



WAI-ARIA: 10 mistakes to avoid

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WAI-ARIA: 10 mistakes to avoid

Where our data comes from



Over 7,000 WAI-ARIA issues
logged into our WS Assure
servers over the past 2 years!

Speakers

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Our top 10 list for today

1. Incorrect WAI-ARIA syntax
2. Children roles without parent roles
3. Parent roles without children roles
4. Improper use of listbox role
5. Improper use of aria-hidden attribute
6. Improper use of aria-live attribute
7. Improper use of application role
8. Invalid ID value references
9. Allowed WAI-ARIA attributes missing
10. Required WAI-ARIA attributes missing

WAI-ARIA: 10 mistakes to avoid

Examples files

| Accessibility Test Files Suite | |
|---|---|
| ARIA 1.1 Examples | |
| Fail Examples | Pass Examples |
| <ol style="list-style-type: none">1. Incorrect WAI-ARIA syntax2. Children roles without parent roles3. Parent roles without children roles4. Improper use of listbox role5. Improper use of aria-hidden attribute6. Improper use of aria-live attribute7. Improper use of application role8. Invalid ID value references9. Allowed WAI-ARIA attributes missing10. Required WAI-ARIA attributes missing | <ol style="list-style-type: none">1. Correct WAI-ARIA syntax2. Children roles with proper parent roles3. Parent roles with expected children roles4. Proper use of listbox role5. Proper use of aria-hidden attribute6. Proper Usage of aria-live attribute7. Proper use of application role8. Valid ID value references9. Allowed WAI-ARIA attributes provided10. Required WAI-ARIA attributes provided |

Overview

Fail and pass examples of implementations, showing how WAI-ARIA is often used in the wild (and how it should be used instead).

Resource

<http://a11ytest.dequelabs.com/exlist.html>

Incorrect WAI-ARIA syntax

Typical issues include:

- Role values are assumed to be case insensitive,
- Incorrect spelling for attributes or values,
- Incorrect or invalid role declarations,
- Roles do not exist or are invalid ,
- Etc.



Incorrect WAI-ARIA syntax

DEMO EXAMPLES



Fail example

<http://a11ytest.dequelabs.com/preview.aspx?ID=Mzly>



Pass example

<http://a11ytest.dequelabs.com/preview.aspx?ID=Mzlz>

Incorrect WAI-ARIA syntax

Appropriate/correct use of WAI-ARIA

- Make sure role values are case sensitive,
- Make sure attributes are spelled out appropriately,
- Make sure role declarations are appropriate,
- Make sure no invalid roles are used.



Children roles without parent roles

Typical issues include:

- Tab roles assigned without a related tablist role,
- MenuItem roles assigned without a related menu role,
- Gridcell roles assigned without a related grid role,
- Etc.



Children roles without parent roles

DEMO EXAMPLES



Fail example

<http://a11ytest.dequelabs.com/preview.aspx?ID=MzI1>



Pass example

<http://a11ytest.dequelabs.com/preview.aspx?ID=MzI2>

Children roles without parent roles

Appropriate/correct use of WAI-ARIA

- All expected children roles are defined for the parent role,
- That information is all provided within the WAI-ARIA spec, but Axe will also flag such issues for you.



Parent roles without children roles

Typical issues include:

- Tablist role assigned without related tab roles,
- Menu role assigned without related menuitem roles,
- Grid role assigned without a related gridcell roles,
- Etc.



Parent roles without children roles

DEMO EXAMPLES



Fail example

<http://a11ytest.dequelabs.com/preview.aspx?ID=ODk=>



Pass example

<http://a11ytest.dequelabs.com/preview.aspx?ID=OTA=>

Parent roles without children roles

Appropriate/correct use of WAI-ARIA

- A parent role is defined for each related children roles used,
- That information is all provided within the WAI-ARIA spec, but Axe will also flag such issues for you.



Improper use of listbox role

Typical issues include:

- Using listbox roles on informative carousel slides,
- Using listbox roles on objects that convey semantics,
- Etc.



Improper use of listbox role

DEMO EXAMPLES



Fail example

<http://a11ytest.dequelabs.com/preview.aspx?ID=Mzl3>



Pass example

<http://a11ytest.dequelabs.com/preview.aspx?ID=Mzl4>

Improper use of listbox role

Appropriate/correct use of WAI-ARIA

- Make sure that all the important associated information is announced when listbox role is used,
- Use listbox roles to identify elements that create lists from which a user may select one or more items,
- Don't use listbox roles on carousel or similar objects that contain static and/or semantic information.



