

ARIA: THE GOOD PARTS

Hidde
de Vries

28 September 2023
Paris Web, Paris

@hdv in
most places

Source: Manuel Matuzović

**ARIA ALONE WON'T
MAKE MAKE YOUR
APP ACCESSIBLE**



I'M SERIOUS...

There must be good parts

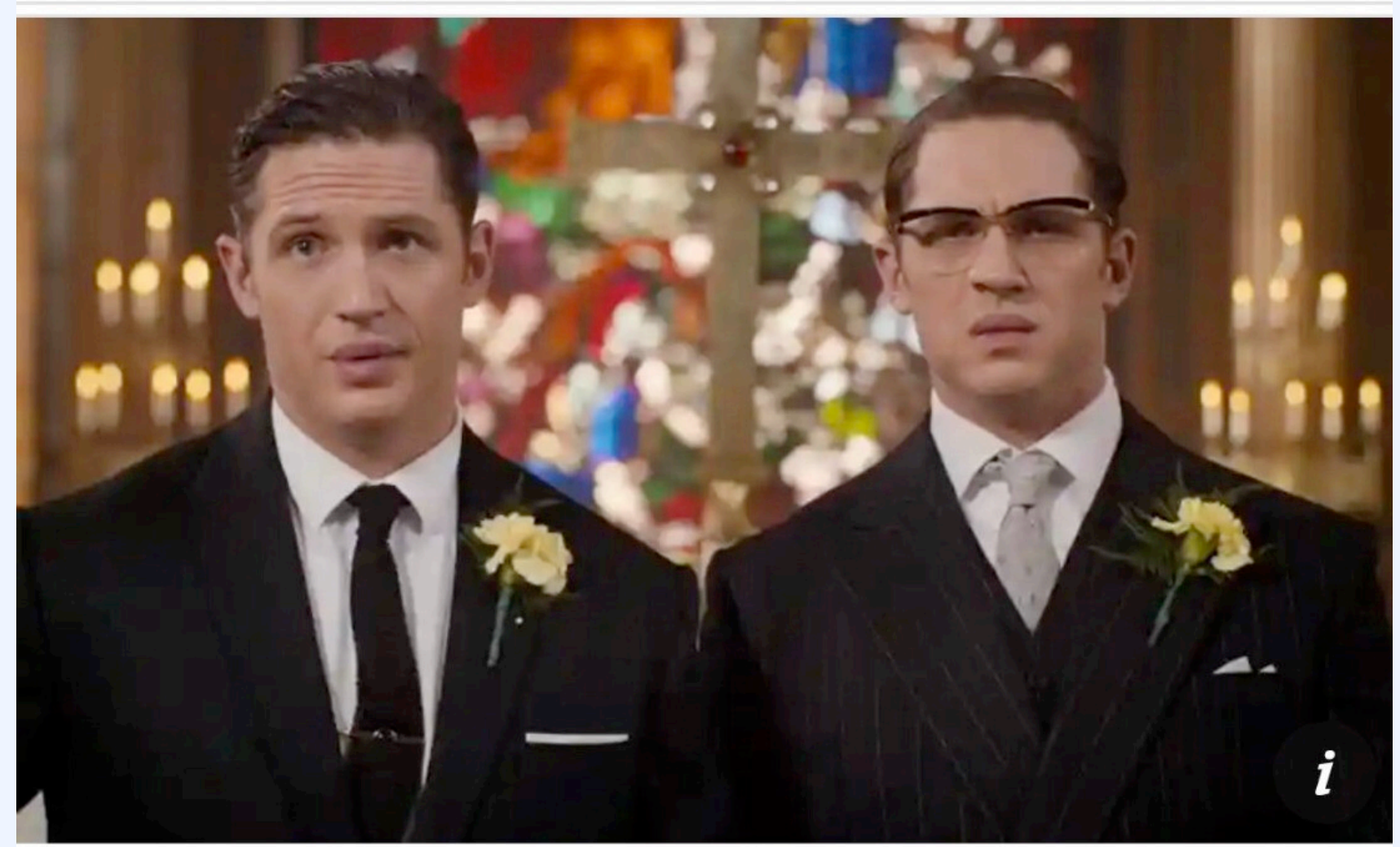


"UNMISSABLE...
A BRITISH CLASSIC"

HUFFINGTON POST BLOG

LEGEND

IN CINEMAS SEPT 9



First look review
Legend review - Tom Hardy on double duty in cartoonish Kays biopic

★ ★ ☆ ☆ ☆

It's two thrags for the price of one actor and while flashes of brilliance emerge from his performance(s), Hardy is let down by disappointingly pedestrian surroundings

Home > Inside Energy > Innovation, profit and purpose on the road to net zero

Innovation, profit and purpose on the road to net zero

Sir Andrew Mackenzie became Chair of Shell in 2021. Here, he reflects on the challenges that face a world in transition, the importance of innovation – and the piece of advice he's glad he didn't take.

By Melanie Cheary
on September 06, 2023

As a highly regarded scientist and Chair of UK Research and Innovation, do you think there is enough investment in the right technology and is there enough innovation taking place to achieve net zero?

Global

Continuing to support a net-zero future

The 2023 Advancing Climate Solutions Progress Report outlines our approach to help reduce greenhouse gas emissions in support of a net-zero future.

[Read more about the strategy](#)

ExxonMobil Global Outlook: Our view to 2050 | Delivering industrial solutions | ExxonMobil announces... of Denbury

Reimagining energy for people and our planet

Enabling us to pivot from being an international oil company to an integrated energy company

Transforming bp to deliver secure, affordable, lower carbon energy

[Find out more](#) [Find out more](#) [Find out more](#)

Net zero from ambition to action

Net zero by 2050

"The world's carbon budget is finite and running out fast; we need a rapid transition to net zero"

Bernard Looney, chief executive officer

[Reimagining energy](#) [Sign up for news](#)

**1.
WHAT
AND
WHY**

**2.
THE
GOOD
PARTS**

**3.
THE
BAD
PARTS**

HI, I'M HIDDE

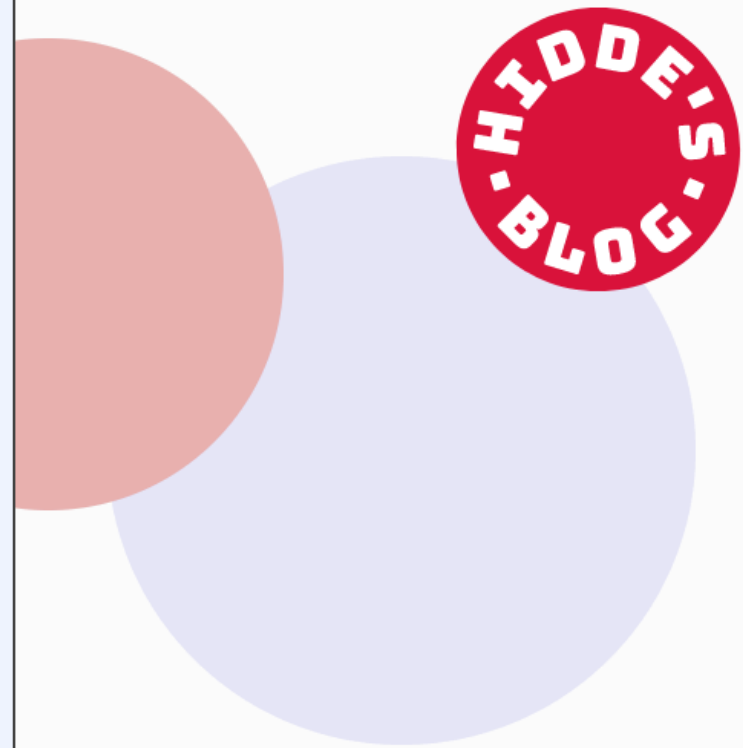
developer relations + accessibility
at NL Design System

participant at Open UI CG / CSS WG

hidde.blog

LIKE &
SUBSCRIBE





Blog

Posts about HTML, CSS, JavaScript, accessibility and browsers from the perspective of a curious front-end developer.

All 201 of them. For shorter writings, follow [@hdv@front-end.social](#) ([@hdv](#) [RSS](#)).

- books (10)
- events (44)
- front-end (25)
- industry (9)
- security (2)
- CSS (17)
- performance (1)
- Web Components (3)
- design systems (2)
- accessibility (38)
- elsewhere (3)
- personal (14)
- ethics (6)
- UX (1)
- ai (3)
- meta (5)
- primers (3)
- web platform (6)
- privacy (2)
- workflow (2)
- media (3)

▶ [RSS \(full\)](#)

▶ [Blog roll](#)

My ideal accessible components resource is holistic, well tested and easy to use

on Wed Mar 08 2023

To improve accessibility of the web as it is today, I feel we dearly need accessibility guidance that is holistic, well tested and easy to use



talks.hiddedevries.nl/hDiD0G/aria-the-good-parts

THE WHAT AND WHY

Web accessibility is about
how **people** use the web.

(facts!)

A LOT OF PEOPLE

https://en.wikipedia.org/wiki/Page_zooming 240%

Article Talk Read Edit View history Search Wikipedia

Page zooming

From Wikipedia, the free encyclopedia

This article **does not cite any sources**. Please help improve this article by adding citations to reliable sources. Unsourced material may be challenged and removed.

Find sources: "Page zooming" – news · newspapers · books · scholar · JSTOR (December 2009) (Learn how and when to

