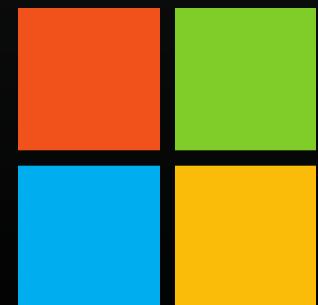


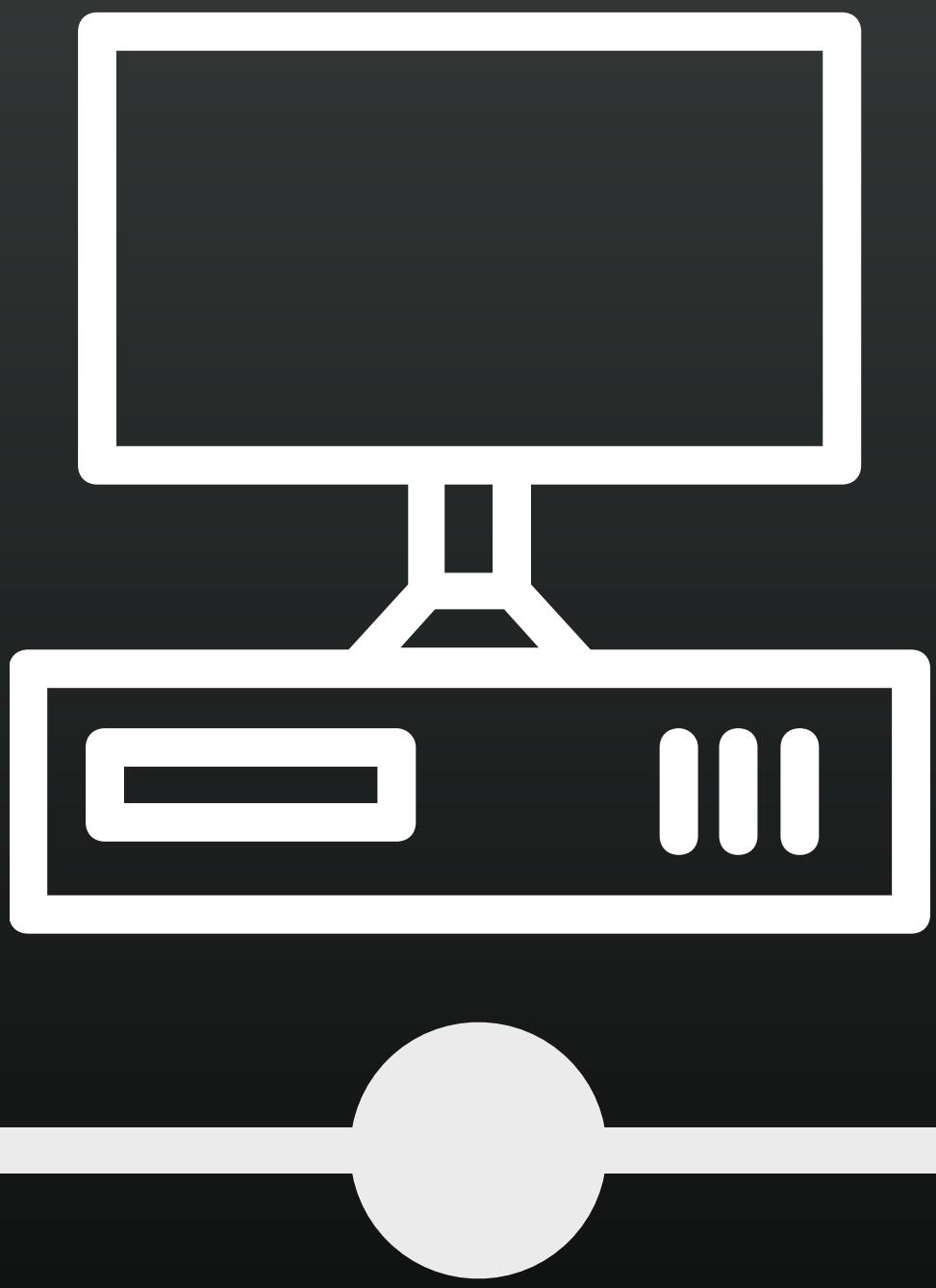
Adapting to Reality



Aaron Gustafson
@AaronGustafson
slideshare.net/AaronGustafson

Web design &
development is hard

In the beginning...



640 × 480



This is a fixed width @ 640px.

What is Lorem Ipsum?

Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum.

