

Could browsers
fix more
accessibility
problems
automatically?

Who?

@hdv

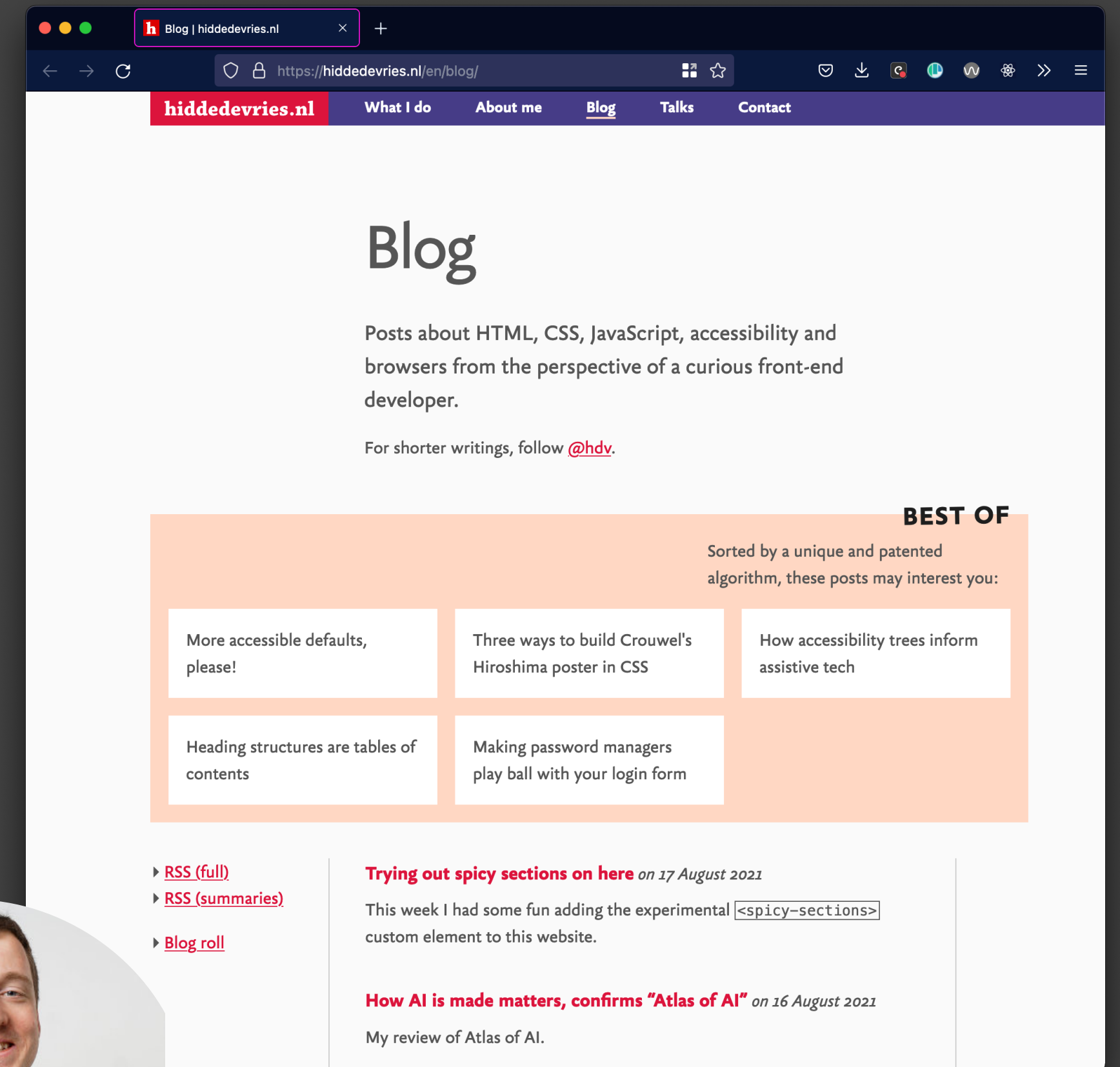
Hi, I'm Hidde.

Freelance accessibility and front-end consultant for organisations like the Dutch Government, Mozilla & W3C.

I write at hidde.blog.

