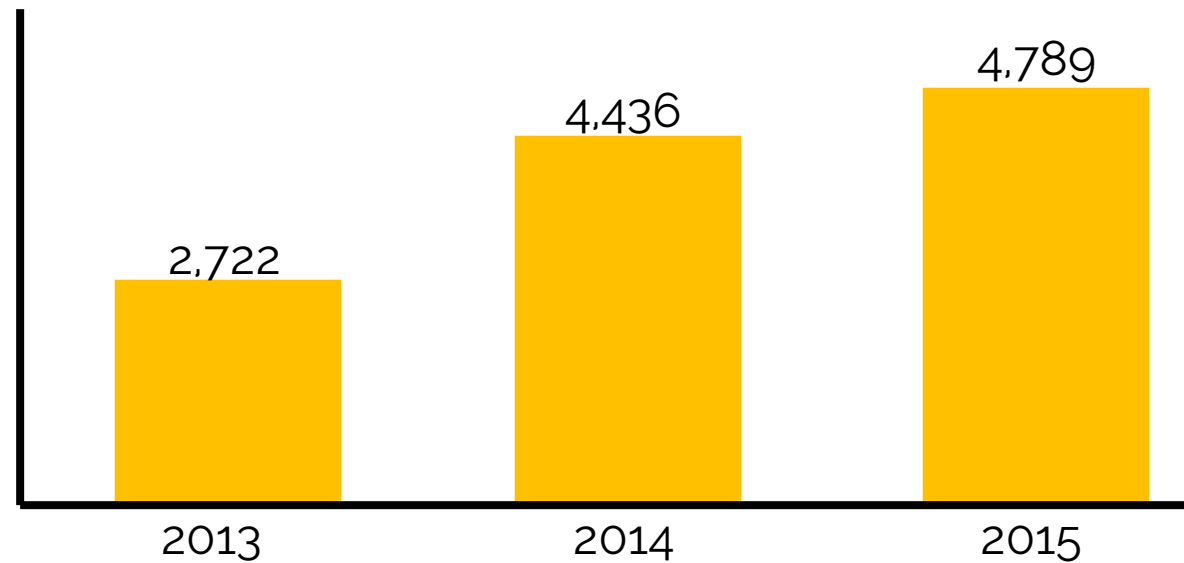
- ➔ Few words on the industry outlook.
- ➔ Webpage navigation techniques for screen reader users.
 - ▶ Quick Check Tools
 - ▶ Working Through the Examples
 - ▶ Navigation Design Plan Exercise

Your Obligation

- ◆ Section 508 Amendment to the Rehabilitation Act
- ◆ Texas Government – TAC 206 / TAC 213
- ◆ Americans with Disabilities Act
 - ◆ Title I – Employment
 - ◆ Title II – Public Entities
 - ◆ DOJ, May 9 2016 - Supplemental ANPRM (SANPRM) for state and local government websites
 - ◆ Title III - Public Accommodation
 - ◆ Slated for 2018 New Public Accommodation Rules

Current Events

Number of ADA Title III Lawsuits Nationwide in Federal Courts



- 63% Increase from 2013 to 2014
- 8% Increase from 2014 to 2015

Accessibility Standards

Web Content Accessibility Guidelines

(WCAG) 2.0

- Principles:
 - Perceivable
 - Operable
 - Understandable
 - Robust
- Sections:
 - Principle – Core Principle
 - How to Meet – Greater Detail
 - Understanding – Intent, Examples, Resources, Techniques, Terms

<https://www.w3.org/TR/WCAG20/>

Accessibility Standards

Technical Standards:

- Web Accessibility Initiative – Accessible Rich Internet Applications (WAI-ARIA) – ARIA
- HTML5

1,000 Foot Summary

1. Public websites / web applications are covered explicitly or implicitly under current law for the public and private sector.
2. The standards now exist to create accessible experiences for people who have vision, mobility, hearing and cognitive challenges.

Accessible Navigation

Two primary user interface concerns for accessible webpage or web application navigation:

- Vision – Screen Reader Users
 - NVDA - <http://www.nvaccess.org/>
 - JAWS - www.freedomscientific.com
- Mobility
 - <https://www.w3.org/WAI/perspectives/keyboard.html>
 - <https://www.w3.org/WAI/perspectives/>

Note: This presentation only covers vision.

Vision - Simple Example

[Skip to main content](#)

Simple Navigation Example



[Home](#) [About](#) [Contact](#)

More resources:

- [Judging Form](#)
- [Training Site](#)

Welcome to Open AIR!

In the words of the immortal Mark Twain

Do the right thing. It will gratify some people and astonish the rest.