Zoom in
on web
pages

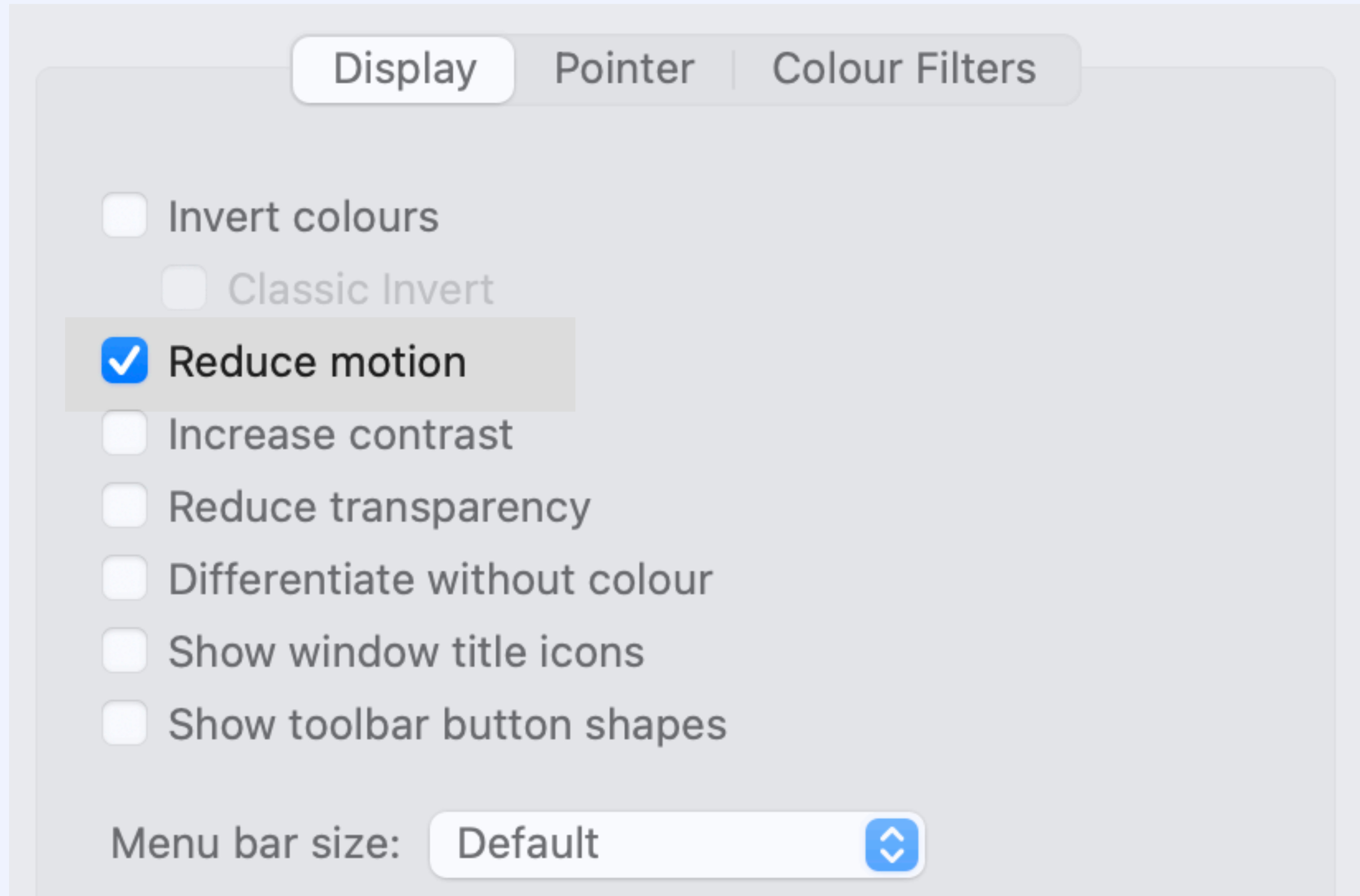
A LOT OF PEOPLE

Use high contrast modes



A LOT OF PEOPLE

Prefer
reduced
motion



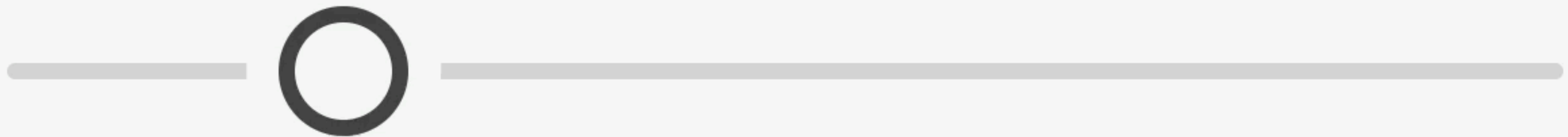
A LOT OF PEOPLE

Do not use a mouse



Cookies to buy

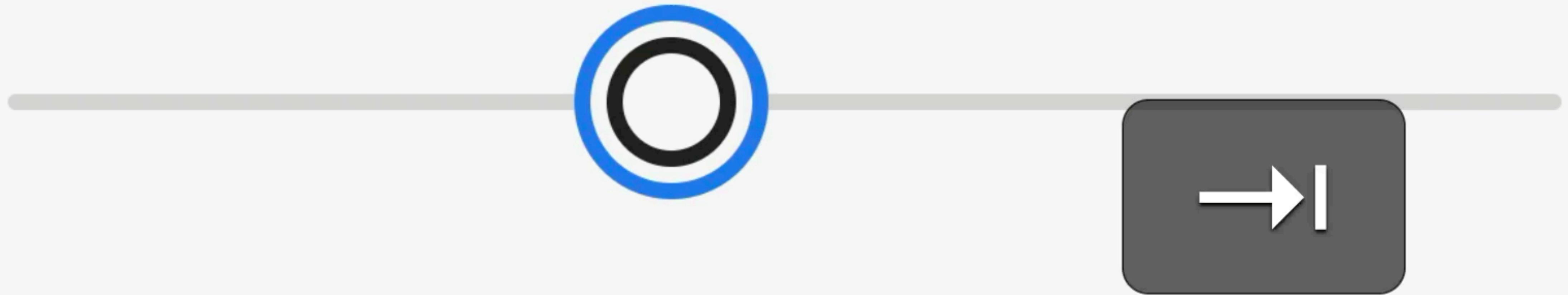
19



Slider example from Adobe Spectrum

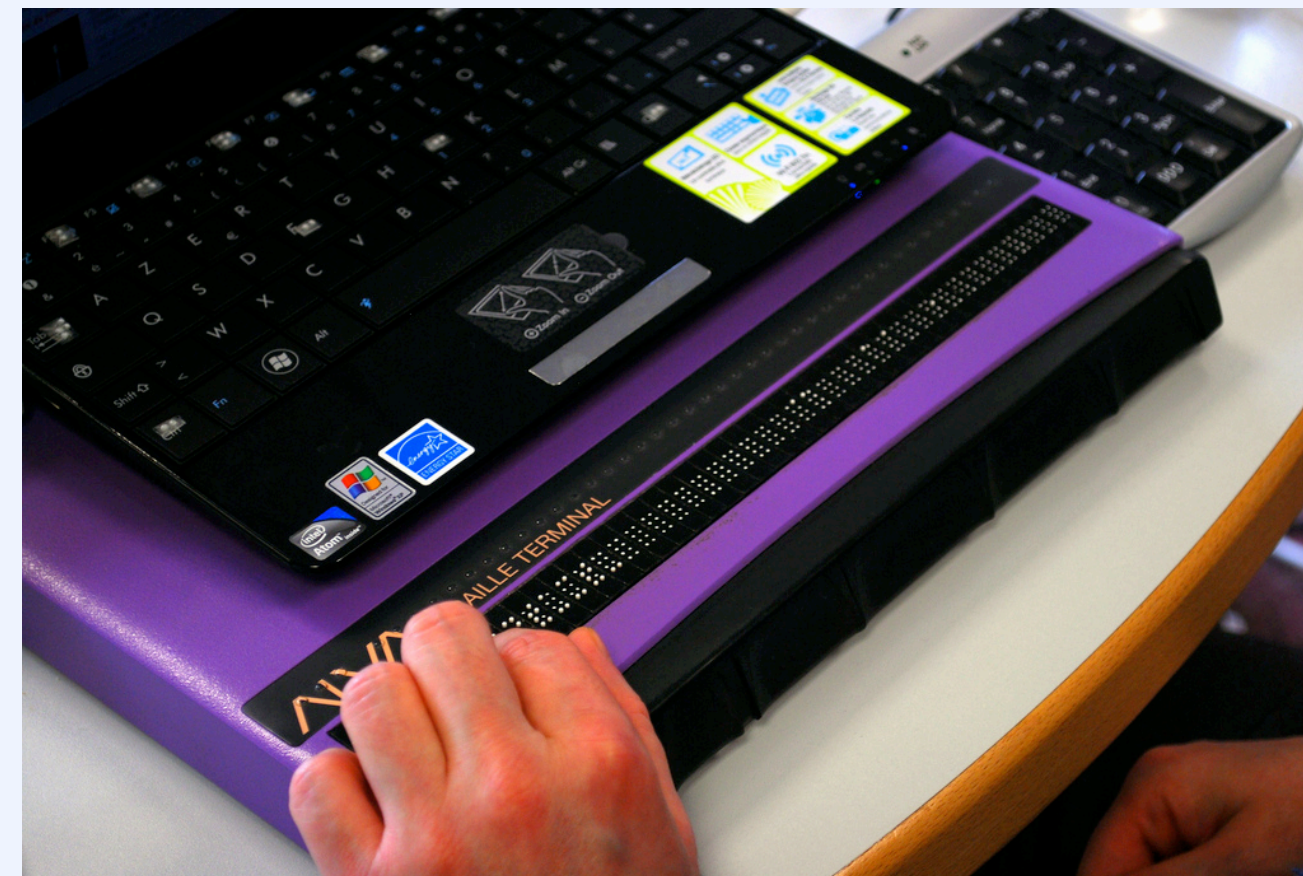
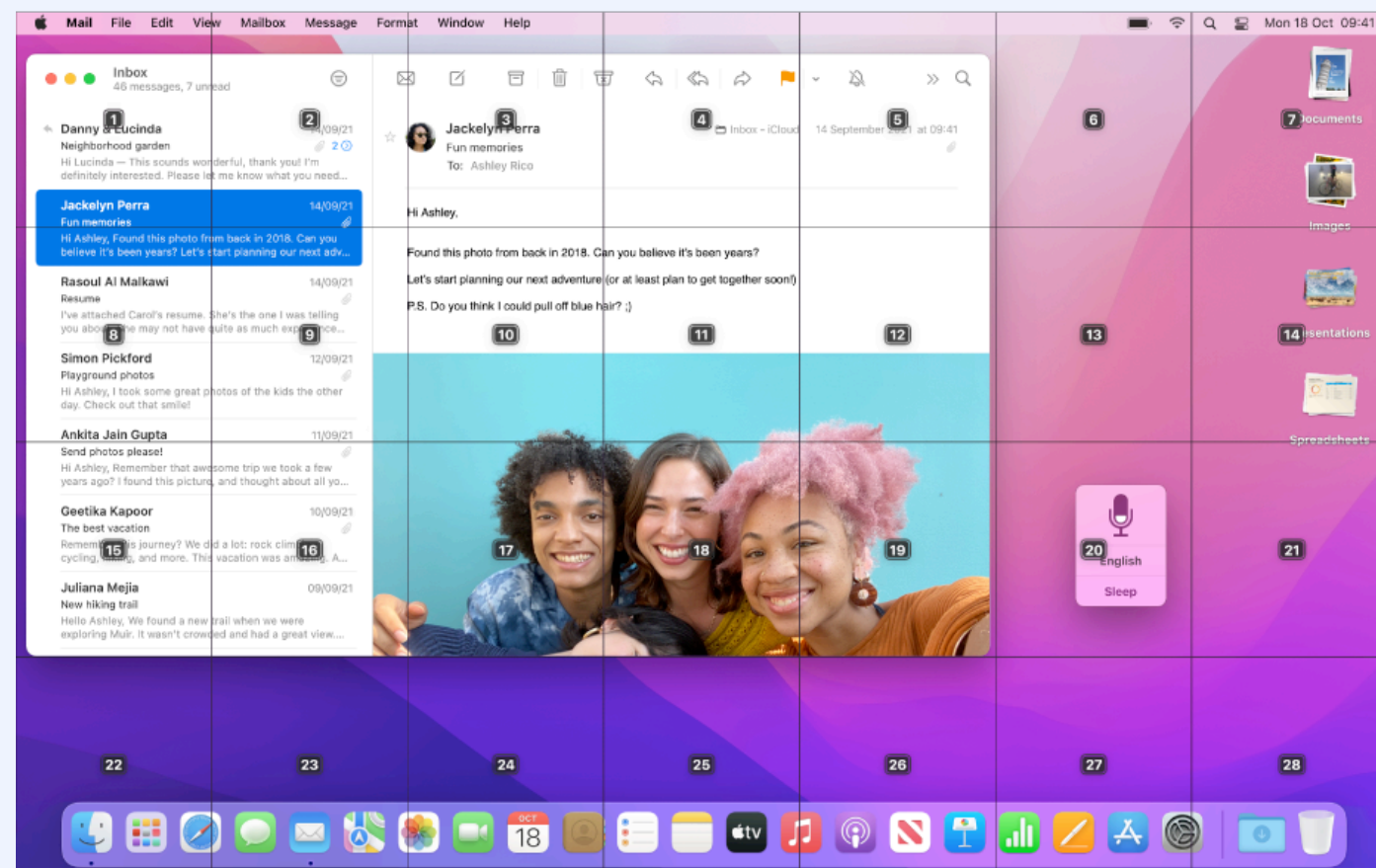
Cookies to buy