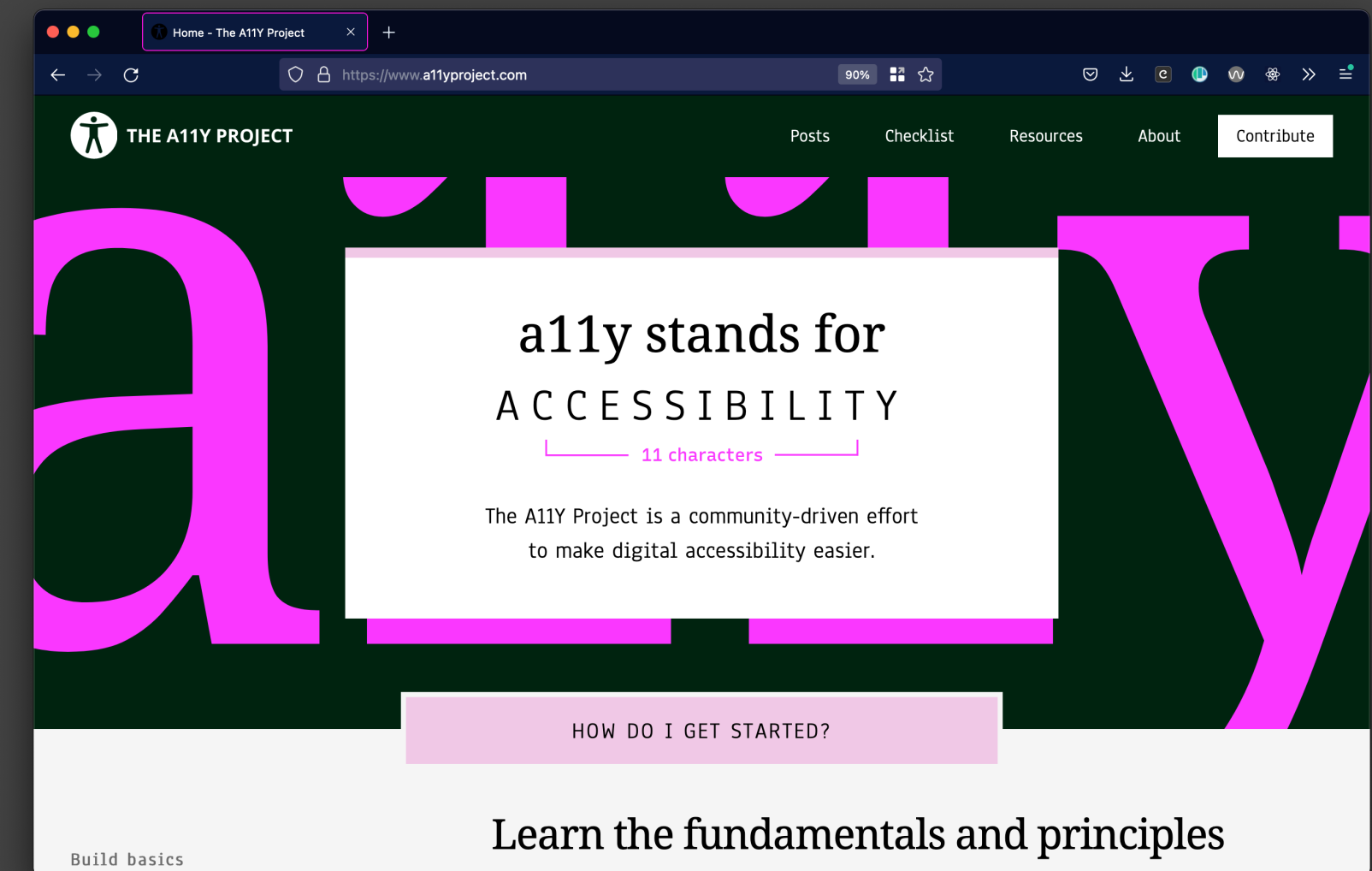
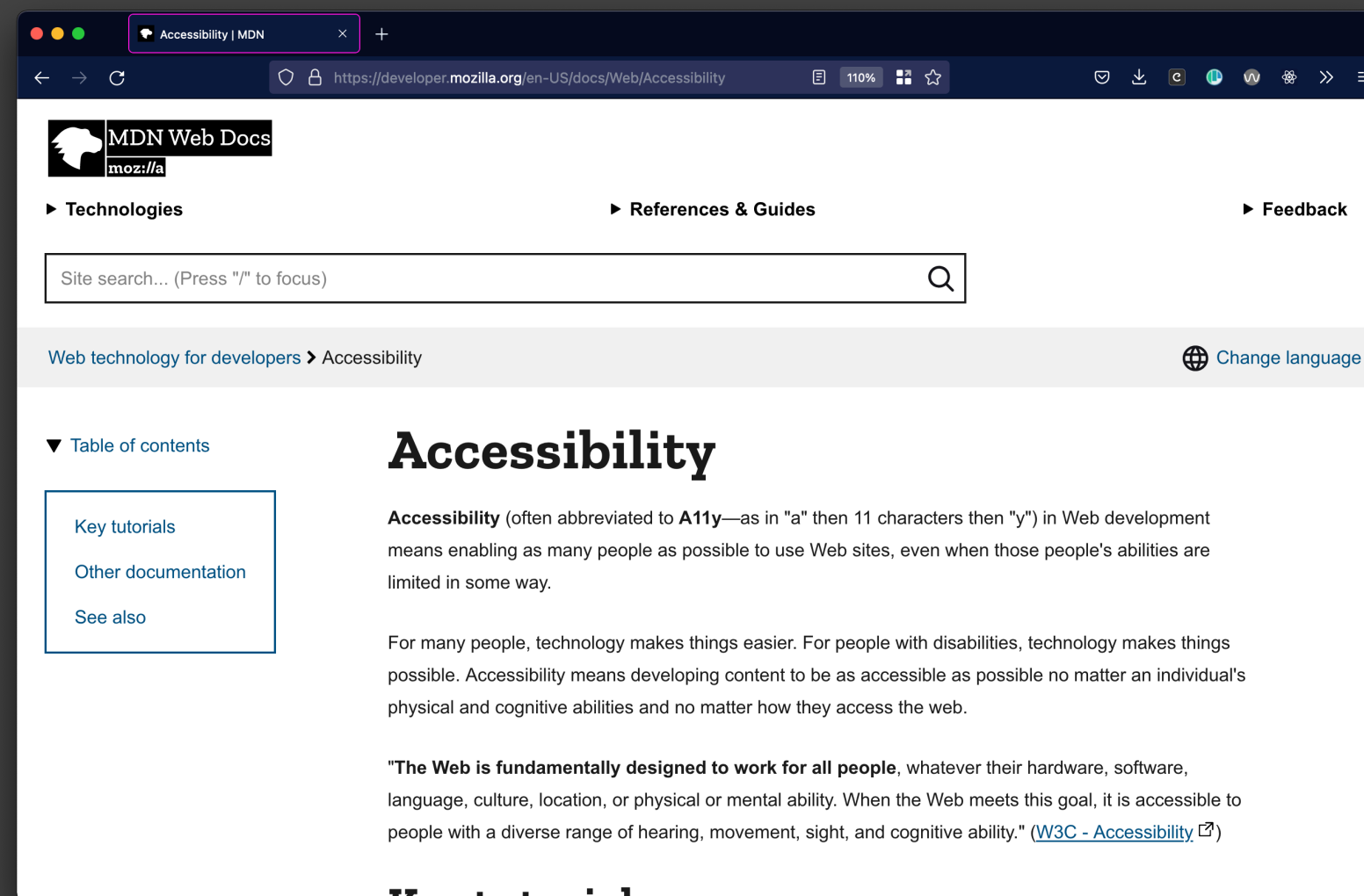
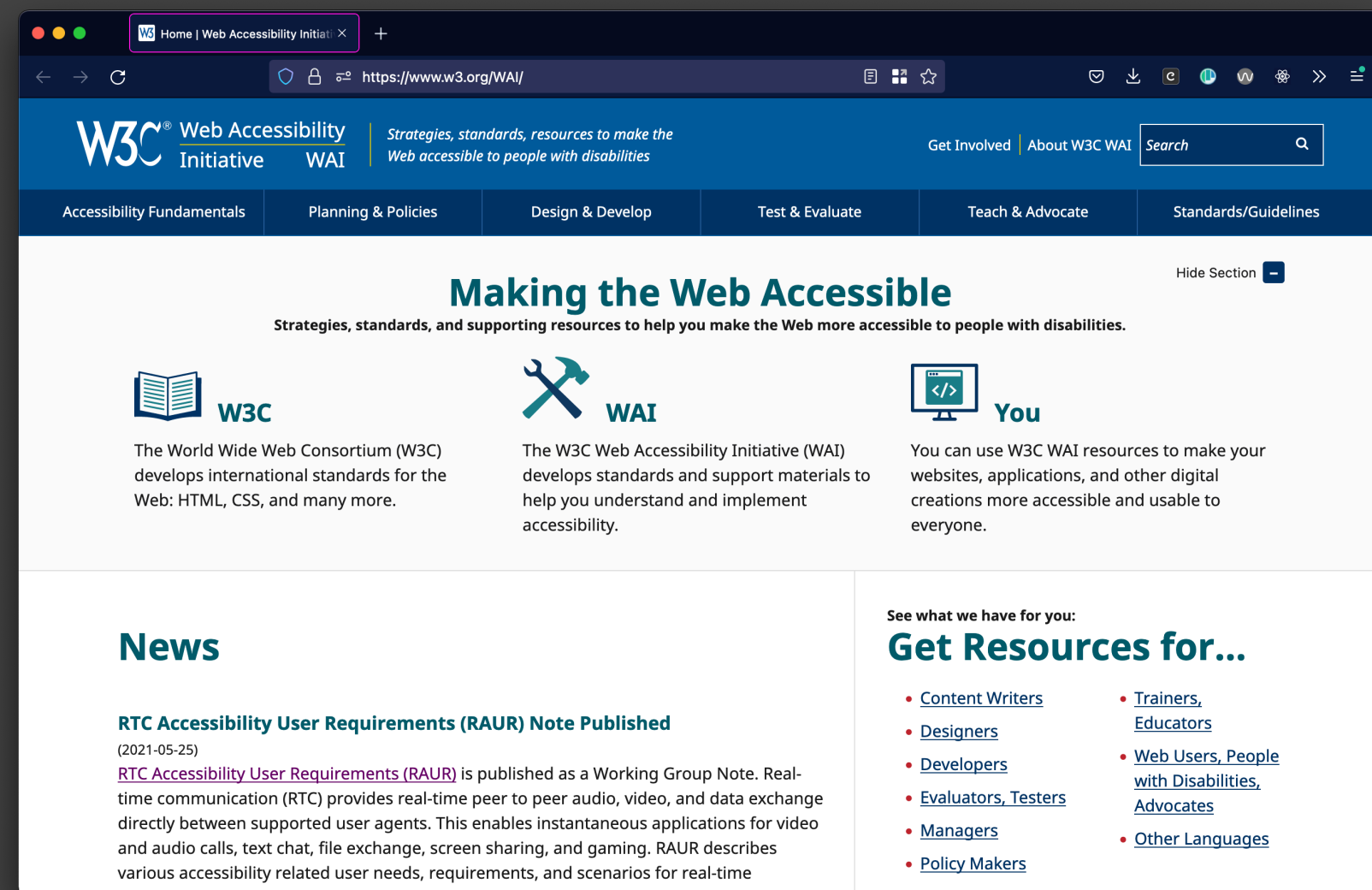


