Accessibility in modern tech — FOSDEM 2021

Oana Mangiurea · FOSDEM 2021, Open Source Design

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Latest tech, great! Accessibility, not so much.

Oana Mangiurea

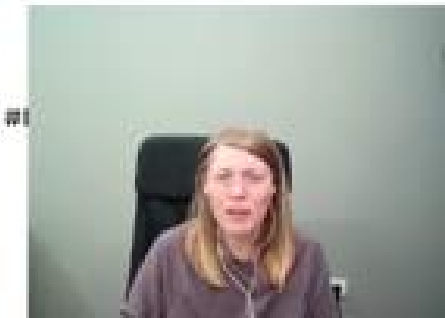
D.design
2021-02-07



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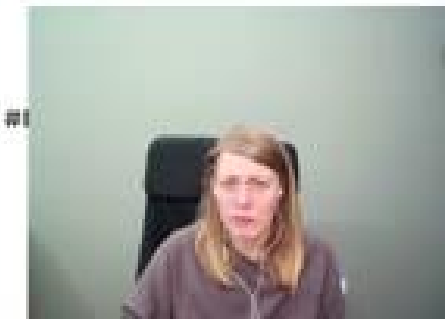
Oana Mangiurea
Senior UX Designer @ Grafana Labs
@Caelea



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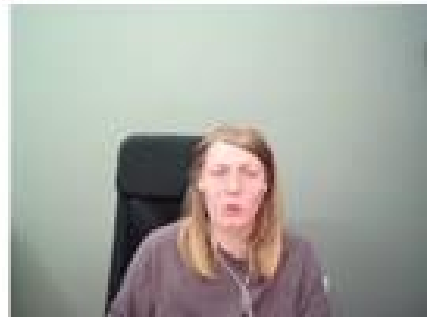


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Plus you get...

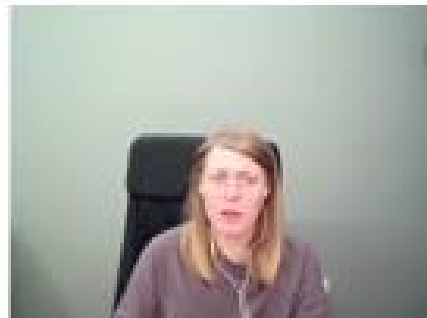
- A tool or app that is **easier to use by everyone**
- A **bigger user or contributor base**, as more people can use your project
- Advantage over your competitors
- **Cater for clients** whose businesses have a mandatory accessibility requirement for the software that they use, like federal agencies
- Potentially expose areas in UI or user flow that need improvement
- *Plus it's 2021... it's about time we not only talk about inclusiveness, but act on it*



Learn about accessibility (a11y)