42



A LOT OF PEOPLE

Use assistive technologies



Assistive technologies need
to “understand” our site well
to convey it

Jimmy Buffett | France abaya school ban | American families leaving the US for Europe | Final call for boarding passes? |
Novak Djokovic at the US Open | Mohamed Al-Fayed

Burning Man attendees unable to leave desert



Tens of thousands of festival goers told to conserve water and food after heavy rains leave them stranded in Nevada



In this Asian country, the young find dating so hard their parents are doing it for them

- South Korea needs more babies and workers. It's hoping foreign housekeepers will fix that

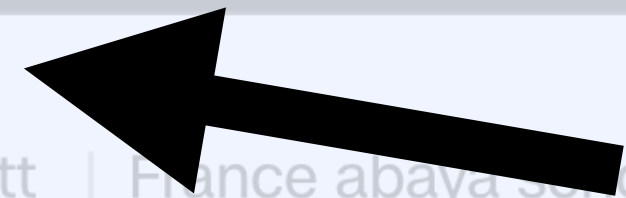


North Korea says it has simulated a nuclear missile attack to warn US of 'nuclear war danger'

World Cup kiss scandal hasn't damaged Spanish brand, prime minister says

Typhoon Haikui expected to make landfall in Taiwan Sunday afternoon

▶ Dr. Fauci responds to study that says masks didn't work



role: link

name: "World"

Burning Man attendees
unable to leave

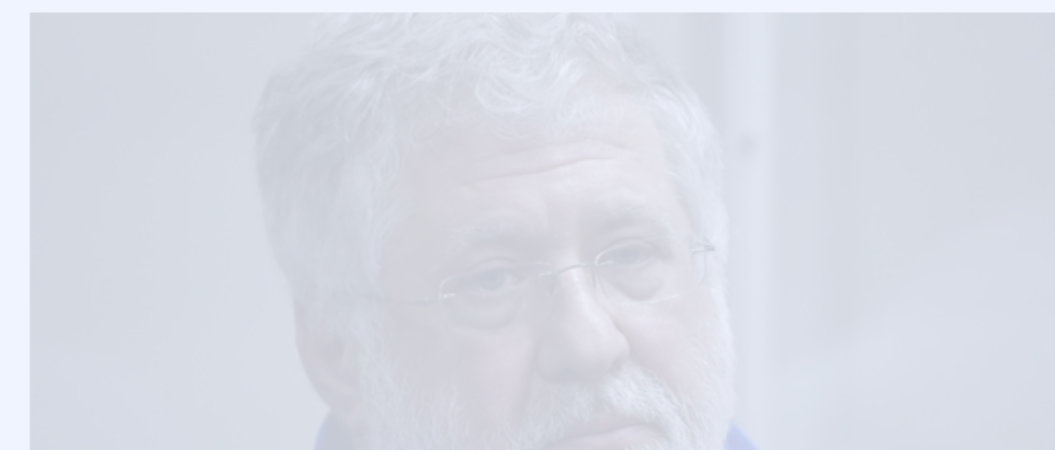


Tens of thousands of festival goers told to conserve water and food after heavy rains leave them stranded in Nevada



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World Cup kiss scandal hasn't damaged Spanish brand, prime minister says

Typhoon Haikui expected to make landfall in Taiwan Sunday afternoon

Dr. Fauci responds to study that says masks didn't work

role: link

name: "US politics"



Tens of thousands of festival goers told to conserve water and food after heavy rains leave them stranded in Nevada



In this Asian country, the young find dating so hard their parents are doing it for them

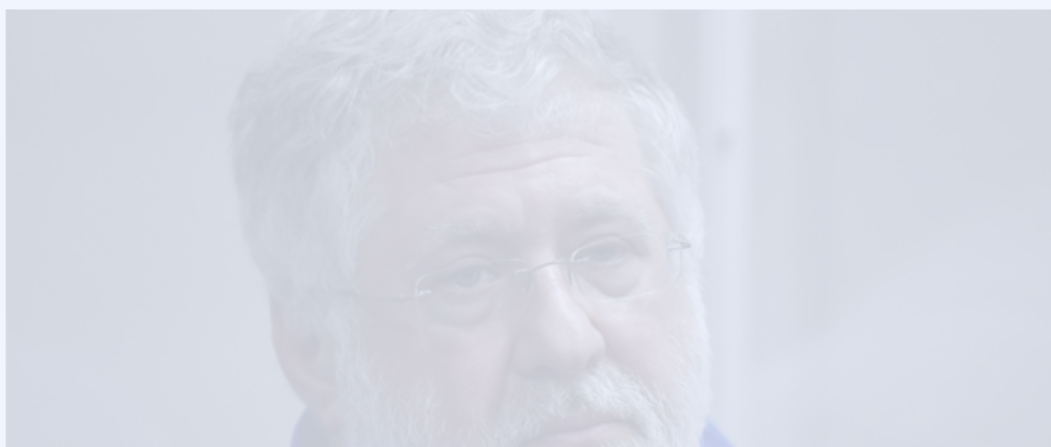
- South Korea needs more babies and workers. It's hoping foreign housekeepers will fix that



North Korea says it has simulated a nuclear missile attack to warn US of 'nuclear war danger'

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Dr. Fauci responds to study that says masks didn't work

role: button

name: "Open menu"



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Dr. Fauci responds to study that says masks didn't work

All websites expose “accessibility meta information”.

All websites expose “accessibility meta information”. A developer's choices can directly influence the quality of it.

With WAI-ARIA, you can **set**
and **augment** accessibility meta
information



With **WAI-ARIA**, you can **set**
and augment accessibility meta
information.

**With great power comes
great responsibility.**



WAI-ARIA is an **ontology** for
accessibility meta information

**defined/standardised
naming structure**

WAI-ARIA is an **ontology** for
accessibility meta information

ROLES

STATES

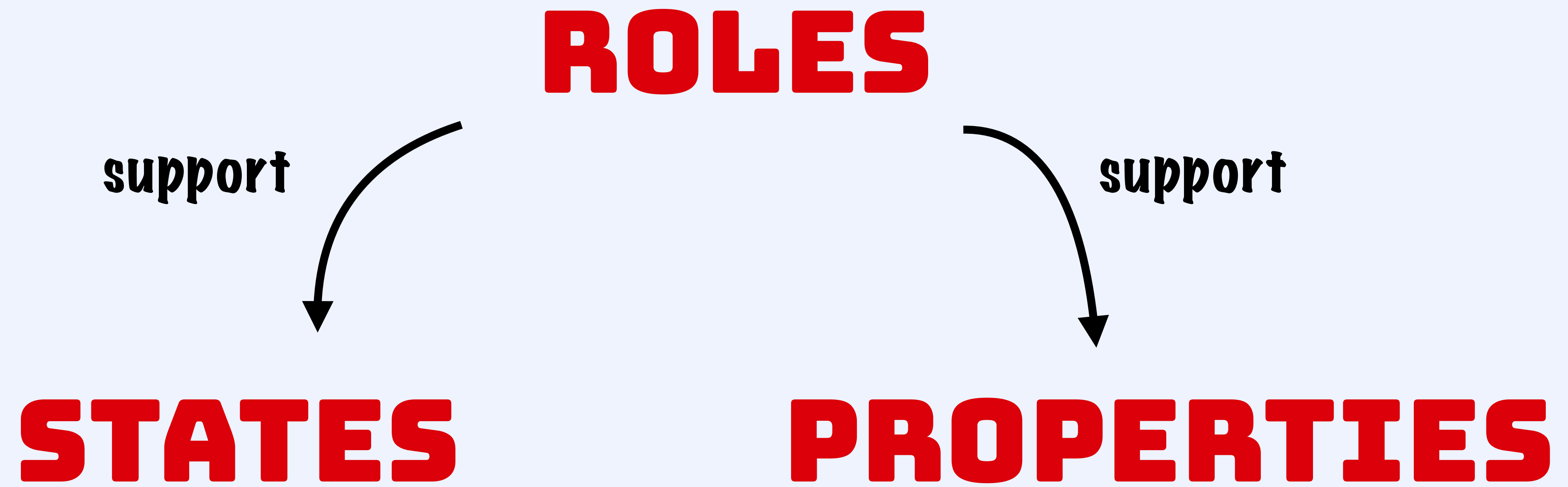
PROPERTIES

ROLES

STATES

PROPERTIES

**“semantics”
— WAI-ARIA**



ROLES, STATES, PROPERTIES

in our HTML

ROLES, STATES, PROPERTIES

*in your HTML
(or SVG, XML, JSX etc)*

ROLES, STATES, PROPERTIES

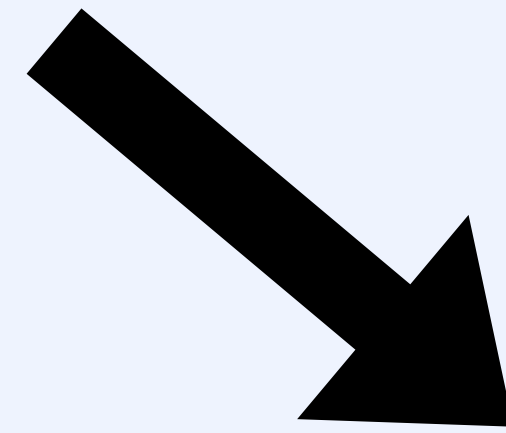
*in your HTML
(or SVG, XML, JSX etc)
(with or without ARIA attributes)*

ROLES, STATES, PROPERTIES

*in our HTML
(or SVG, XML, JSX etc)
(with or without ARIA attributes)
(sometimes impacted by our
HTML and/or CSS)*

ROLES, STATES, PROPERTIES

*in your HTML
(or SVG, XML, JSX etc)
(with or without ARIA attributes)
(sometimes impacted by our
HTML and/or CSS)*