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Currently...

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websites, workshops, conferences

**accessibility
outreach is
great, but does
not reach all**

**we can detect
problems
automatically**

Currently...

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ACT-Rules

<https://act-rules.github.io/pages/about/>

Currently...

@hdv

interpretation
is hard



See also: “A11y Wars” by Glenda
Sims and Wilco Fiers


A11y Wars: The Accessibility Inte X


+

← → ↺

https://www.deque.com/blog/the-web-accessibility-interpretation-problem/

120%  





By Glenda Sims

May 17, 2018

Categories

[Accessibility](#)

[Compliance Matters](#)

Home » Blog » Accessibility Compliance Matters

A11y Wars: The Accessibility Interpretation Problem

Without a shared testing perspective, achieving accurate test results for compliance with WCAG 2.0 can be challenging and expensive. A common cause for inconsistent accessibility results between experts is accessibility testers doing their work with different goals in mind. A natural tension exists

Maybe we can...

@hdv

**Automatically
detect
issues**



**Automatically
fix
issues**

Maybe we can...

@hdv

Automatically
detect
*a small
subset of* issues



Automatically
fix
*a small
subset of* issues

this does not relieve
websites from their
responsibility



**organisations
to get their
accessibility
right**

**browsers to
fix things
when they
are able to**

accessibility overlays have issues

Some vendors make false claims

Overlays often don't work well or make things worse for users with disabilities

Overlays only fix the sites they're on

Overlays often don't work well with DOM updates in SPAs

<https://overlayfactsheet.com/>

**“it was far easier
to navigate the
post without [the
overlay]”**

— Connor Scott-Gardner, blind student

With caveats in mind,
**could browsers
fix more
accessibility
problems
automatically?**



force readability

**“Web design is
95% typography”**

— Oliver Reichenstein, iA

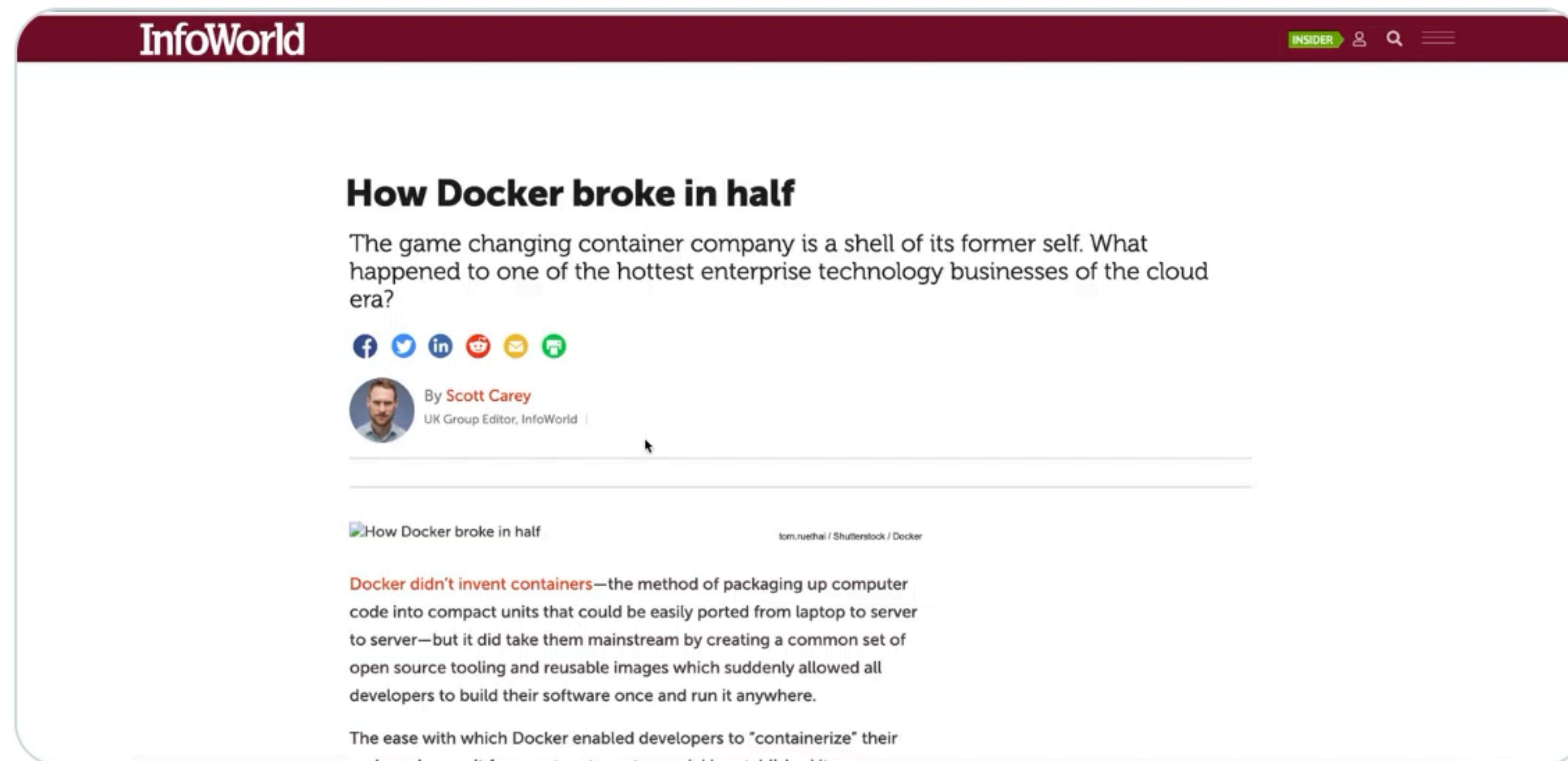


Andrej Karpathy

@karpathy



Browsing the web, 2021



Leverage agile frameworks to provide a robust synopsis for high level overviews. Iterative approaches to corporate strategy foster collaborative thinking to further the overall value proposition. Organically grow the holistic world view of disruptive innovation via workplace diversity and empowerment.

Capitalize on low hanging fruit to identify a ballpark value added activity to beta test. Override the digital divide with additional clickthroughs from DevOps. Nanotechnology immersion along the information highway will close the loop on focusing solely on the bottom line.