www.a11yproject.com

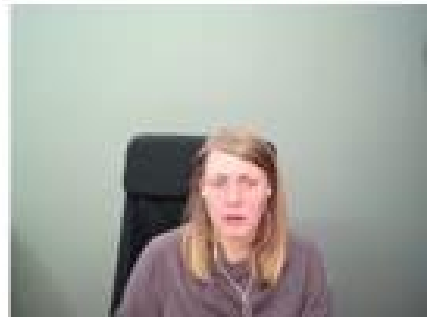
-> great resources & checklist



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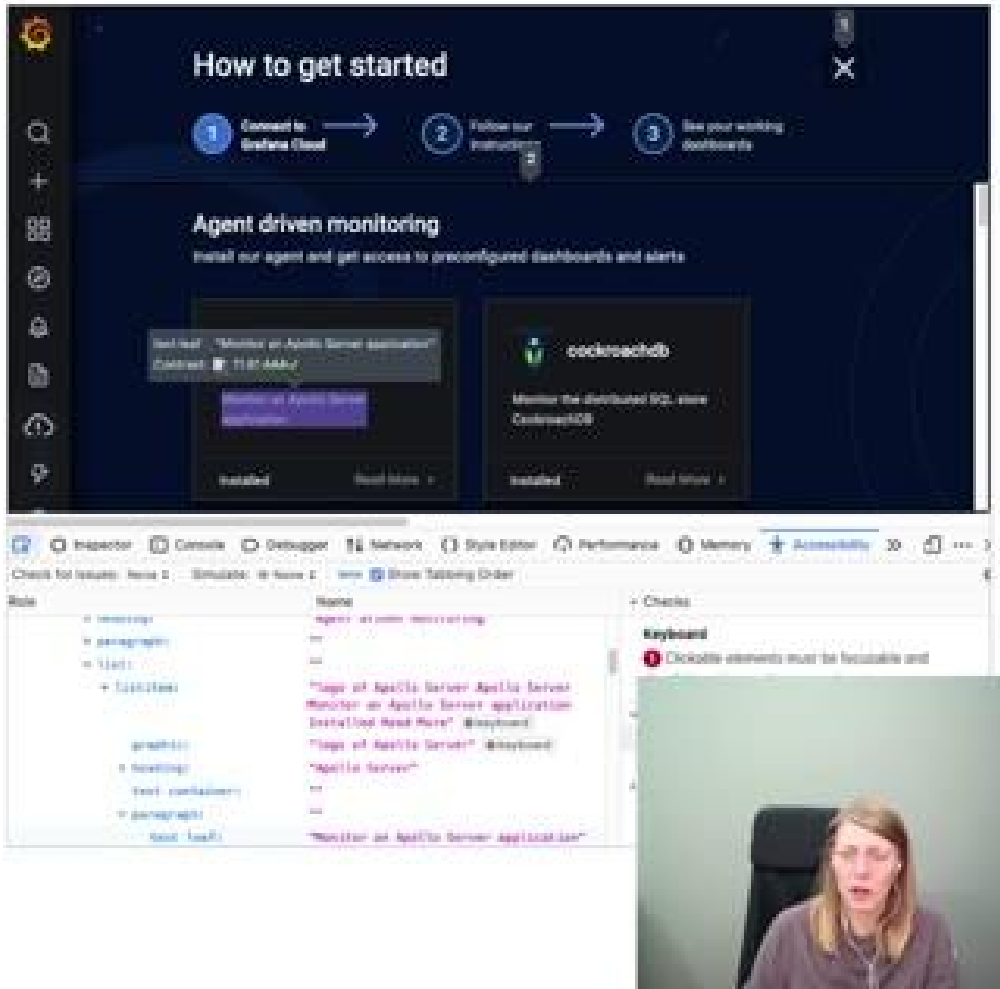


Browser tools

Firefox Accessibility Tool - all in one tool

- color blindness simulator
- color contrast checker - use as inspect or entire page
- audit for contrast, keyboard navigation and text label issues
- shows tabs order for navigation