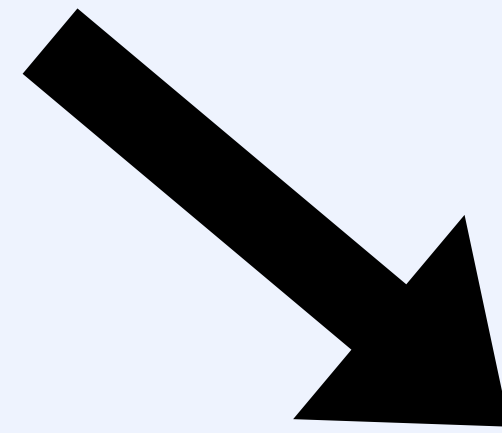


INTERFACE AFFORDANCES

*in our user's screenreader
(or switch, voice control etc)*

ROLES, PROPERTIES,
CODE OF YOUR WEBSITE

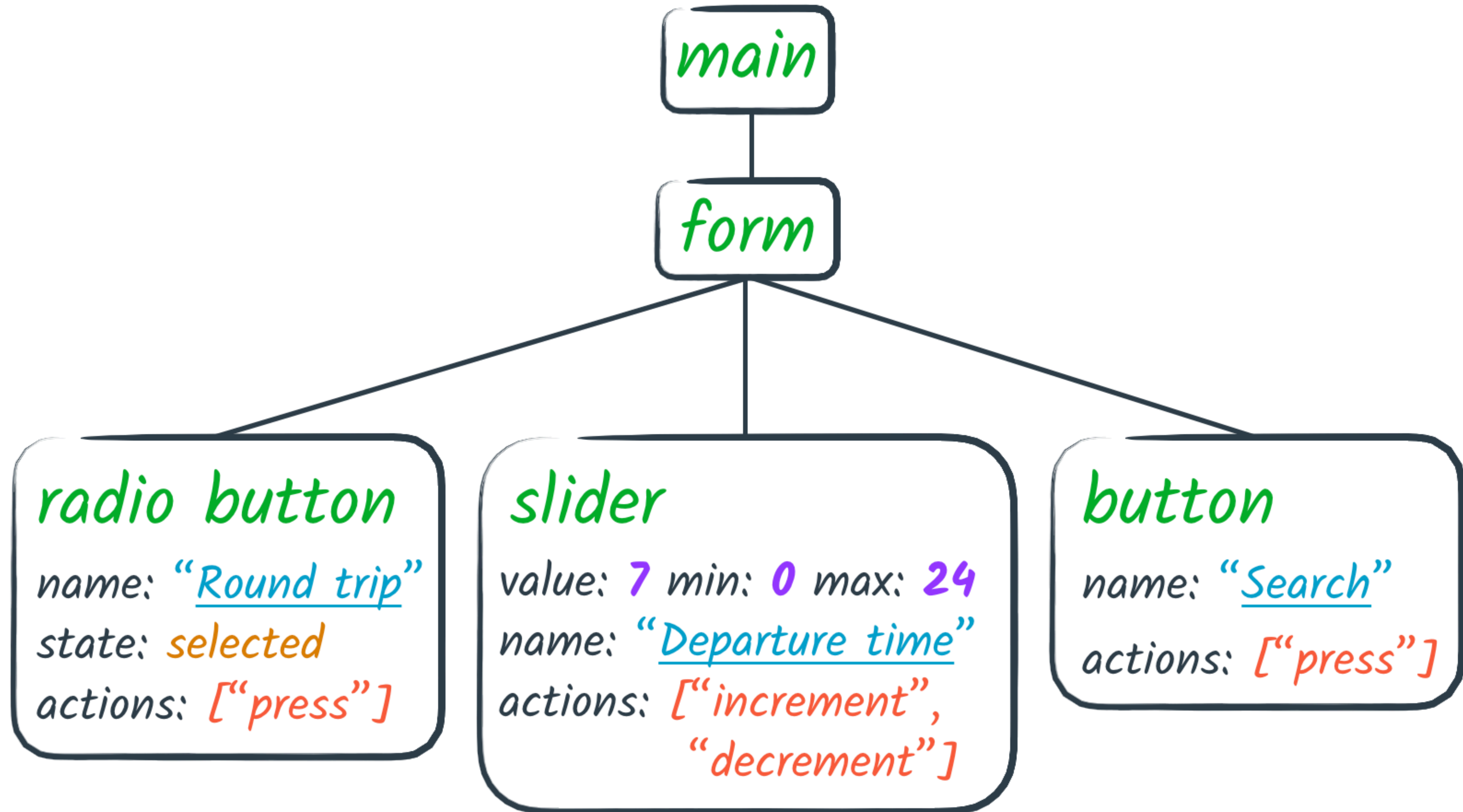
*in your HTML
(or SVG, XML, JSX etc)
(with or without ARIA attributes)
(sometimes impacted by your
HTML and/or CSS)*



IMPACTANCE
USER'S UI
ASSISTANCE

*in our assistive screenreader
(or switch, voice control etc)*

**THERE ARE A LOT OF
DIFFERENT PEOPLE
AND TOOLS**



WHAT IS ARIA?

Ontology for accessibility
meta information + way
for devs to augment it

WHAT IS ARIA?

Ontology for accessibility
meta information + way
for devs to augment it

HOW DOES IT AFFECT USERS?

Their AT can be better informed
about what's happening in site

WHAT IS ARIA?

Ontology for accessibility
meta information + way
for devs to augment it

HOW DOES IT AFFECT USERS?

Their AT can be better informed
about what's happening in site

Personalisation for users with
cognitive/learning disabilities

WHAT IS ARIA?

Ontology for accessibility
meta information + way
for devs to augment it

HOW DOES IT AFFECT USERS?

Their AT can be better informed
about what's happening in site
Personalisation for users with
cognitive/learning disabilities

WHY NOT ALL PARTS GOOD?

There's lots of nuance. That
nuance is often ignored.

THE GOOD PARTS

ARIA CAN ONLY BENEFIT USERS WHEN...

...the properties are **well-supported**

ARIA CAN ONLY BENEFIT USERS WHEN...

...the properties are **consistently supported**

ARIA CAN ONLY BENEFIT USERS WHEN...

**...it's used alongside other accessibility
requirements**

ARIA CAN ONLY BENEFIT USERS WHEN...

...it's used alongside other accessibility
requirements



```
<div role="button"></div>
```

ARIA CAN ONLY BENEFIT USERS WHEN...

...it's used alongside other accessibility
requirements

accessible names

Save

```
<div role="button">  
  Save  
</div>
```

ARIA CAN ONLY BENEFIT USERS WHEN...

...it's used alongside other accessibility
requirements

accessible names

color contrast



Save

```
<div role="button">  
  Save  
</div>
```

ARIA CAN ONLY BENEFIT USERS WHEN...

...it's used alongside other accessibility
requirements

accessible names

color contrast

focus indication



```
<div role="button">  
  Save  
</div>
```

ARIA CAN ONLY BENEFIT USERS WHEN...

...it's used alongside other accessibility
requirements

accessible names

color contrast

focus indication

keyboard support



```
<div role="button"  
tabindex="0">  
  Save  
</div>
```

ARIA CAN ONLY BENEFIT USERS WHEN...

...it's used alongside other accessibility
requirements

accessible names

color contrast

focus indication

keyboard support

zoom support



```
<div role="button"  
tabindex="0">  
  Save  
</div>
```

ARIA CAN ONLY BENEFIT USERS WHEN...

...it's used alongside other accessibility requirements

accessible names

color contrast

focus indication

keyboard support

zoom support

High Contrast
Mode support



```
<div role="button"  
tabindex="0">  
  Save  
</div>
```


THE GOOD PARTS

a.k.a. “adding these adds
some value for end users”

landmarks





stage

toilets

registration

```
<nav aria-labelledby="n">  
  <h2 id="n">On this Page</h2>  
  ...  
</nav>
```

```
<nav aria-labelledby="n">  
  <h2 id="n">On this Page</h2>  
  ...  
</nav>
```

```
<aside aria-labelledby="f">  
  <h2 id="f">Filters</h2>  
  ...  
</nav>
```

```
<nav aria-labelledby="n">
  <h2 id="n">On this Page</h2>
  ...
</nav>

<aside aria-labelledby="f">
  <h2 id="f">Filters</h2>
  ...
</nav>

/* other landmark elements
   are <header>, <footer>,
   <section>, <search>,
   <form> */
```

```
<nav aria-labelledby="n">
  <h2 id="n">On this Page</h2>
  ...
</nav>

<aside aria-labelledby="f">
  <h2 id="f">Filters</h2>
  ...
</nav>

/* other landmark elements
   are <header>, <footer>,
   <section>, <search>,
   <form> */
```

landmarks: how?

- only the most important ones
- most useful when they are labelled
- they all have HTML elements


```
<nav aria-labelledby="n">  
  <h2 id="n">On this Page</h2>  
  ...  
</nav>
```

```
<aside aria-labelledby="f">  
  <h2 id="f">Filters</h2>  
  ...  
</nav>
```

```
/* other landmark elements  
are <header>, <footer>,  
<section>, <search>,  
<form> */
```

landmarks: why?

- some users navigate by landmarks

aria-expanded

aria-expanded

to say if tooltip opened or closed



BIC/SWIFT codes are used to identify banks and financial institutions globally.

aria-expanded to convey meta data is expanded

HTML Accessibility API Mappings 1.0

W3C Working Draft 02 September 2023



▶ **More details about this document**

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Abstract

HTML Accessibility API Mappings (HTML-AAM) defines how *user agents* map HTML [HTML] elements and attributes to platform *accessibility application programming interfaces (APIs)*. It leverages and extends the Core Accessibility API Mappings 1.2 and the Accessible Name and Description Computation 1.1 for use with the HTML host language. Documenting these mappings promotes interoperable exposure of roles, states,

aria-expanded how?

- only on elements that *toggle*
- the browser manages this for **popover** and **<details>/<summary>**

BIC/SWIFT codes are used to identify banks and financial institutions globally.

HTML Accessibility API Mappings 1.0
W3C Working Draft 02 September 2023

W3C

▶ More details about this document

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aria-expanded why?

- conveys visual state programmatically



BIC/SWIFT codes are used to identify banks and financial institutions globally.

W3C Working Draft

HTML Accessibility API Mappings 1.0

W3C Working Draft 02 September 2023



► [More details about this document](#)

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aria-pressed

aria-pressed to make a button to toggle mute



aria-pressed to make a button to toggle liked status

Live every moment,
Laugh every day,
Love beyond words.



Like



Comment



Repost



Send

aria-pressed how?

- toggle between true/false

Live every moment,

Laugh every day
Love beyond words.



Like



Comment



Repost



Send

aria-pressed why?

- convey visual state programmatically

Live every moment,

Laugh every day
Love beyond words.



Like



Comment



Repost



Send

aria-label/
aria-labelledby

aria-label / aria-labelledby to label stuff

The screenshot shows the Eurostar website's search interface. At the top left is the Eurostar logo. On the right, there are links for 'Help', 'United Kingdom' (with a UK flag), and a user profile 'Hidde de Vries'. Below the logo is a navigation bar with 'Trains' (selected), 'Train + Hotel', and 'Hotels'. Further right are links for 'Destinations', 'Travelling with Eurostar', 'Frequent travellers', and 'Manage booking'. The search area contains a 'From' field with 'London St Pancras Int'l', a 'To' field, a date field set to 'Tue 26 Sept' with an 'Add return' option, and a '1 adult' passenger selection. A yellow 'Search' button is on the right. Below the search area are three links: 'Explore all trains', 'Find lowest fares', and 'Groups 10+'. A green button for 'Live train information' is located in the top right of the main banner area.



aria-label / aria-labelledby to label stuff

The image shows a screenshot of the Eurostar website's search interface. At the top left is the Eurostar logo. The top right contains links for 'Help', 'United Kingdom', and a user profile 'Hidde de Vries'. Below the logo is a navigation bar with 'Trains', 'Train + Hotel', and 'Hotels' as primary options, and 'Destinations', 'Travelling with Eurostar', 'Frequent travellers', and 'Manage booking' as secondary options. The search form is partially visible, with the 'From' field containing 'London St Pancras Int'l' and the 'To' field highlighted. A callout box points to the 'To' field with the text 'has no visible label, needs name'. The background features a stylized illustration of a Eurostar train and wind turbines.

eurostar

Help United Kingdom Hidde de Vries

Trains Train + Hotel Hotels Destinations Travelling with Eurostar Frequent travellers Manage booking