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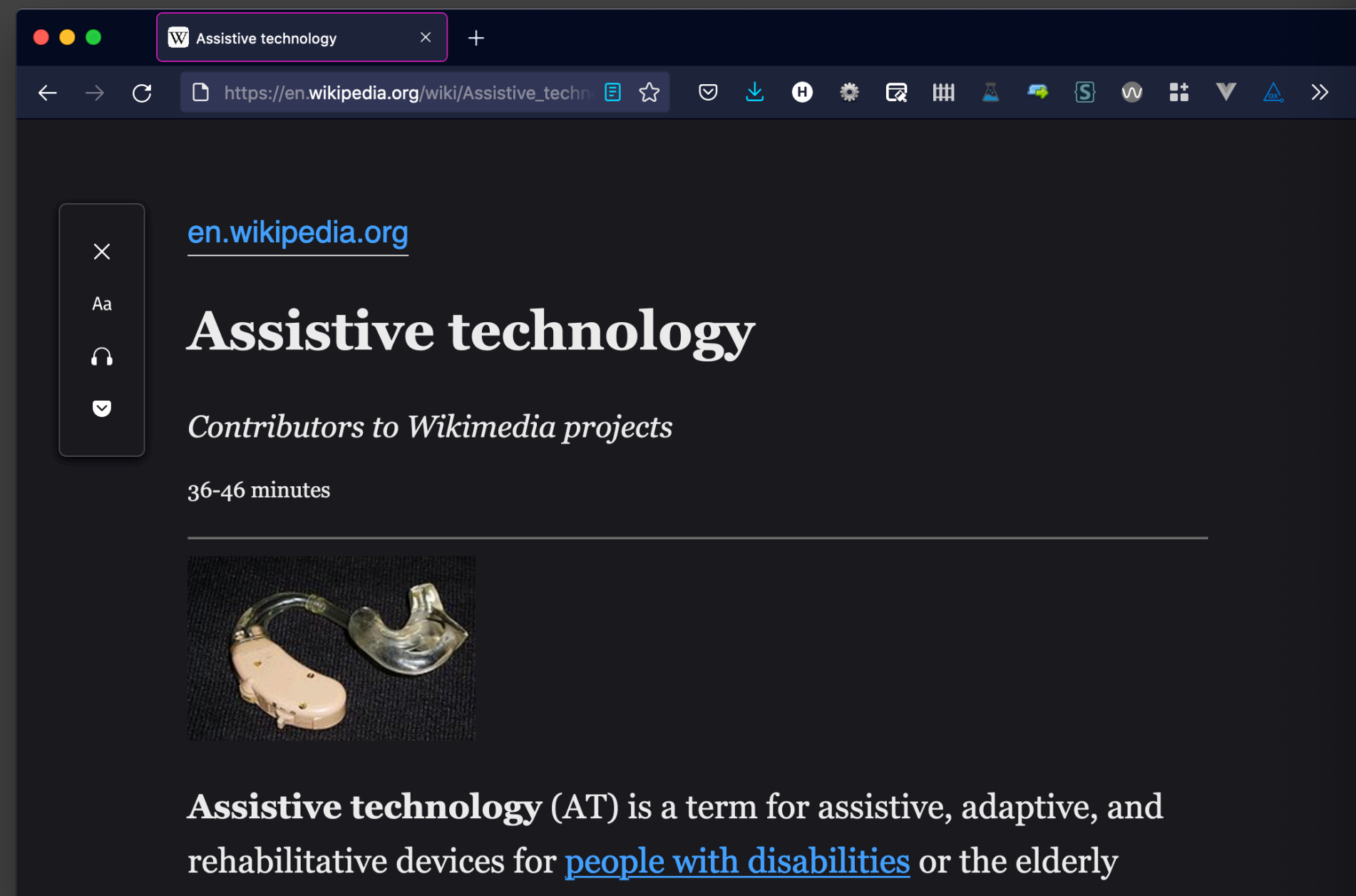
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What if browsers let us...

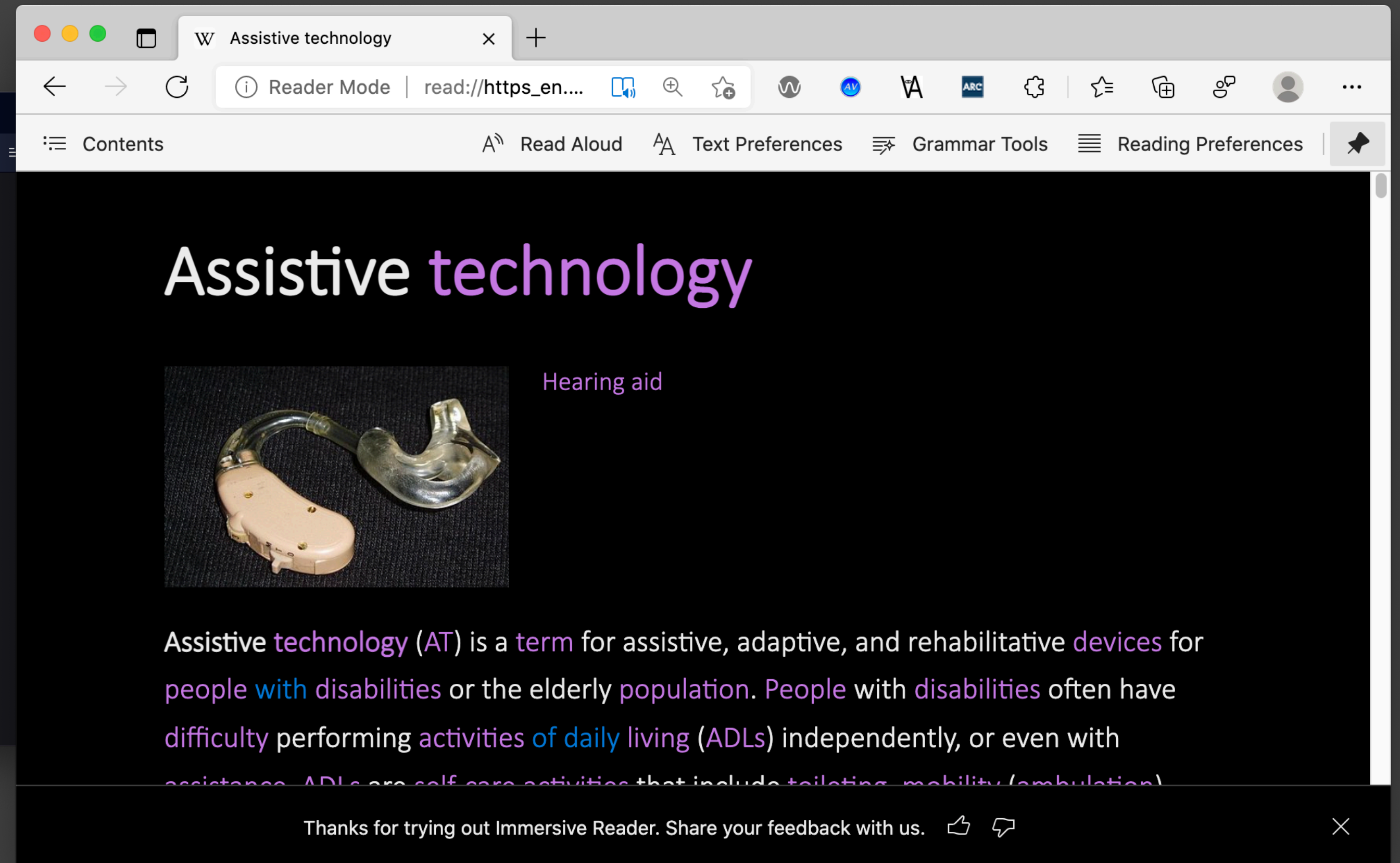


force readability

@hdv



Firefox reading mode



read:// in Edge



always allow zoom

What if browsers let us...