Google Lighthouse - runs like an audit

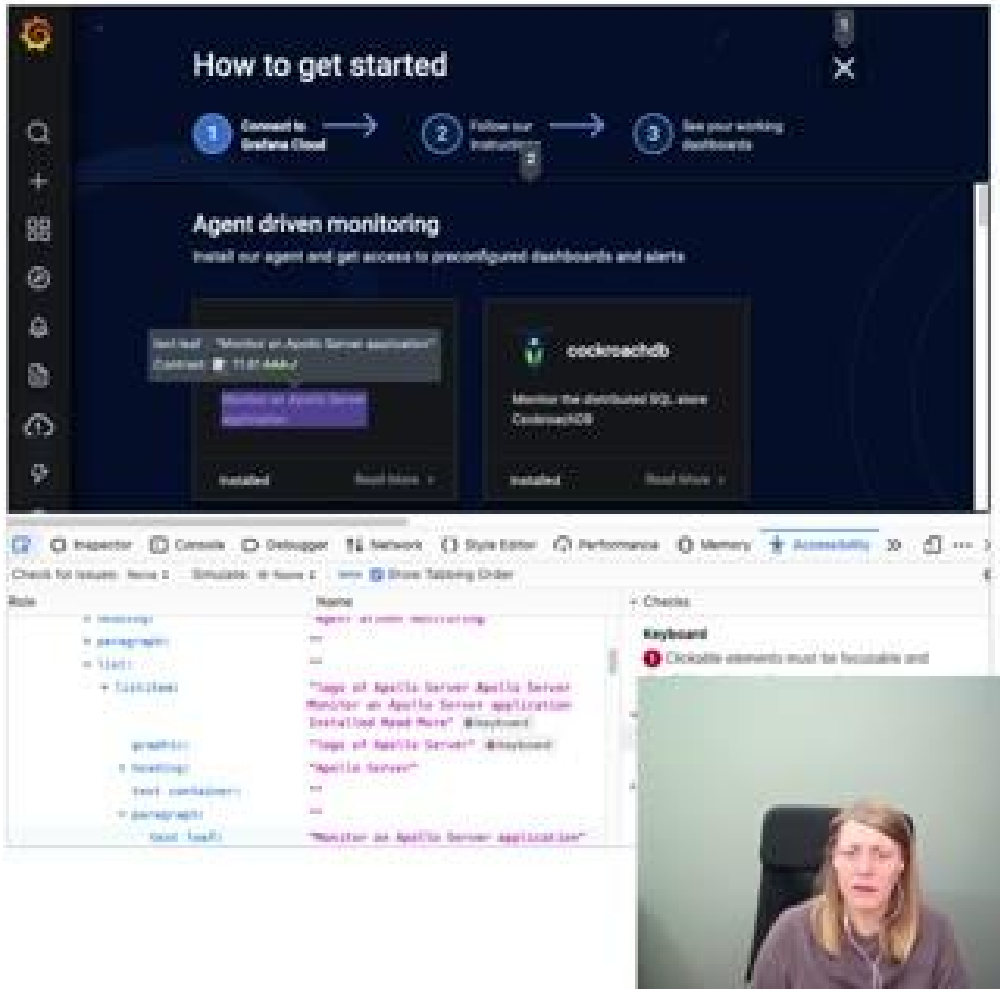


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Other tools

Wave - a11y evaluation tool. Chrome & Firefox extensions

Color blindness simulator

Colorblindly - extension

Cobis - online tool

Color contrast checker

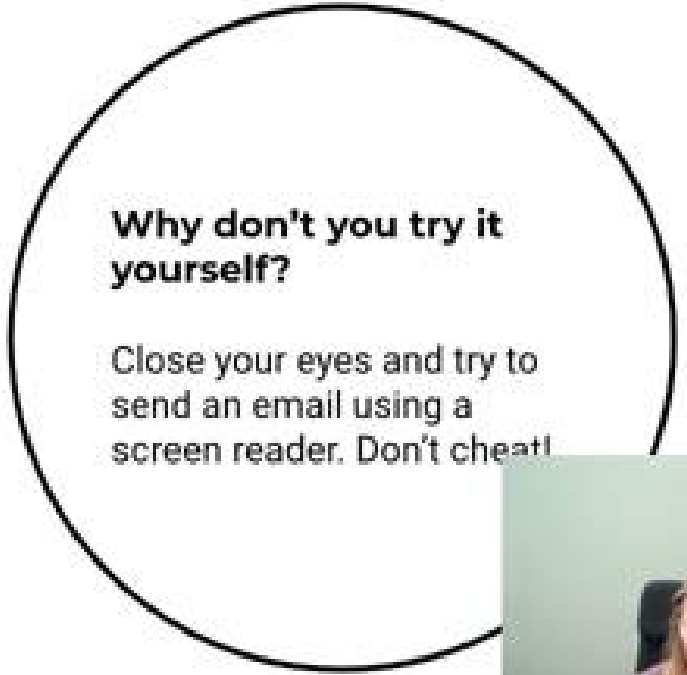
Colour Contrast Checker - extension & online tool