London St Pancras Int'l To Search

Explore all trains

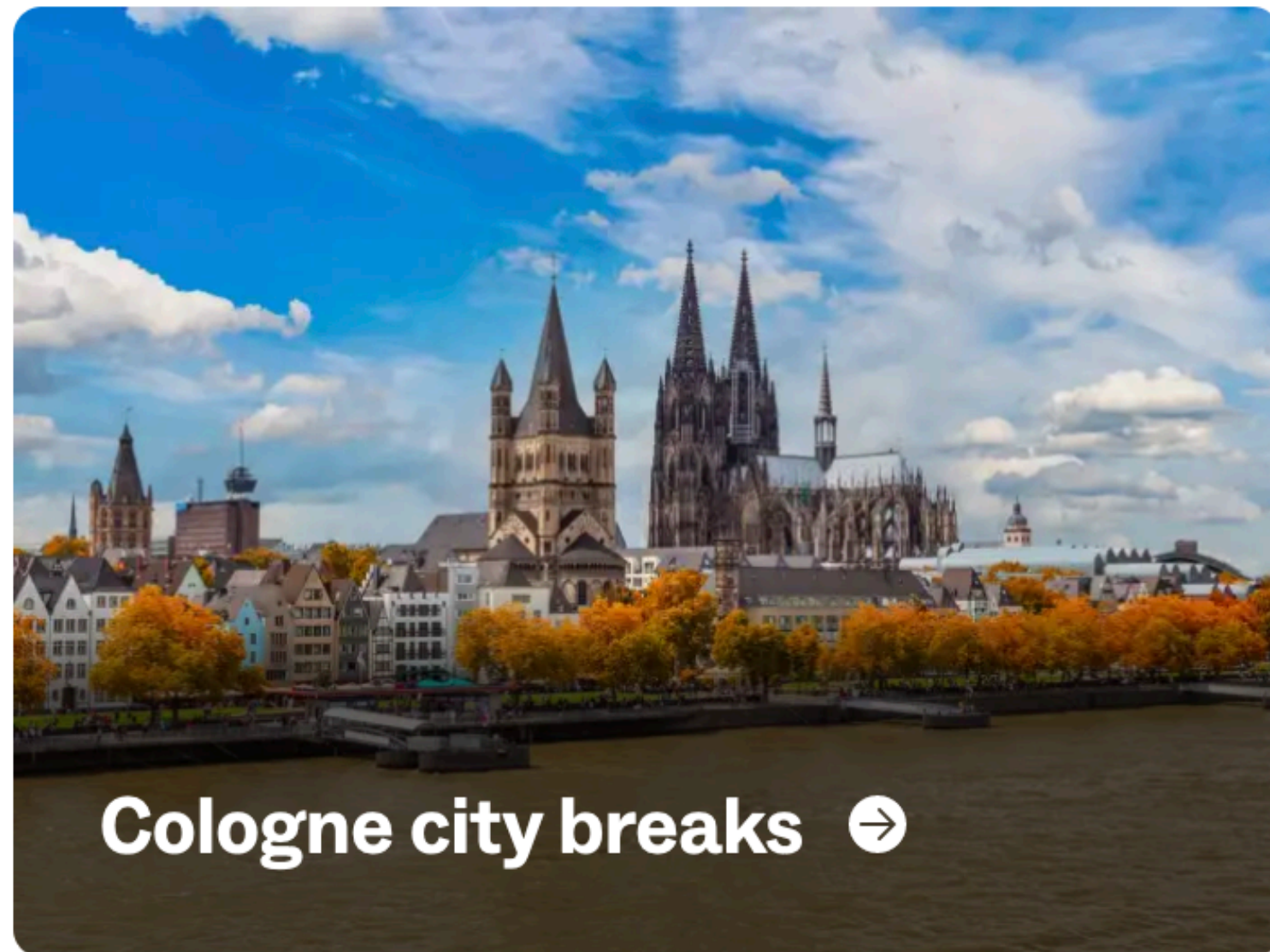
Information

See more of Eurostar

has no visible label, needs name

aria-label / aria-labelledby to label stuff

Ideas for your next trip



Cologne city breaks →



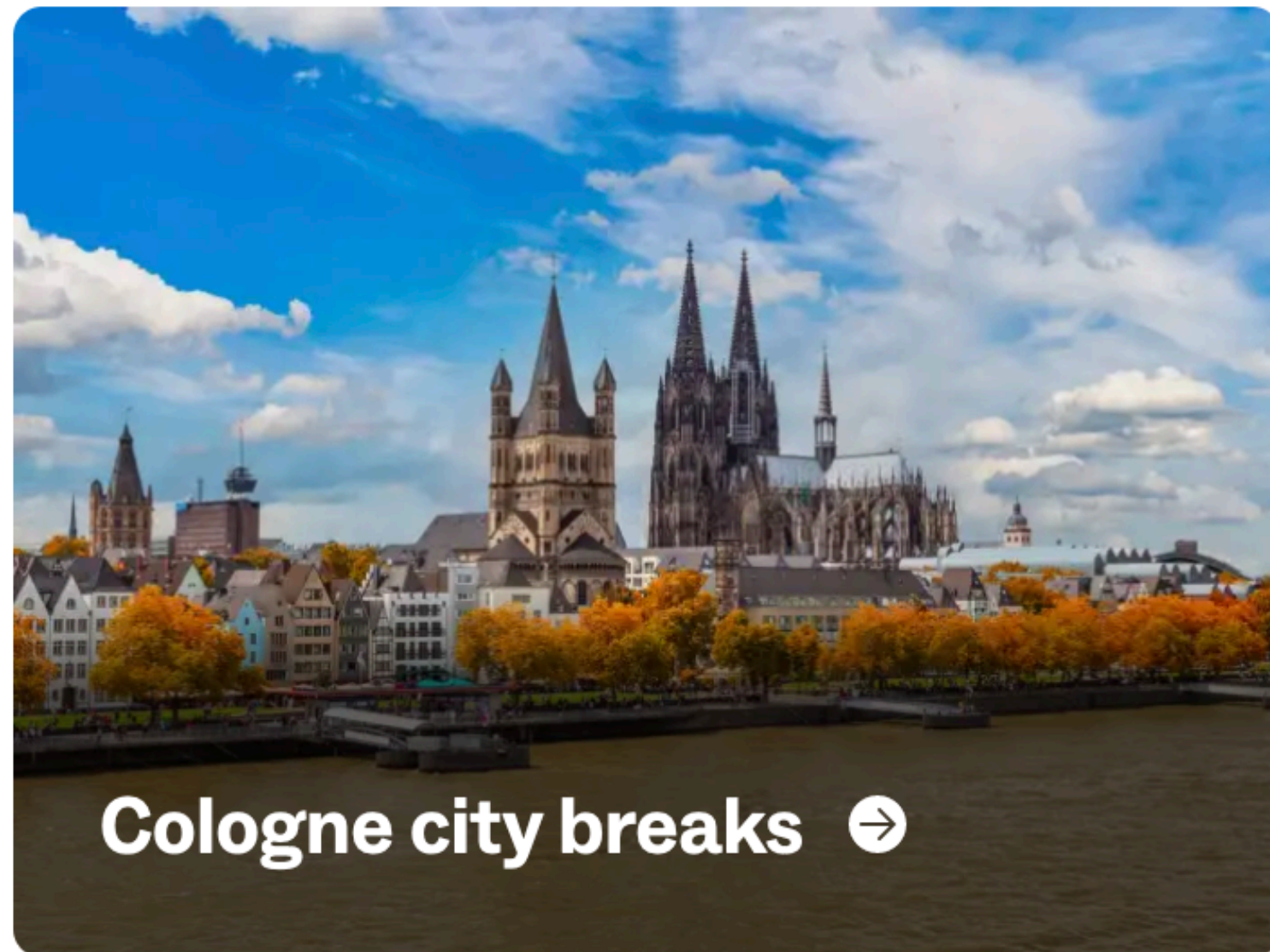
Disneyland holidays →



Beautiful Bruges →

aria-label / aria-labelledby to label stuff

Ideas for your next trip



Cologne city breaks →



Disneyland holidays →

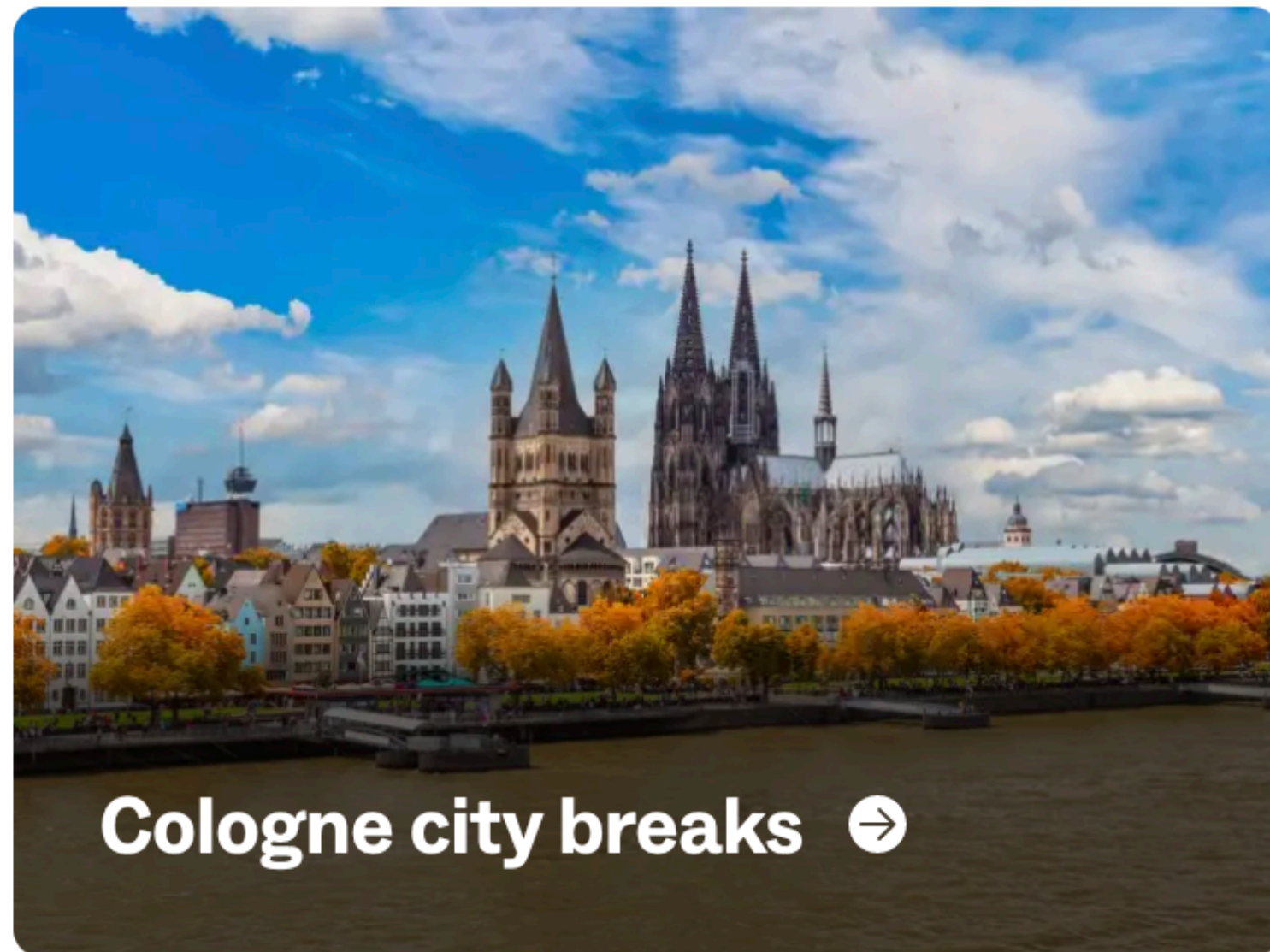


Beautiful Bruges →

```
<section>  
  <h2>Ideas for your next trip</h2>  
  ...  
</section>
```


aria-label / aria-labelledby to label stuff

Ideas for your next trip



```
<section aria-labelledby="ideas">  
  <h2 id="ideas">Ideas for your next trip</h2>  
  ...  
</section>
```