Improper use of aria-hidden attribute

Typical issues include:

- Assigning aria-hidden="true" on informative content,
- Assigning aria-hidden="true" on focusable content,
- Etc.



Improper use of aria-hidden attribute

DEMO EXAMPLES



Fail example

<http://a11ytest.dequelabs.com/preview.aspx?ID=MzEw>



Pass example

<http://a11ytest.dequelabs.com/preview.aspx?ID=MzEx>

Improper use of aria-hidden attribute

Appropriate/correct use of WAI-ARIA

- Make sure aria-hidden is ONLY used to hide extraneous or redundant content from screen reader users,
- Don't use aria-hidden="true" on focusable elements,
- Use aria-hidden="true" to remove redundant or unnecessary content for screen reader users, such as page content when a modal is displayed.



Improper use of aria-live attribute

Typical issues include:

- Assigning aria-live to inappropriate objects,
- Hijacking the screen reader by constantly updating it with information that is not relevant,
- Relying on assertive live regions for content that doesn't require the users' immediate attention,
- Etc.



Improper use of aria-live attribute

DEMO EXAMPLES



Fail example

<http://a11ytest.dequelabs.com/preview.aspx?ID=MzE5>



Pass example

<http://a11ytest.dequelabs.com/preview.aspx?ID=Mzlw>

Improper use of aria-live attribute

Appropriate/correct use of WAI-ARIA

- Live regions are defined only when necessary, such as for character count features, stock tickers, news updates, auctions, etc.
- Live regions should be set to “polite” in most cases, unless there’s urgency in announcing content updates... in which case, setting the value to assertive is appropriate.



Improper use of application role

Typical issues include:

- Application role assigned to the <body> element,
- Applying application roles on modals or containers that display static or semantic information,
- Etc.



Improper use of application role

DEMO EXAMPLES



Fail example

<http://a11ytest.dequelabs.com/preview.aspx?ID=MzEy>



Pass example

<http://a11ytest.dequelabs.com/preview.aspx?ID=MzI0>

Improper use of application role

Appropriate/correct use of WAI-ARIA

- Should only be assigned to custom widgets that don't follow a standard interaction pattern, such as a slide deck editor, a calendar widget, or a drag and drop functionality.
- Means authors will need to factor basic HTML semantics back in for every static text object in the application, such as headings, lists, etc.



Invalid ID value references

Typical issues include:

- Referencing an ID attribute value that does not exist,
- Misspelling an existing ID attribute value,
- Etc.



Invalid ID value references

DEMO EXAMPLES



Fail example

<http://a11ytest.dequelabs.com/preview.aspx?ID=MzE1>



Pass example

<http://a11ytest.dequelabs.com/preview.aspx?ID=MzE2>

Invalid ID value references

Appropriate/correct use of WAI-ARIA

- Make sure reference ID values are valid and can be found in the DOM.
- This is typical proof reading of your code, but Axe will also flag such issues for you.



Allowed WAI-ARIA attributes missing

Typical issues include:

- Incorrectly assigning attributes to specific roles, such as aria-selected or aria-pressed to a link or an anchor.



Allowed WAI-ARIA attributes missing

DEMO EXAMPLES



Fail example

<http://a11ytest.dequelabs.com/preview.aspx?ID=MzEz>



Pass example

<http://a11ytest.dequelabs.com/preview.aspx?ID=MzE0>

Allowed WAI-ARIA attributes missing

Appropriate/correct use of WAI-ARIA

- Make sure only attributes that are allowed as per the specification are used for the related roles.
- That information is all provided within the WAI-ARIA spec, but Axe will also flag such issues for you.



Required WAI-ARIA attributes missing

Typical issues include:

- Using a particular WAI-ARIA role without also using the expected complementary roles and attributes,
- Only using some of the expected attributes that work in conjunction with a particular role,
- Etc.