Coolors - extension & online tool



Supportive assistive technology

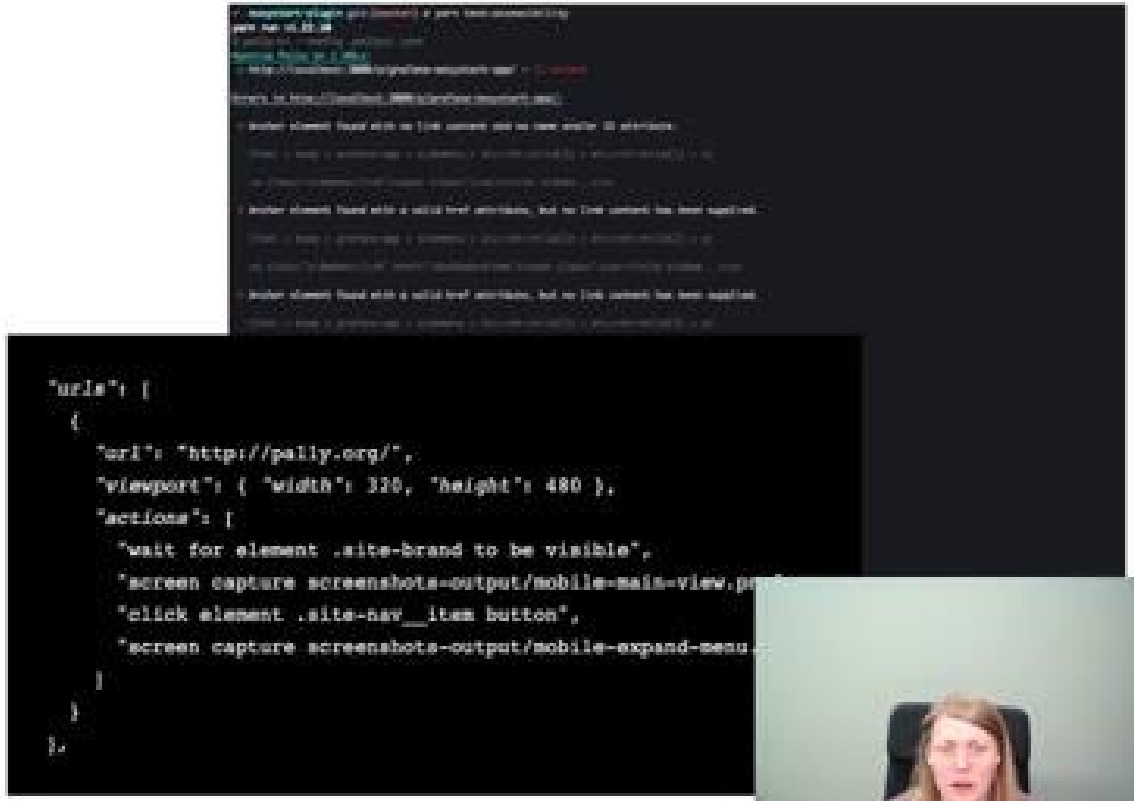
- Orca (Linux/Gnome)
- Emacspeak (Linux)
- VoiceOver (Mac OS X)
- JAWS (Windows)
- NVDA (Windows)
- Dolphin Supernova (Windows)
- ZoomText (Windows)



Automated testing with Pa11y

Pa11y runs accessibility tests on your pages via the command line or Node.js, so you can automate your testing process.

With Pa11y you can define routes to be tested, and be able to take screenshots of those routes through actions which help you go through the app.



FOSS - LGPL-3.0 licensed

Let's break it into pieces

01

Audit your project

Use one of the tools presented to see where your project stands today

02

Identify main issues

Write down all important or repetitive issues

03

Estimate time/effort

Give each a rough time or effort estimate

04

Create a plan

Be it a roadmap, prioritization matrix or anything that works for you

05

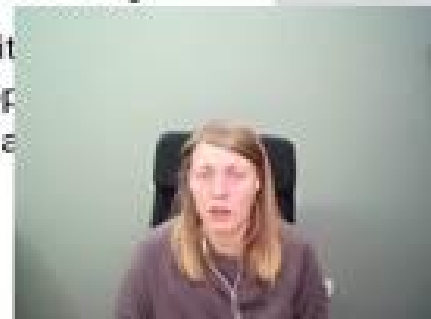
Start small

Go after the low hanging fruit. What's the easiest fix you can do?