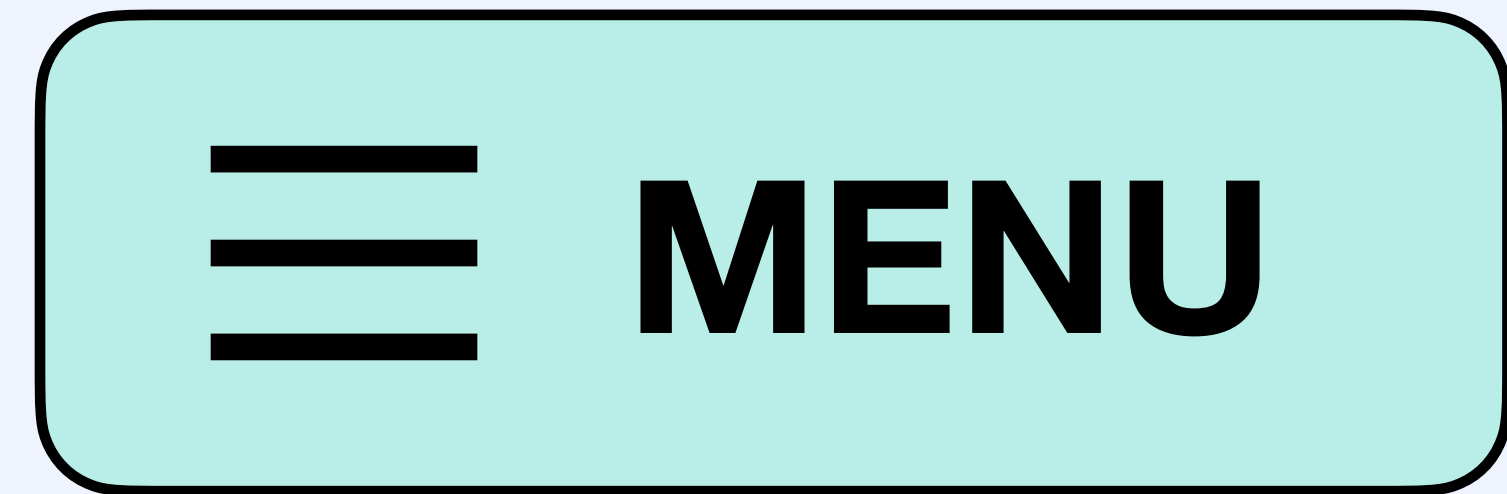
ARIA labels how?

- when we've ran out of other labeling techniques
- use unique, to the point names
- avoid difference in ARIA label and visual label

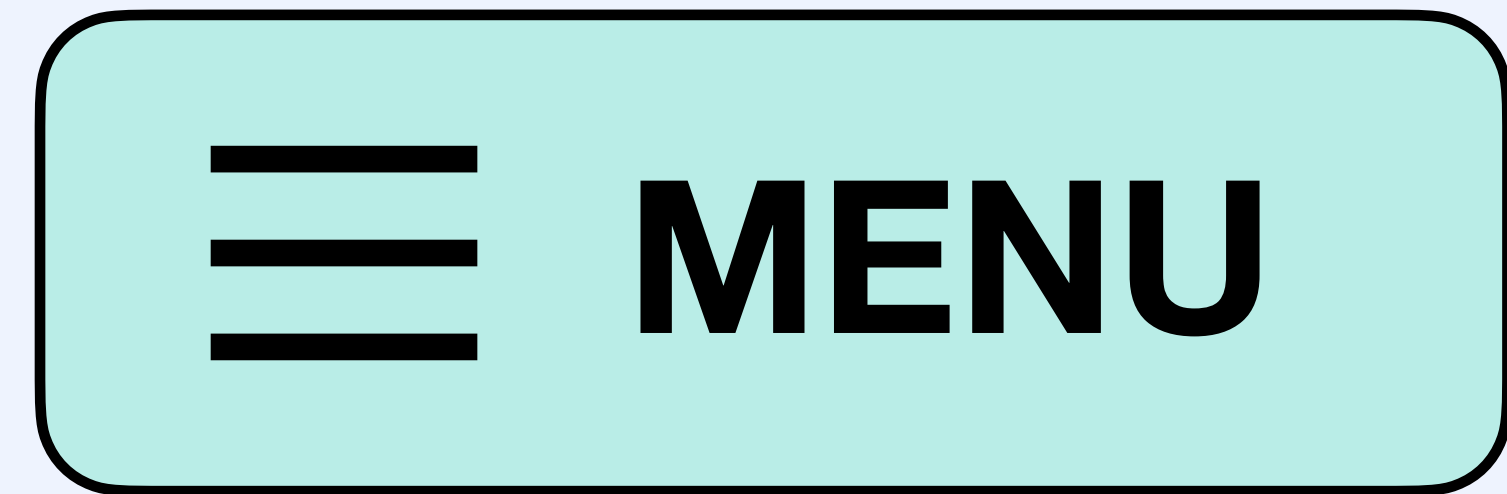
```
<button type="button">  
  <svg>...</svg>  
  MENU  
</button>
```



```
<button  
  type="button"  
  aria-label=  
    "Open hamburger thingy">  
  <svg>...</svg>  
  MENU  
</button>
```



```
<button  
  type="button"  
  aria-label=  
    "Open hamburger thingy">  
  <svg>...</svg>  
  MENU  
</button>
```



**mismatch between aria-label
and visual fails "Label In Name"**



Eric Eggert

@yatil@yatil.social



Is there a good overview on the ARIA roles that overwrite their contents when aria-label is used (button, a,...) and those who do not (nav, region,...)? I looked into the ARIA standard, but didn't find it.

12 September 2023 at 11:30:13 · 🌐

elk.zone/yatil.social/@yatil/111051473778282684

ARIA labels why?

- because users can navigate much more easily if things have (unique + useful) names

aria-describedby

aria-describedby to relate error message to field(set)

National Insurance number

It's on your National Insurance card, benefit letter, payslip or P60. For example, 'QQ 12 34 56 C'.

Enter a National Insurance number in the correct format

with field

When was your passport issued?

For example, 27 3 2007

The date your passport was issued must be in the past

Day

Month

Year

with fieldset

aria-current

aria-current

<p>Home Products About us Contact</p>	
<p><u>Home</u> / <u>About us</u> / Team</p>	<p>◀ previous 1 2 3 next ▶</p>

aria-current why?

The diagram illustrates the visual state of a navigation menu and a pagination control. The top part shows a navigation menu with four items: Home, Products, About us, and Contact. The 'About us' item is highlighted with a white background, indicating it is the current page. The bottom part shows a pagination control with three pages: 1, 2, and 3. The '2' page is highlighted with a black background, indicating it is the current page. The 'previous' and 'next' buttons are also shown.

Home Products About us Contact

Home / About us / Team

◀ previous 1 2 3 next ▶

makes visual state
programmatically
available

aria-current why?



makes visual state programmatically available

better than visually hidden “(current)” (i18n, standardised)

aria-current why?

The diagram illustrates the use of `aria-current` in a navigation menu and pagination. It is divided into two main sections.

Navigation Menu: A horizontal bar contains four items: "Home", "Products", "About us", and "Contact". The "About us" item is highlighted with a white background, indicating it is the current page.

Pagination: A row of elements includes a breadcrumb trail, navigation buttons, and page numbers. The breadcrumb trail is "Home / About us / Team". The navigation buttons are "◀ previous" and "next ▶". The page numbers are 1, 2, and 3. The number 2 is highlighted with a black background, indicating it is the current page.

makes visual state programmatically available

better than visually hidden “(current)” (i18n, standardised)

well supported

aria-live

aria-live

for session time out warnings

@hdv@front-end.social

English



MijnOverheid

H.A. de Vries

[Uitloggen](#)

- Home
- Berichtenbox
- Lopende zaken
- Identiteit
- Financiën
- Werk
- Gezondheid**
- Wonen

Wilt u uw sessie verlengen?

Uw sessie is mogelijk verlopen. Als u te lang niks hebt gedaan, wordt u uit veiligheidsoverwegingen uitgelogd.

Kies "Ja" om uw sessie te verlengen, mogelijk moet u dan opnieuw inloggen.

[Uitloggen](#)

[Ja, verlengen](#)

n na uw overlijden wel of niet

[Ga naar Donorregister](#)



105,79 excl. VAT

128,-

Delivered tomorrow

Compare to other products



Tefal OptiGrill Elite GC7508

470 reviews

Removable plates | 4 sandwiches | Included plates ribbed

165,29 excl. VAT

200,-

Delivered tomorrow

Compare to other products



Sage the BBQ and Press

14 reviews

Removable plates | 4 sandwiches | Included plates Ribbed, Smooth

154,55 excl. VAT

187,-



aria-live
for successful shopping
cart additions

aria-live how?

- with aria-live
 - or we can use an `<output>` element for a name-able polite region that mostly works

aria-live pitfalls?

- don't focus the live region
- don't trigger announcements multiple times, too much is annoying

aria-live why?

- status updates and warnings are often clearly marked **visually**, live regions add it **programmatically**

aria-hidden

aria-hidden how?

- not on focusable elements!
- avoid confusing sighted screenreader users

aria-live why?

- to remove redundant content from AT (this is likely rare)

aria-hidden is not the
same as role=presentation
(which only removes
default role)

landmarks, aria-expanded, aria-pressed
aria-label/aria-labelledby, ariadescribedby,
aria-current, aria-live, aria-hidden

landmarks, aria-expanded, aria-pressed
aria-label/aria-labelledby, ariadescribedby,
aria-current, aria-live, aria-hidden