Additional Resources

- [Knowblity](#)
- [OpenAIR](#)

Additional Humorists

- [Will Rogers](#)
- [Groucho Marx](#)

For more information, please contact: hramk@microassist.com

Vision - Simple Example

<div>

Skip to main content

</div>

<div>

Simple Navigation Example

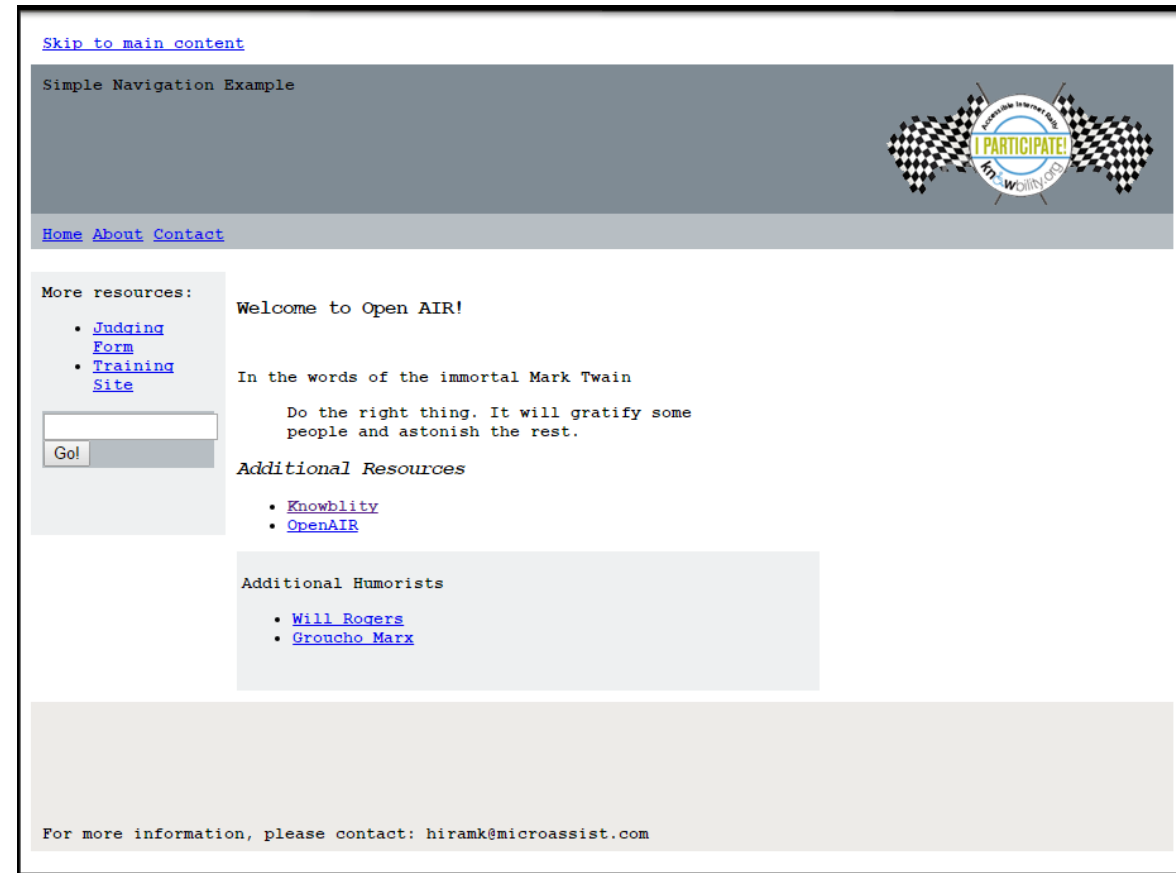
<div>

Home

About

Contact

</div>



Vision - Context is Content

Navigation Element

Banner

Navigation Element

Supplementary Info

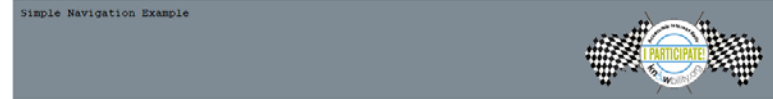
Embedded Search

Body / Main

Supplementary Info

Footer

[Skip to main content](#)



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Vision - Context is Content

HTML 5	ARIA Role	Max
<header>	role="banner"	1
<nav>	role="navigation"	∞
<main>	role="main"	1
<footer>	role="contentinfo"	1
<aside>	role="complementary"	∞
none	role="search"	∞
<form>	role="form"	∞
none	³ role="application"	∞

Not Landmarks:

- ¹<section>
- ²<article> *role="main"*

- 1 Not recognized as landmark.
- 2 Article is not recognized as landmark.
Add ARIA role.
- 3 Do not use role="application" except
in special circumstance.

nav / navigation

header / banner

nav / navigation

aside / complementary

/ Search

main / main

aside / complementary

footer / contentinfo

[Skip to main content](#)



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Vision - Context is Content

<nav role="navigation" ...>

<header role="banner" ...>

<nav role="navigation" ...>

<aside role="complementary" ...>

<div role="search" ...>

<main role="main" ...>

<aside role="complementary" ...>

<footer role="contentinfo" ...>

nav / navigation

header / banner

nav / navigation

aside / complementary

/ Search

main / main

aside / complementary

footer / contentinfo

[Skip to main content](#)

Simple Navigation Example



[Home](#) [About](#) [Contact](#)

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Go!