☐ always allow zoom

@hdv

```
<meta name="viewport"  
content="user-scalable=no">
```

What if browsers let us...



always allow zoom

@hdv

```
<meta name="viewport"  
content="user-scalable=no">
```

What if browsers let us...

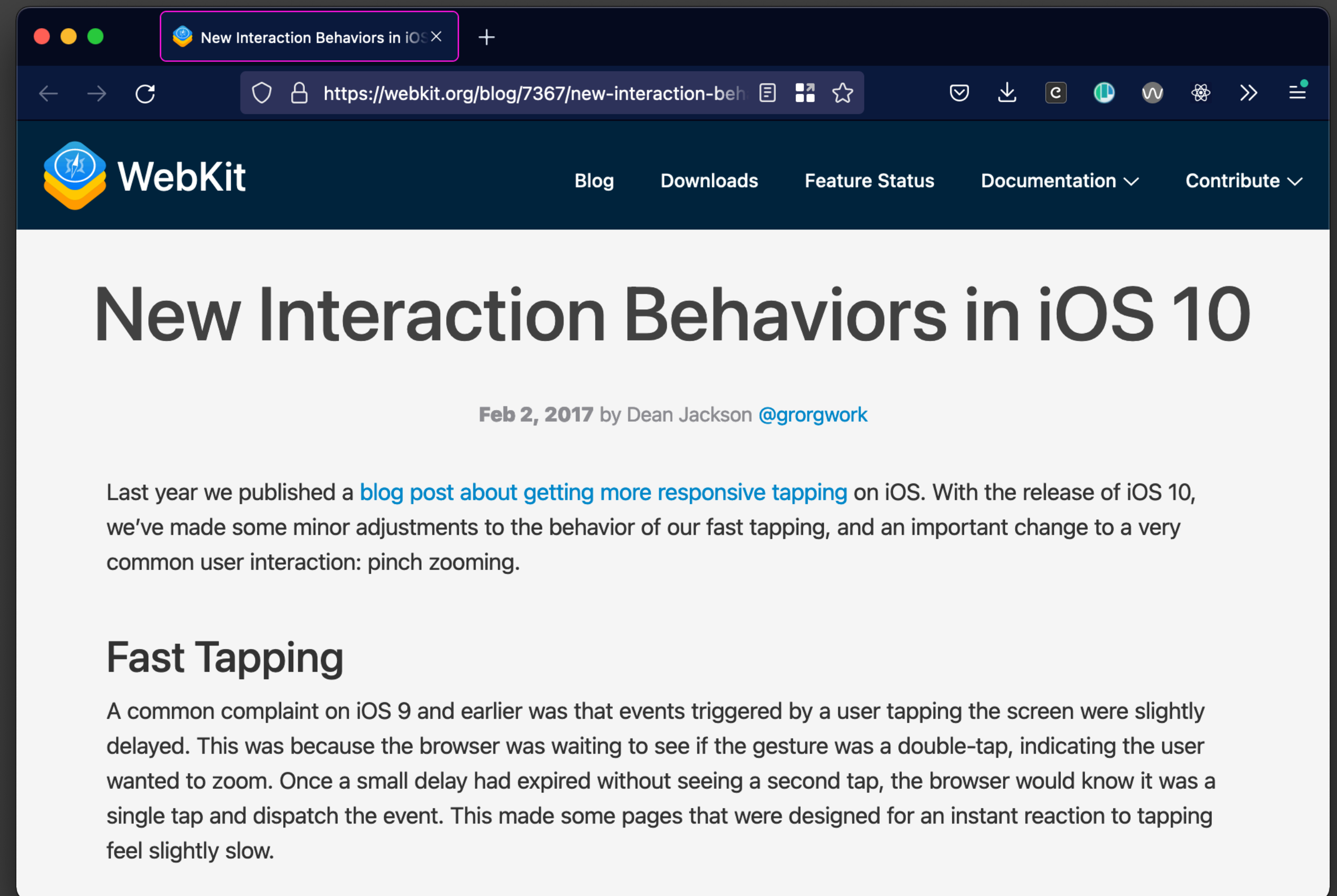


always allow zoom

@hdv

“Now, we ignore the user-scalable, min-scale and max-scale settings. If you have content that disabled zoom, please test it on iOS 10, and understand that many users will be zooming now.”

– Dean Jackson, Apple



<https://webkit.org/blog/7367/new-interaction-behaviors-in-ios-10/>



enforce contrast

What if browsers let us...

☐ enforce contrast

@hdv





“Low contrast text, below the WCAG 2 AA thresholds, was found on 86.4% of home pages. This was the most commonly-detected accessibility issue. On average, home pages had 31 distinct instances of low-contrast text.”

– WebAIM Million

86.4%

What if browsers let us...

☐ enforce contrast

@hdv



What if browsers let us...



enforce contrast



<https://booktravel.business>

Booktravel

Visit Kinderdijk





Fix Contrast

A browser extension that automatically increases contrast on sites.

Download for  **Firefox**

Also available for these browsers:



Chrome



Edge



Brave



Vivaldi



Opera



coming
soon

Fix Contrast

Fix color contrast issues on websites automatically.

☒ Active

Set minimum contrast level

☒ Medium

☐ High

Or choose your own values (advanced)

Small text 4.5

Large text 3

☒ Change background color when needed.

What if browsers let us...