Required WAI-ARIA attributes missing

DEMO EXAMPLES



Fail example

<http://a11ytest.dequelabs.com/preview.aspx?ID=MzE3>



Pass example

<http://a11ytest.dequelabs.com/preview.aspx?ID=MzE4>

Required WAI-ARIA attributes missing

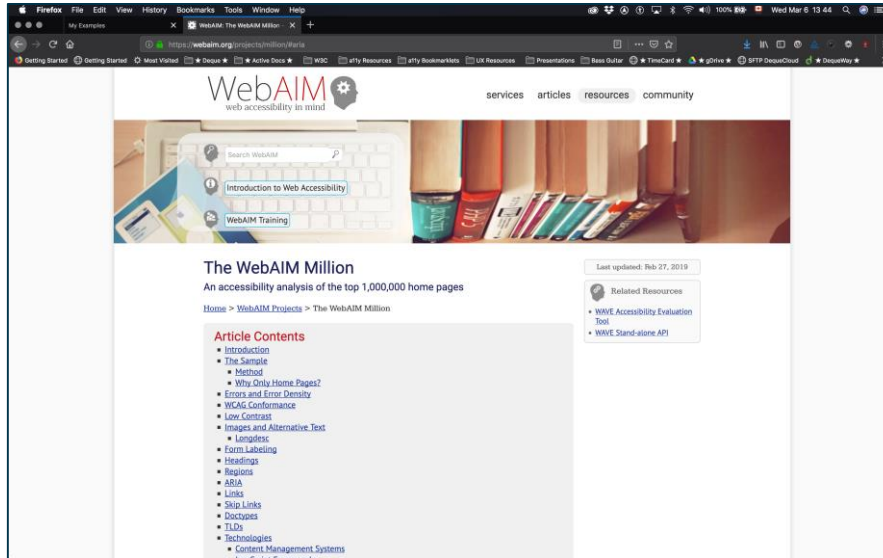
Appropriate/correct use of WAI-ARIA

- All expected required attributes are defined for a specific WAI-ARIA role used,
- That information is all provided within the WAI-ARIA spec, but Axe will also flag such issues for you.



WAI-ARIA: 10 mistakes to avoid

The WebAIM million



1,000,000 pages assessed!

- 60.1% of the 1M pages assessed used WAI-ARIA.
- 22.3M WAI-ARIA attributes were detected throughout
- Pages with WAI-ARIA present averaged 11.2 more errors than pages without WAI-ARIA.

Resource

<https://webaim.org/projects/million/#aria>

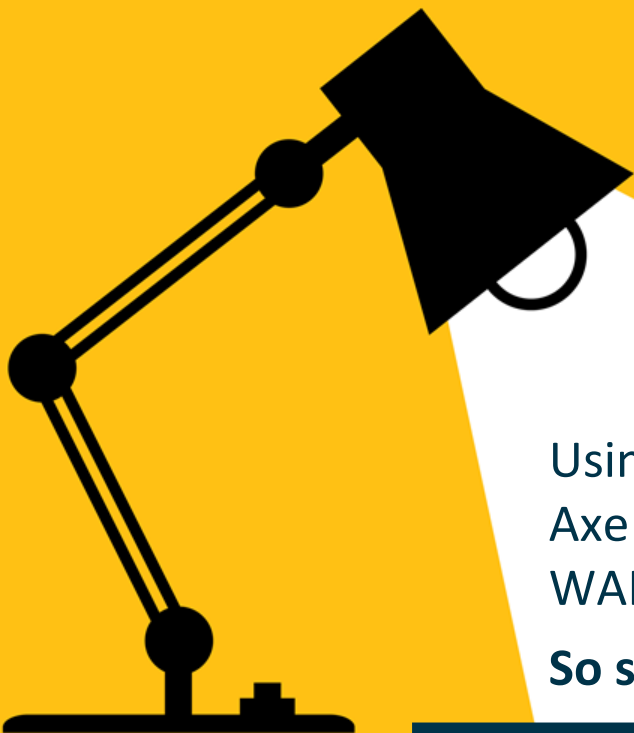
YOUR FIRST TAKEAWAY!



Though WAI-ARIA is supposed to help make the Web more accessible, using it poorly can actually make things worse!

So use WAI-ARIA responsibly!

YOUR SECOND TAKEAWAY!



Using a tool like the free
Axe extension makes finding
WAI-ARIA issues in your code easy!

So start using AXE today!



Thank you for your time.

Any questions? Now's your chance!



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