06

+ Involve community

- test your GUI wit
- invite them to op
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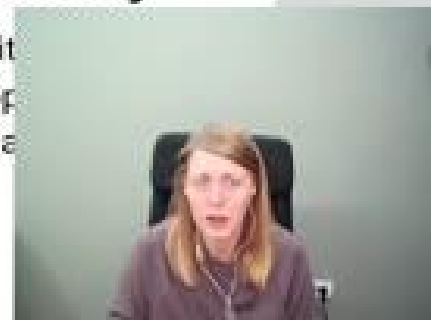
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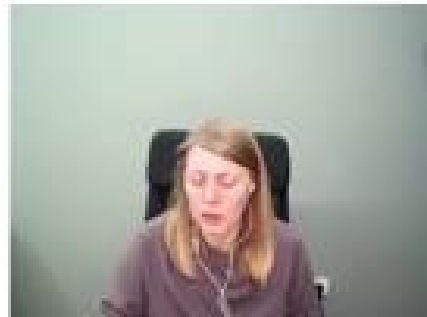
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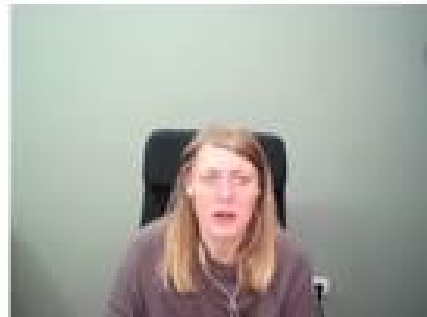
Main issues

- **Navigation:**
  - impossible to use the app with keyboard only
  - impossible to use the app with screen readers
- **Structural elements:**
  - page headings levels are sometimes skipped - *used to facilitate keyboard navigation by users of assistive technology*
  - missing page regions or ARIA landmarks - *used to identify significant page areas*
- **Forms (design system related):**
  - using empty form labels for on/off switches
  - missing fieldset for button-groups
  - missing form labels
- **Color contrast:**
  - code highlight issues - red on black has too low contrast



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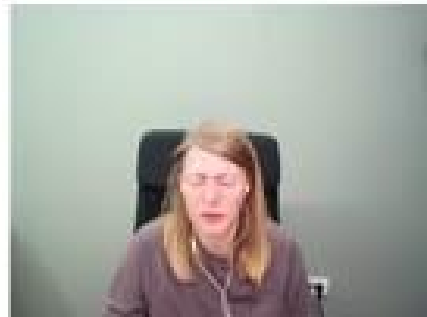
Fixes everywhere