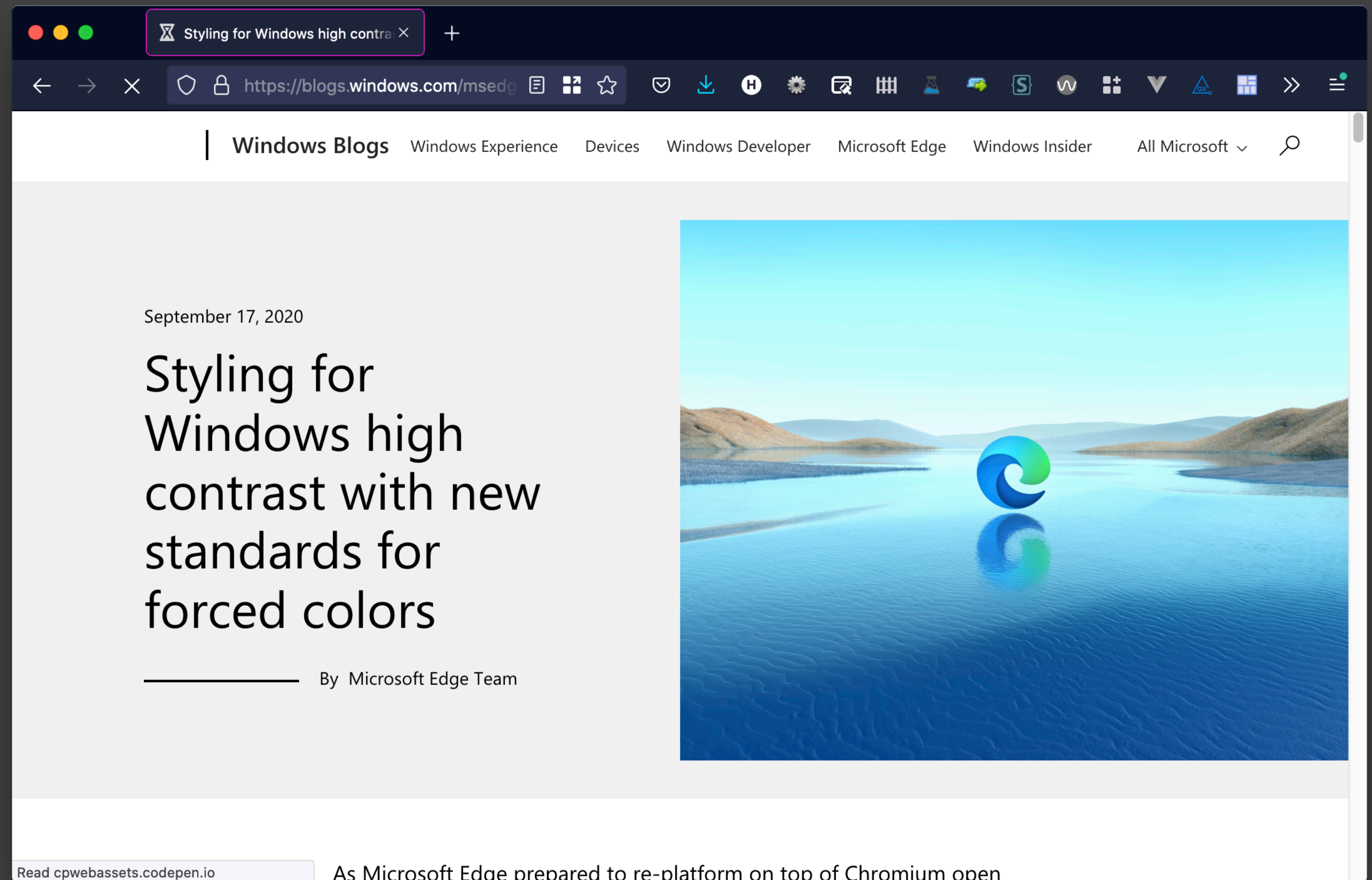


enforce contrast

@hdv

“In addition to preserving the user’s systems colors and adjusting potentially distracting CSS properties, browsers that support forced color modes also draw “backplates” behind text.”

– Melanie Richards, Alison Maher, Edge team



<https://blogs.windows.com/msedgedev/2020/09/17/styling-for-windows-high-contrast-with-new-standards-for-forced-colors/>

What if browsers let us...

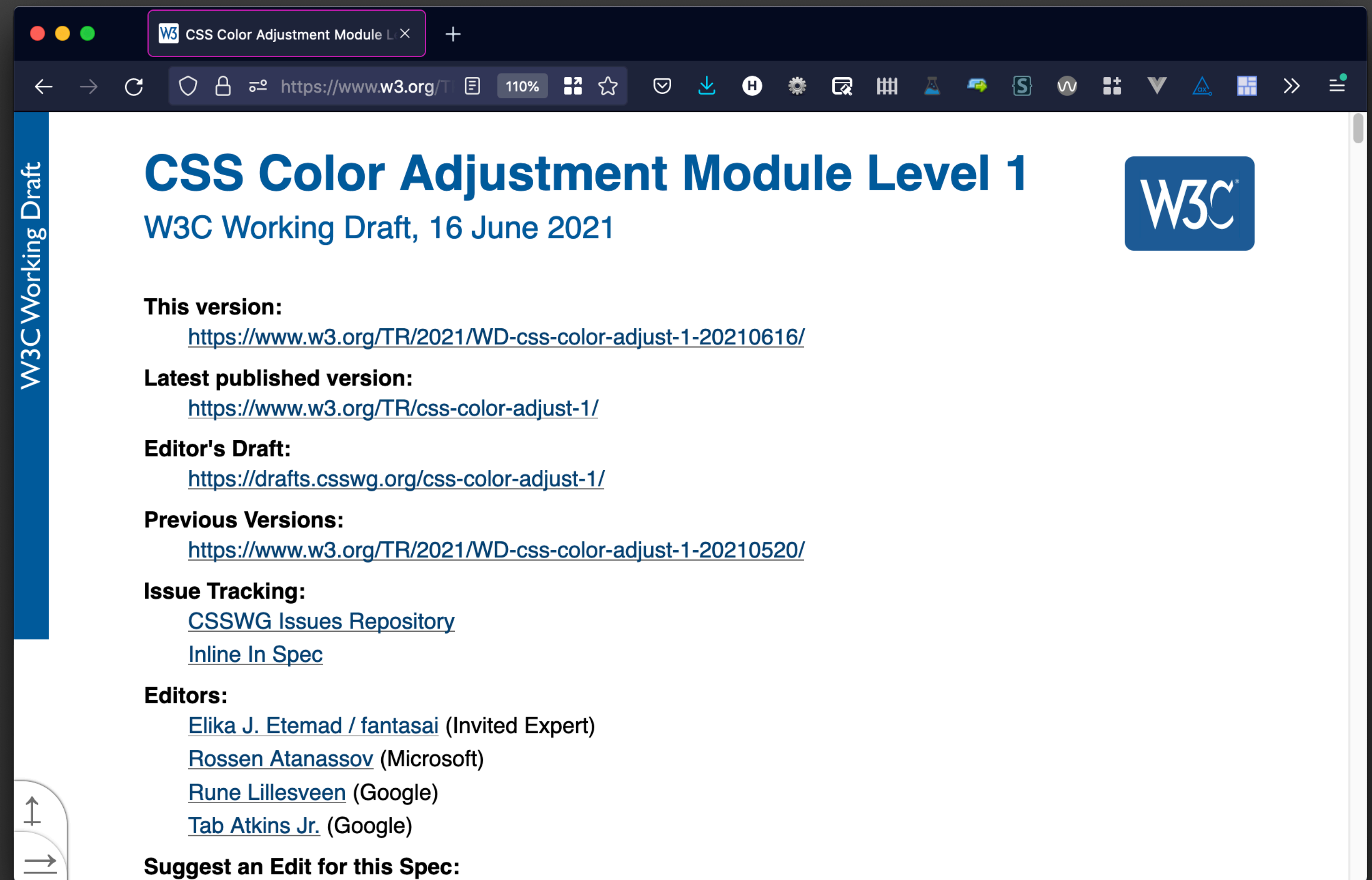


enforce contrast

@hdv

“[forced colors mode] may also enforce a “backplate” underneath text (similar to the way backgrounds are painted on the ::selection pseudo-element) to ensure adequate contrast for readability..”