vs

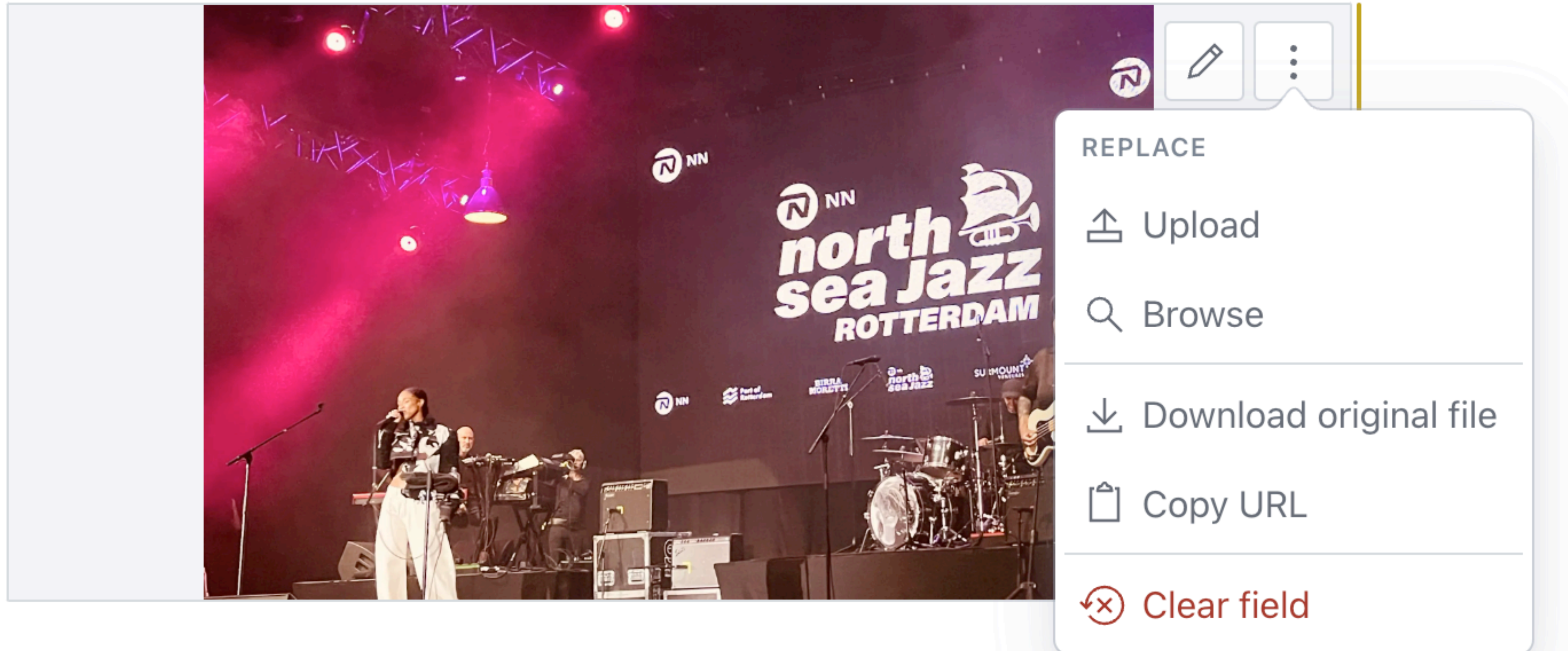
more complex widgets

**“TALK TO YOUR
KIDS ABOUT ARIA
BEFORE IT'S TOO
LATE.”**

—*Sarah Higley*

sarahmhigley.com/writing/roles-and-relationships/

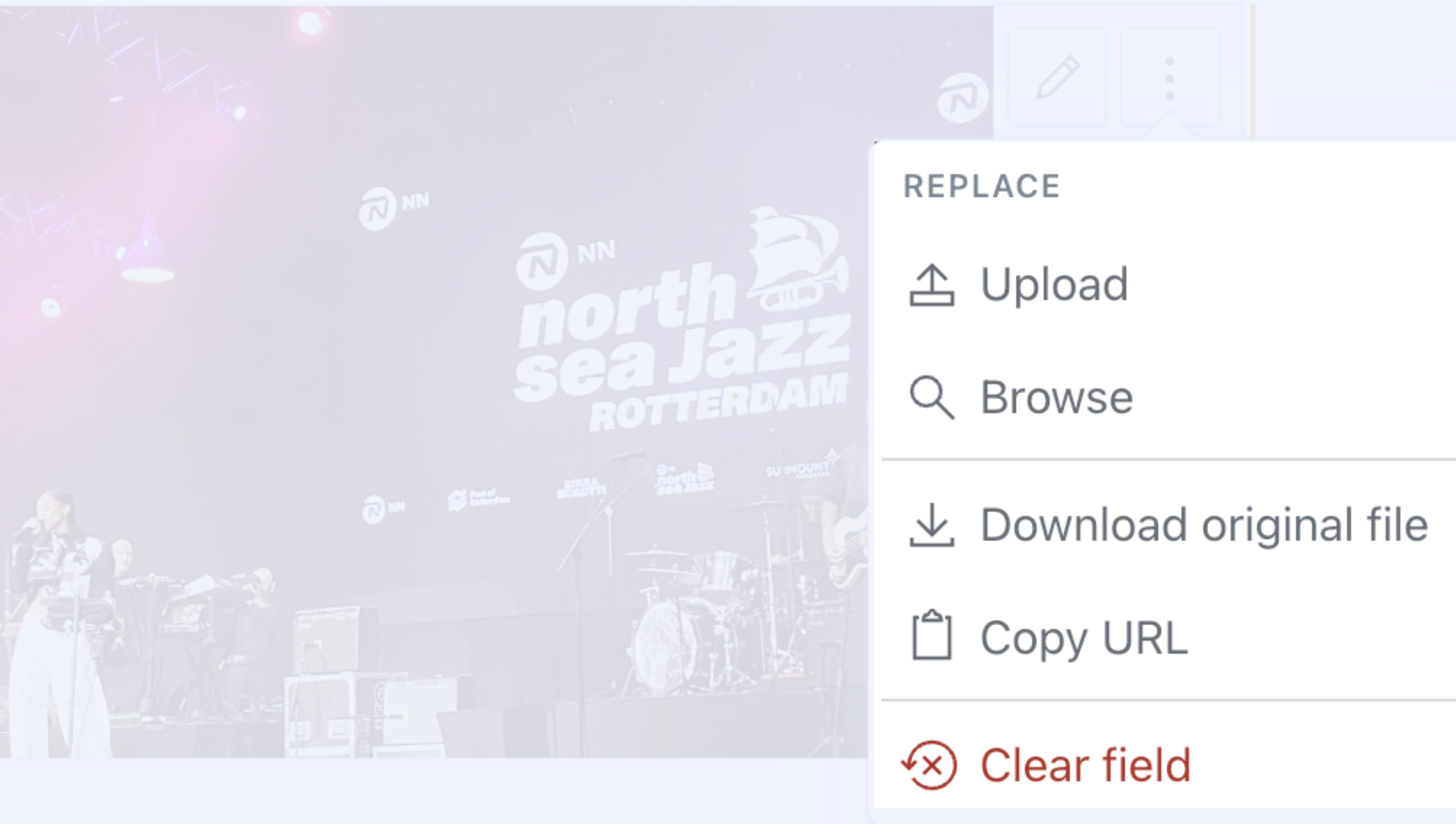
menu to build menus (not navigations)



Alternative text

What's on this picture?

menu to build menus (*not navigations*)



role=menu

menu to build menus (*not navigations*)

role=menuitem |

REPLACE

📁 Upload

🔍 Browse

⬇️ Download original file

📄 Copy URL

🗑️ Clear field

role=menu

menu to build menus (*not navigations*)

role=menuitem I

roving tabindex

REPLACE

📁 Upload

🔍 Browse

⬇️ Download original file

📄 Copy URL

🗑️ Clear field

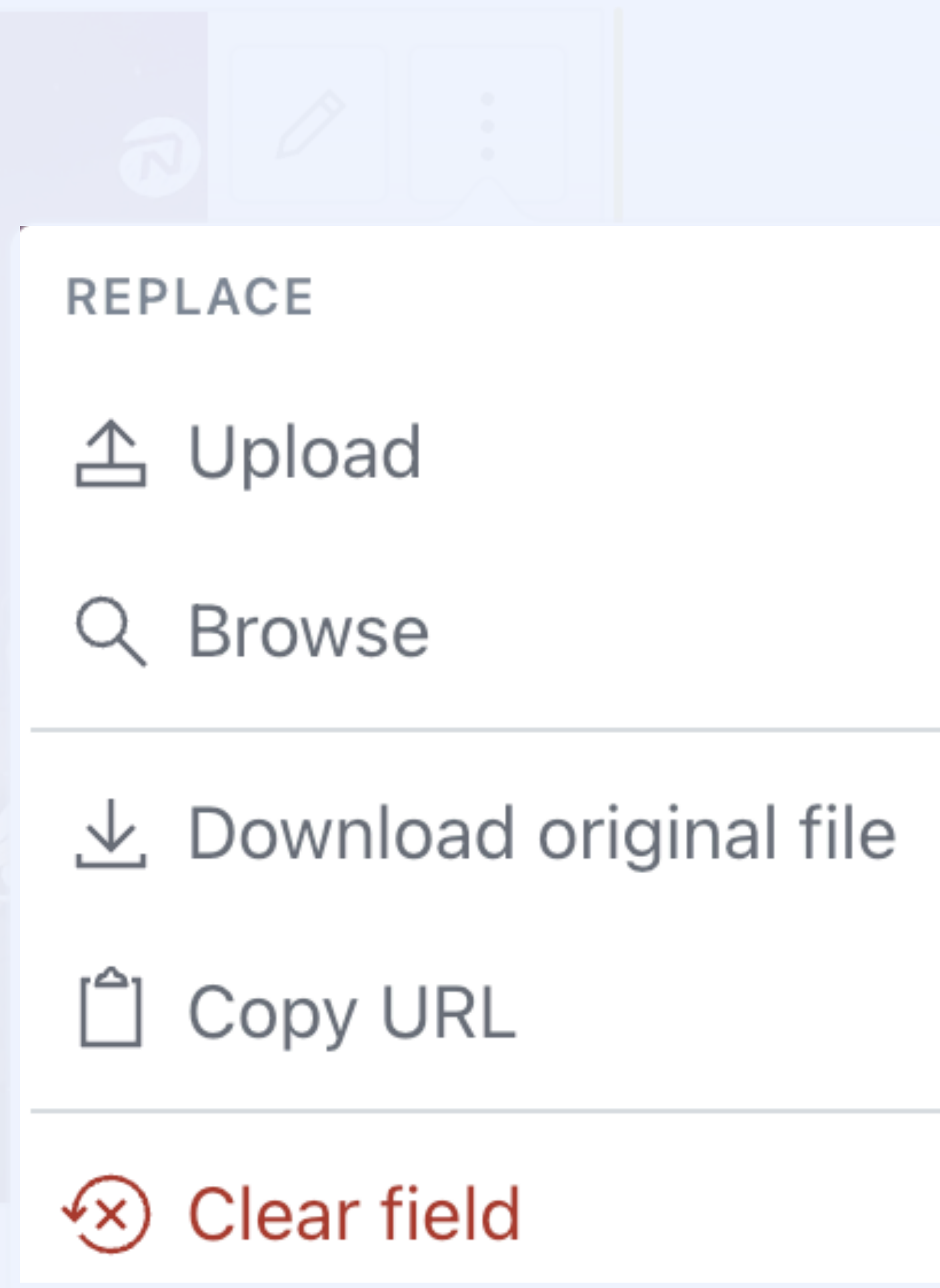
role=menu

menu to build menus (*not navigations*)