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Vision - Simple Example

[Skip to main content](#)

Simple Navigation Example



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Elements List

Type:

Links Headings Landmarks

- Skip Navigation navigation
- banner
- Main Menu navigation
- Additional Resources complementary
 - ... search
 - main
 - ... Additional Humorists complementary
- content info

Filter by:

Screen Reader Perception

ARIA Rules

- ◆ All content has to be in a Landmark region.
- ◆ Regions are hierarchical (can be nested).
- ◆ Duplicate regions must have a unique description.

- ◆ aria-label

Write a label within the tag.

```
<aside role="complementary" aria-label="Additional Resources">
```

- ◆ aria-labelledby

Associate a landmark with another element.

```
<aside role="complementary" aria-labelledby="elementx">
```

```
<p id="elementx">Additional Humorists</p>
```



Illustrated Example

The image shows a web browser window displaying a page titled "Simple Navigation Example". The page content includes a navigation menu, a search box, and several sections of text and links. Overlaid on the right side is an "Elements List" panel, which is currently set to "Landmarks". The panel lists various landmarks such as "Skip Navigation navigation", "banner", "Main Menu navigation", "Additional Resources complementary", "main", "Additional Humorists complementary", and "content info".

Red arrows indicate the mapping between the HTML code and the DOM elements in the Elements List:

- A red arrow points from the `<main id="main" role="main" tabindex="0">` code to the "main" element in the Elements List.
- Another red arrow points from the `<aside role="complementary" aria-labelledby="elementx">` code to the "Additional Humorists complementary" element in the Elements List.

Blue arrows indicate the mapping between the HTML code and the page content:

- A blue arrow points from the `<h2 id="elementx" >Additional Humorists</h2>` code to the "Additional Humorists" section on the page.
- A large blue curved arrow points from the `</main>` code back to the "content info" element in the Elements List.

The HTML code shown is:

```
<main id="main" role="main" tabindex="0">
  ...
  <aside role="complementary"
    aria-labelledby="elementx">
    <h2 id="elementx" >Additional Humorists</h2>
  </aside>
</main>
```


Headings VS Landmarks

Landmarks – Context Navigation

- ◆ Moving between areas of a website / web application.
- ◆ Perceived as Landmarks by screen readers.

Headings - Content Navigation


- ◆ Are used to navigation between “sections” of content.
 - ◆ Book
 - ◆ Chapter
 - ◆ Paragraph
- ◆ Similar rules as creating a Word document.
- ◆ There should be one Heading level 1 `<h1>` per page.

- Before HTML5 and ARIA, headings were used as context navigation elements. If using a HTML4 DTD – use headings.
- There is an HTML4 DTD that includes ARIA. https://www.w3.org/TR/wai-aria/appendices#html_dtd
- Including landmarks in HTML4 with the correct DTD technically works although the W3C Validator will mark in error.

Simple Example

role="navigation"<nav>
[Skip to main content](#)

role="banner"<header>
Simple Navigation Example



role="navigation"<nav>
[Home](#) [About](#) [Contact](#)

More resources:
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• [Training Site](#)

role="search"
Go!

role="complementary"<aside>role="main"<main>role="contentinfo"<footer>
<h1>Welcome to Open AIR!</h1>

In the words of the immortal Mark Twain

Do the right thing. It will gratify some people and astonish the rest.

hello world
greetings world

<h2>Additional Resources</h2>

- [Knowblity](#)
- [OpenAIR](#)

role="complementary"<aside>

Elements List

Type:
 Links Headings Landmarks

<h1>Welcome to Open AIR!</h1>
...<h2>Additional Resources</h2>

Filter by:

Activate Move to Cancel

Elements List

Type:
 Links Headings Landmarks

Skip Navigation navigation
banner
Main Menu navigation
Additional Resources complementary
... search
main
... Additional Humorists complementary
content info

Testing Tools

- ◆ Bookmarklets <http://pauljadam.com/bookmarklets/>

- ◆ Juicy Studio Accessibility Toolbar (Firefox)

<https://addons.mozilla.org/en-US/firefox/addon/juicy-studio-accessibility-too/>

Google Search: juicy studio accessibility toolbar firefox

- ◆ Inspect Element (Browser)

- ◆ Screen Reader
 - ◆ NVDA <http://www.nvaccess.org/>
 - ◆ JAWS www.freedomscientific.com
 - ◆ Voiceover (MAC) (Native)

Exercise

- ◆ Go to hiramk.com and find *Instructions and Exercise*.
- ◆ Walk you through loading the tools.

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OPENAIR

REAL HEROES SOLVE REAL CHALLENGES



OpenAIR Competition
OpenAIR University Competition

Jessica Looney - jessica@knowbility.org
Hiram Kuykendall - hiramk@microassist.com