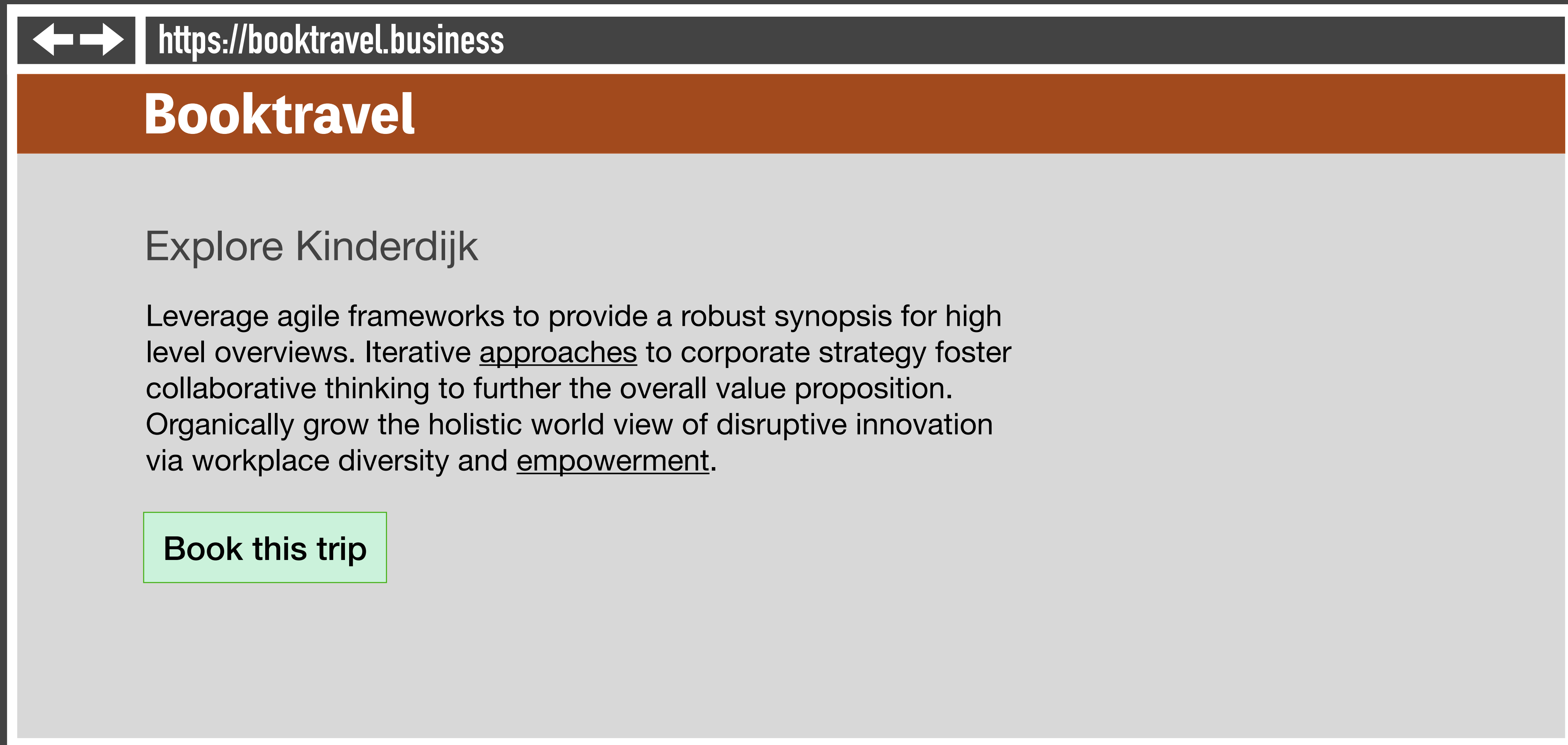
– CSS Color Adjustment Module Level 1 Working Draft, 16 June