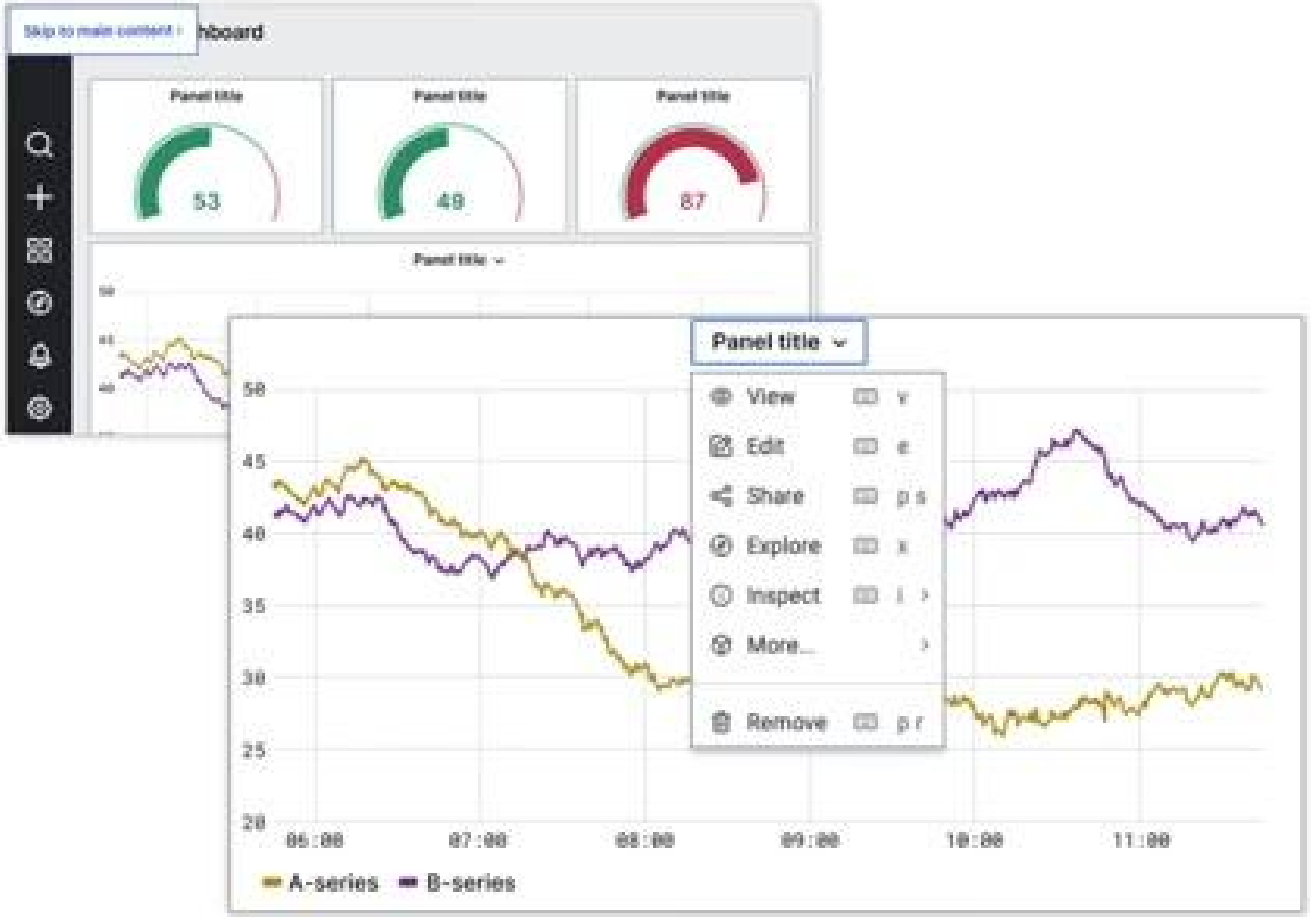
Small issues:

- Define ARIA landmarks ~ 2 days / feature
- Open Github issues for form elements related to the design system. Assign it to yourself if you can fix it and you have time
- Make sure we use labels for all dropdowns, button-groups, etc or that we have appropriate aria-labels ~ 1 day / feature
- Use proper level headings ~ 1 day / feature

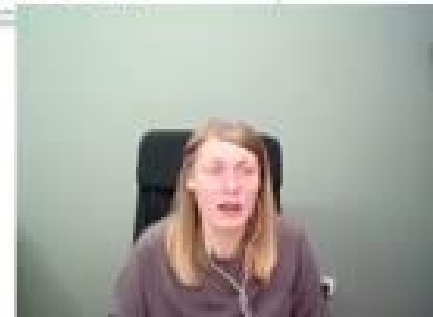


We can fix them in under a week!




Skip to main content
Panel title
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Panel title
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Panel title
87
Panel title
Panel title
View v
Edit e
Share p s
Explore x
Inspect i
More...
Remove p r
06:00
07:00
08:00
09:00
10:00
11:00
A-series
B-series


New dashboard
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Dashboards
Home
Manage
Playlists
Snapshots
A-series
B-series



Final steps



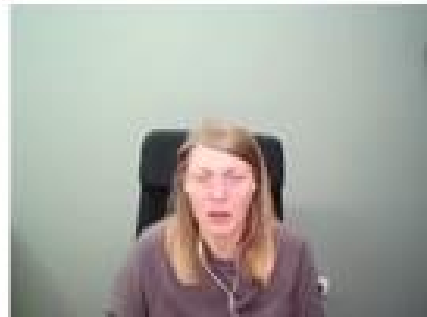
Test with pa11y, our own keyboards and voiceover tools



Get feedback from community on the changes



Keep learning, keep fixing and write semantic HTML!



Thank you!
Let's take some questions.

@Caelea