role=menuitem |

roving tabindex

**usable with
arrow keys**



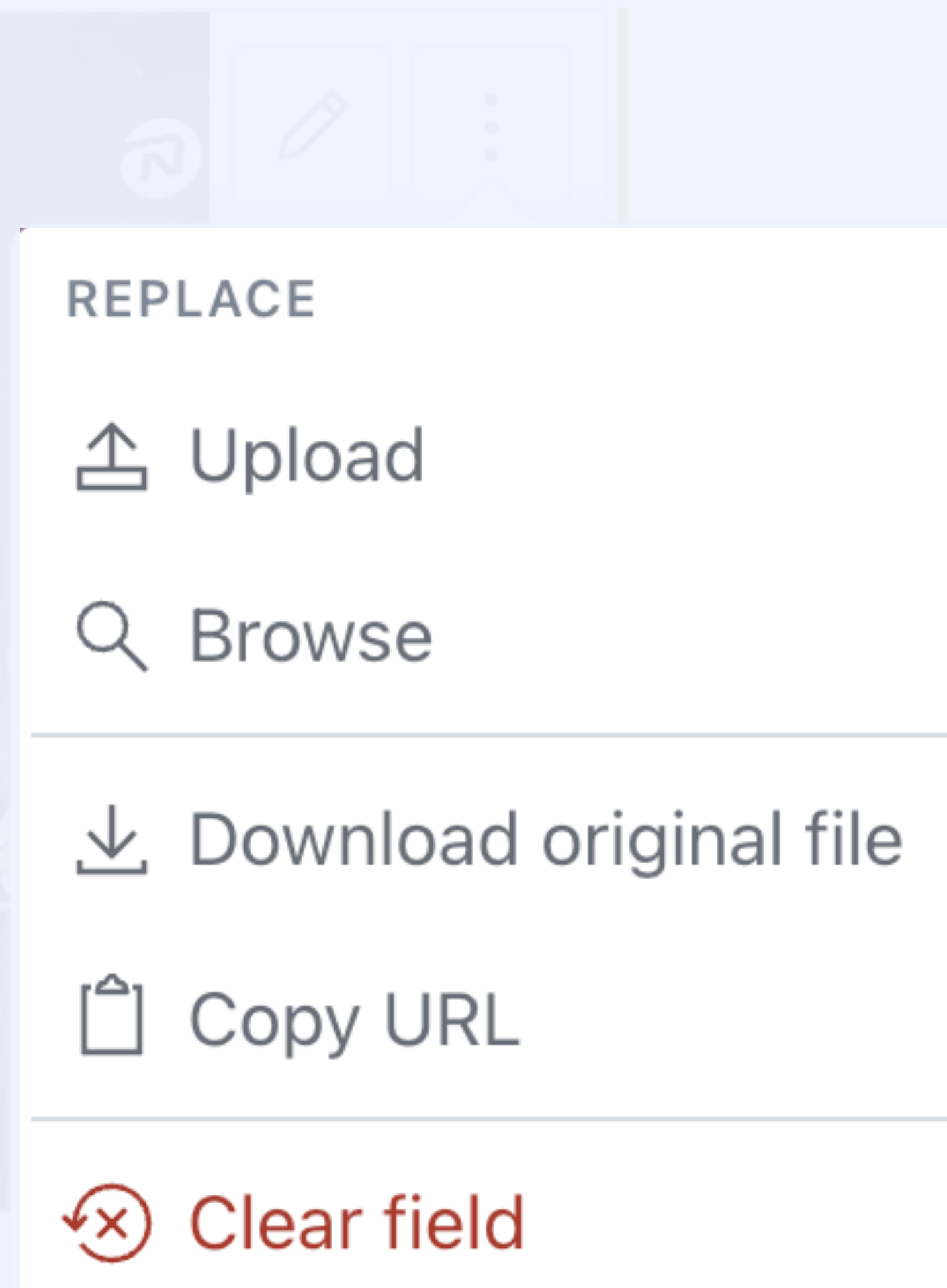
role=menu

menu to build menus (*not navigations*)

role=menuitem I

roving tabindex

**usable with
arrow keys, Escape,
Enter, Home, End, Tab,
Space & all printable chars**



role=menu

menu to build menus (*not navigations*)

It's a **navigation** if the user navigates somewhere (it has links)

It's a **menu** if the user picks an action (it has buttons). Use with care.

THE BAD PARTS

~~THE BAD
PARTS~~

THE COMMON
PITFALLS

standards guidance pitfalls

These are standards:

WCAG

WAI-ARIA

ATAG

UAAG

These are “not normative”:

ARIA Authoring Practices

COGA Guidance

Understanding docs

Techniques

These are standards:

WCAG
WAI-ARIA
ATA
UAAG

Docs on using
specific standards,
not docs on best
accessibility

These are “not normative”:

ARIA Authoring Practices
COGA Guidance
Understanding docs
Techniques

These are standards:

WCAG

WCAG

WCAG

WCAG

Extra context with
WCAG, not
required for
conformance

These are “not normative”:

ARIA Authoring Practices

COGA Guidance

Understanding docs

Techniques

These are standards:

WCAG

WAI

ATAG

UAAG

How to best use
ARIA if you want to
solve it with ARIA

These are “not normative”:

ARIA Authoring Practices

COGA Guidance

Understanding docs

Techniques

Web accessibility is about
how **people** use the web.

Web accessibility is about
how **people** use the web.

Websites impact this
through code

Web accessibility is about
how **people** use the web.

Websites impact this
through code:

HTML, CSS, SVG, WAI-ARIA, JavaScript

The image is a screenshot of a web browser window. The browser's address bar shows the URL `https://hidde.blog/ideal-a11y-guidance/`. The page features a dark purple navigation bar with links for 'Blog', 'Speaking', 'About me', and 'Contact'. A red circular logo with the text 'HIDDE'S BLOG' is positioned in the top left. The main content area has a white background and contains the following text:

Published 7 MONTHS AGO in [accessibility](#)

My ideal accessible components resource is holistic, well tested and easy to use

It would be easier to have an accessible web if all we did with it was publish documents. Blobs of text, images here and there. But modern sites (or "applications") *do* a lot more than documents. Often for better, sometimes for worse. To improve accessibility of the web as it is today, I

website pitfalls

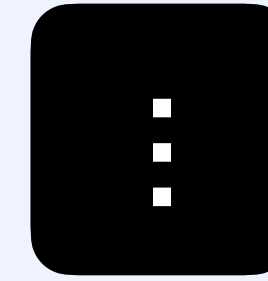
HTML VS ARIA

More and more HTML elements provide accessibility meta information so that we don't need to add ARIA to our HTML

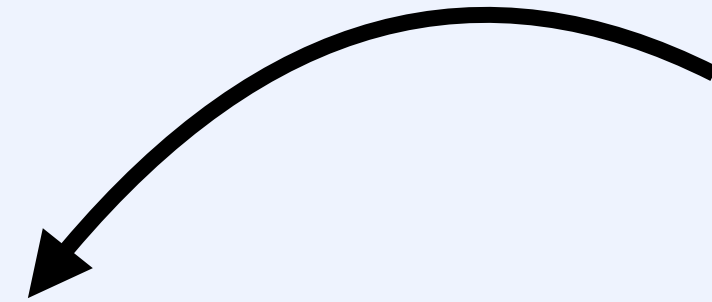
STATE <-> UI CONFLICTS

When state attributes aren't updated or wrong on page load

**menu is not actually
opened / expanded**



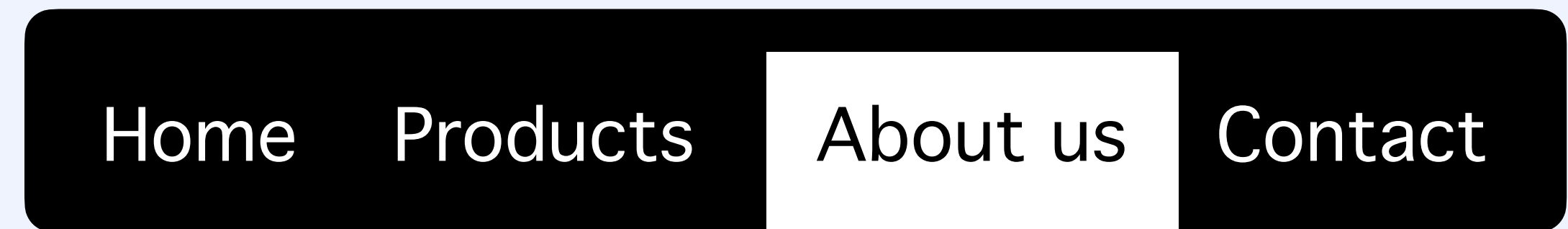
but DOM says it is open



```
<button aria-expanded="true">  
  Open menu  
</div>
```

```
<nav>
  <ul>
    <li>
      <a href="/">Home</a>
    </li>
    <li>
      <a href="/" aria-
current="page">Products</a>
    </li>
    <li>
      <a href="/">About us</a>
    </li>
    <li>
      <a href="/">Contact</a>
    </li>
  </ul>
</nav>
```

current page is **About us**



but **DOM** says it is **"Products"**

DISAPPEARING FOCUS

When an element disappears, focus should go to a **logical** element

DISAPPEARING FOCUS

When an element disappears, focus should go to a **logical** element



BIC/SWIFT codes are used to identify banks and financial institutions globally.

DISAPPEARING FOCUS

When an element disappears, focus should go to a **logical** element



BIC/SWIFT codes are used to identify banks and financial institutions globally.

OK

DISAPPEARING FOCUS

When an element disappears, focus should go to a **logical** element



BIC/SWIFT codes are used to identify banks and financial institutions globally.

OK

DISAPPEARING FOCUS

When an element disappears, focus should go to a **logical** element



SCREENREADER INSTRUCTIONS

Don't write a message to screenreader users in labels/descriptions

```
<button aria-label="hi if you are on a screenreader  
  this is a special message for you">  
  Open dialog  
</div>
```


role=application

stops screenreader from
intercepting shortcut keys

almost never appropriate

can in cases create barriers and
a confusing user experience

**marcozehe.de/if-you-use-the-wai-aria-role-application-please-do-so-wisely
tink.uk/using-the-aria-application-role**

aria-roledescription

no auto-translation

can easily increase verbosity

can make things very confusing
if we remove role info

Upload photo

✕ [grid icon] [table icon] [list icon] [target icon] [monitor icon] Elements >> [search icon] [gear icon]

[E] > [E] > [E] but... Badges [ruler icon] [printer icon] [moon icon] [grid icon] [pen icon] [document icon]

```
<html>
  <head></head>
  <body>
    <button type="button">Upload photo
  </button>
  </body>
</html>
```

✕ web content



aria-relevant

The screenshot shows a web browser window displaying a GitHub issue page. The browser's address bar shows the URL `https://github.com/w3c/aria/issues/712`. The page header includes the GitHub logo, the repository name `w3c / aria`, and navigation icons for search, repository actions, and user profile. Below the header, there are tabs for `Code`, `Issues` (with a count of 353), `Pull requests` (with a count of 33), `Discussions`, and `Actions`. The main content area features the issue title `aria-relevant: find real-world use cases, consider deprecating it #712` and a `New issue` button. Below the title, it indicates the issue is `Open` and was created by `aleventhal` on `Apr 9, 2018` with `17 comments`. A comment from `aleventhal` is visible, asking for examples of `aria-relevant` being used in shipping software and expressing concerns about the attribute. The right sidebar shows the `Assignees` section with `jnurthen` assigned, and the `Labels` section with `needinfo` applied.

OTHER PARTS

aria-controls

no consensus on how it is supposed to be conveyed to screenreader users

JAWS exposes it but it is off by default, hidden deep in config

however... this could be used for AT to help users jump into a controlled element?

aria-owns

support (inconsistent; missing in iOS/macOS + VoiceOver)

complex as there are many ways owner or child could be invalid, ways to create cycles or multiple owners

however... it could be useful for AT to know about relationships?

TAKEAWAYS

TAKEAWAYS

ARIA adds semantics, but not behaviour

Incorrect use is often worse than no use

Going the ARIA route can yield *subtle* bugs in support or consistency of support

There are a couple of things that are safe to use and helpful to end users

**THANK
YOU!**

Questions

@hdv on most platforms

Slides/resources

talks.hiddedevries.nl

Thanks

Eric Eggert, Jules Ernst, Mu-An Chiou, Patrick H. Lauke,
Lotte Bijl, James Scholes, Katherine Badger, Scott O'Hara

**THANK
YOU!**

Sources

WAI-ARIA 1.2

Sarah Higley, *Roles and relationships*

Scott O'Hara, *output: HTML's native live region element*

Jon Whiting, *To ARIA! The Cause of, and Solution to, All Our Accessibility Problems*

Re: role=application

Léonie Watson, *Using the ARIA application role*

Re: aria-owns

Aaron Leventhal, *How Blink implements aria-owns*

Webkit bug: aria-owns doesn't reorder accessibility tree