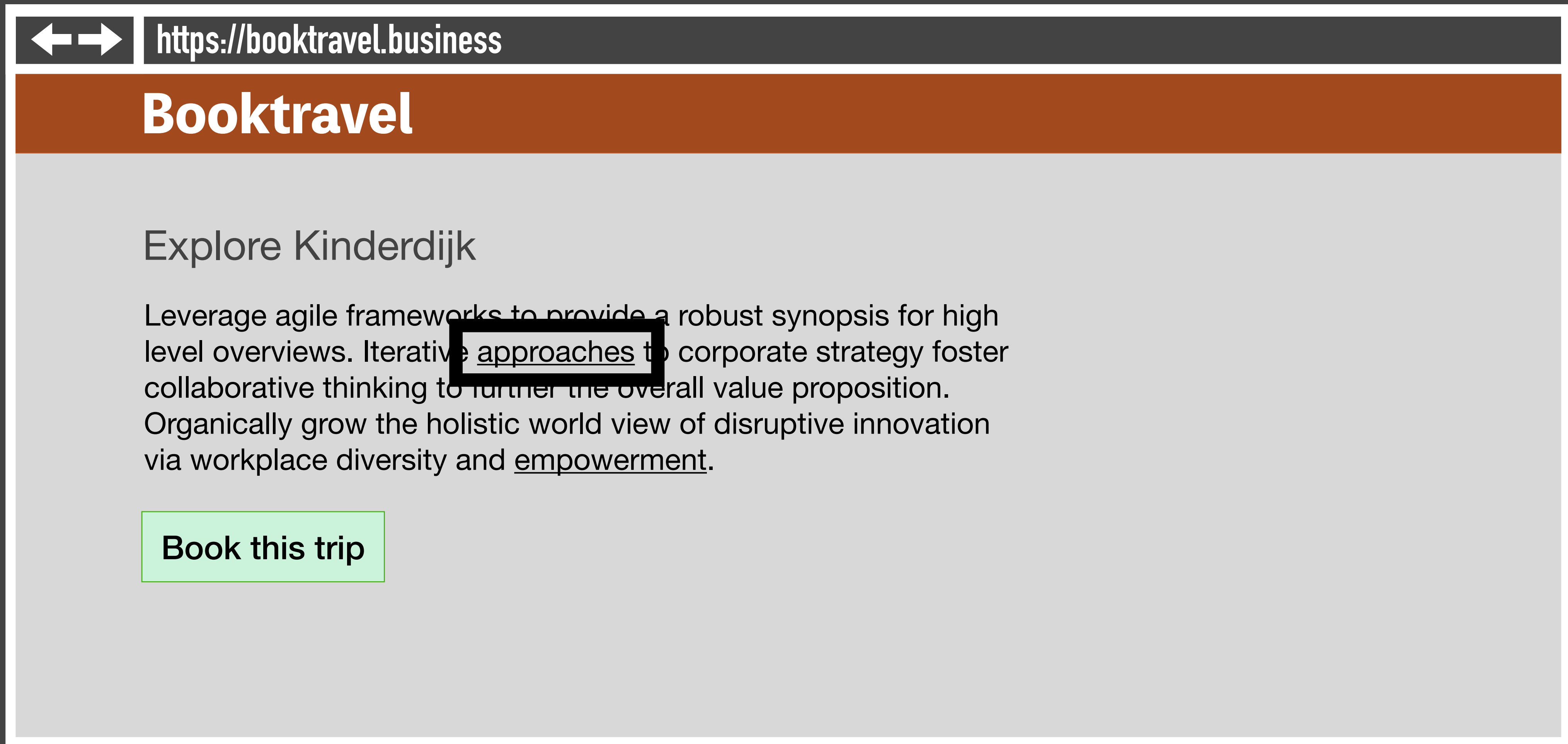


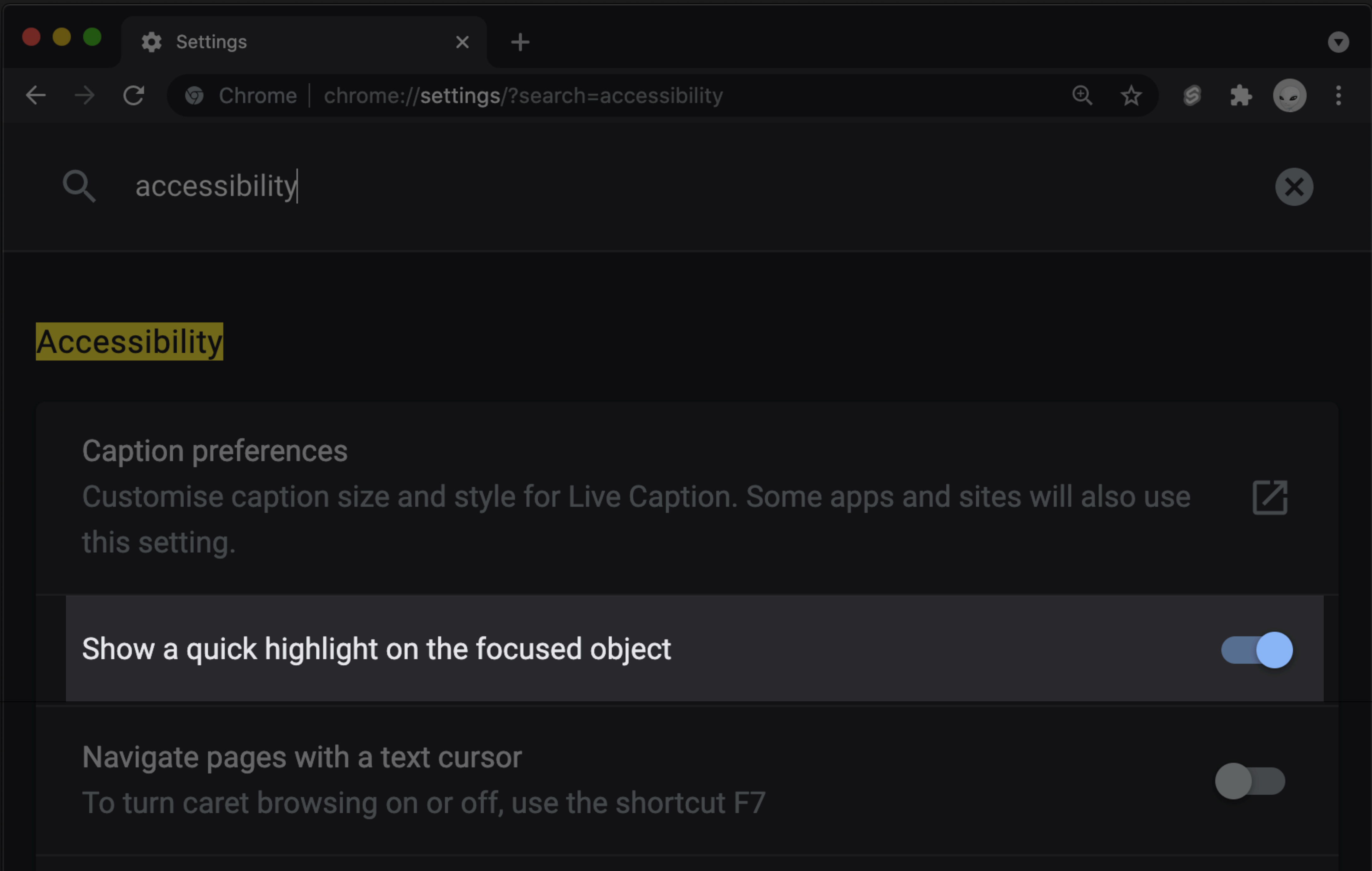
<https://www.w3.org/TR/css-color-adjust-1/>



force focus indication









suppress autoplay

What if browsers let us...

☐ suppress autoplay

@hdv

**audio, video and gifs can
disturb or cause seizures**

What if browsers let us...



suppress autoplay

@hdv

**browsers could suppress
this and let users
choose when to play**



navigate by landmark

What if browsers let us...

☐ navigate by landmark

@hdv

landmarks can make it
easier to efficiently
jump to specific parts
of a web page

landmarks can only be
navigated using certain
assistive technologies

☒ navigate by landmark

Navigation

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Climate crisis

'Blah, blah, blah': Greta Thunberg lambasts leaders over climate crisis

Exclusive: Activist says there are many fine words but the science does not lie - CO2 emissions are still rising

Damian Carrington
Environment editor

 @dpcarrington

Tue 28 Sep 2021 10.00

BST

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No Time to Die
Daniel Craig
James Bond
rage - and c



China's new underlines Aukus pact



Squid Game horrorshow whole world



skip to main content

**web developers implement
their own links to skip
to main content**

**browsers provided a skip link
whenever a (labelled) `<main>`
is available?**

What if browsers let us...



skip to main content

@hdv

'Blah, blah, blah': Greta Thunberg ×

+

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🔒

https://www.theguardian.com/environment/2021/sep/2

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Damian Carrington

Environment editor

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No Time to Die review - Daniel Craig dispatches James Bond with panache, rage - and cuddles

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Squid Game: the hellish



unstick content

**sticky elements can cover too
much of the screen, especially
when zoom is used**

What if...



unstick content

@hdv

browsers could stop the sticking



avoid overlap in content

**elements could overlap when
a user zooms more than
the designer had expected**

**browsers could act when
overlap happens and prioritise
readability over UI perfection**



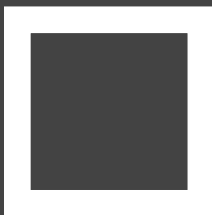
untruncate text

Currently...

☐ untruncate text

@hdv

**truncation gets used as
a content design strategy**



Linda McCartney 2 Vegetarian Qua...



£ 2.20

£ 9.70/kg

1

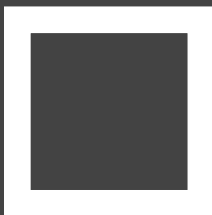
Buy

What if browsers let us...

☐ untruncate text

@hdv

browsers could ignore
text-overflow: ellipsis



Linda McCartney 2 Vegetarian Qua...



£ 2.20

£ 9.70/kg

1

Buy



Linda McCartney 2 Vegetarian
Quarter Pounder Burgers 227G



£ 2.20

£ 9.70/kg

1

Buy

not a “get out
of jail free” card



**should browsers
guess more?**

**Safari
guesses
accessible
names**

are all one line paragraphs
that end with a period
headings?

**browsers could use the
button role as a hint?**

**are all sequences of
strings that start with
a bullet or number
lists?**

With caveats in mind,
**could browsers
fix more
accessibility
problems
automatically?**

More of this?

@hdv

Accessibility Features Communi X

+

← → ↺

https://a11yfeat.com

🗖️ ☆

🔒 ⬇️ 🔍 🌐 📶 🔌 ⌵ ☰

a11y
feat

accessibility features
community group

Introducing AFCG · Meeting Minutes · FAQ · Get involved

Let's find features that can
fix accessibility issues in any
web content.

Introducing AFCG

The Accessibility Features Community Group (AFCG) promotes the development of features that can address accessibility issues in web content. Such features could be added to browsers, other user agents, and operating systems.

Examples

These accessibility features can come in a variety of forms, such as:

Always-on features
such as page and app

Toggles
such as always-visible

a11yfeat.com

That's all!

@hdv

thanks for listening!

@hdv hidde@hiddedevries.nl hidde.blog