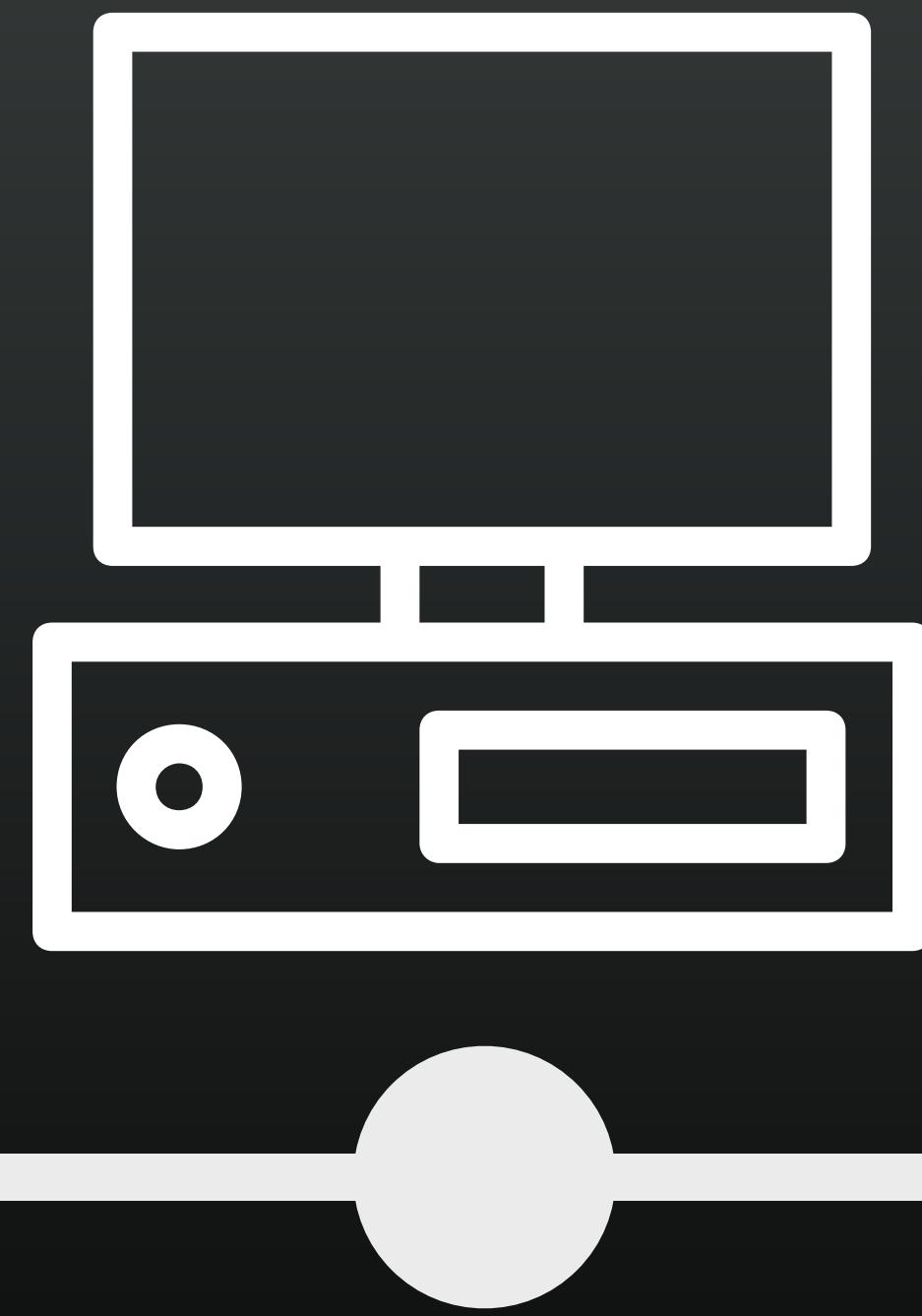


This is a fixed width at 640px centered.

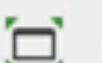
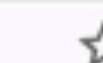
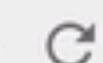
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Ok, we can go a little larger



800 × 600



This is a fixed width at 800px.

What is Lorem Ipsum?

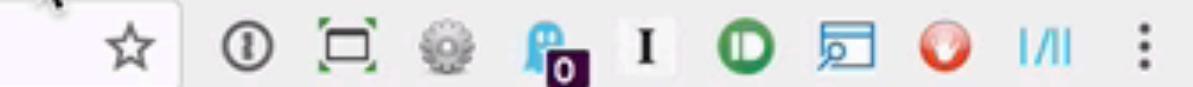
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This is a liquid width.

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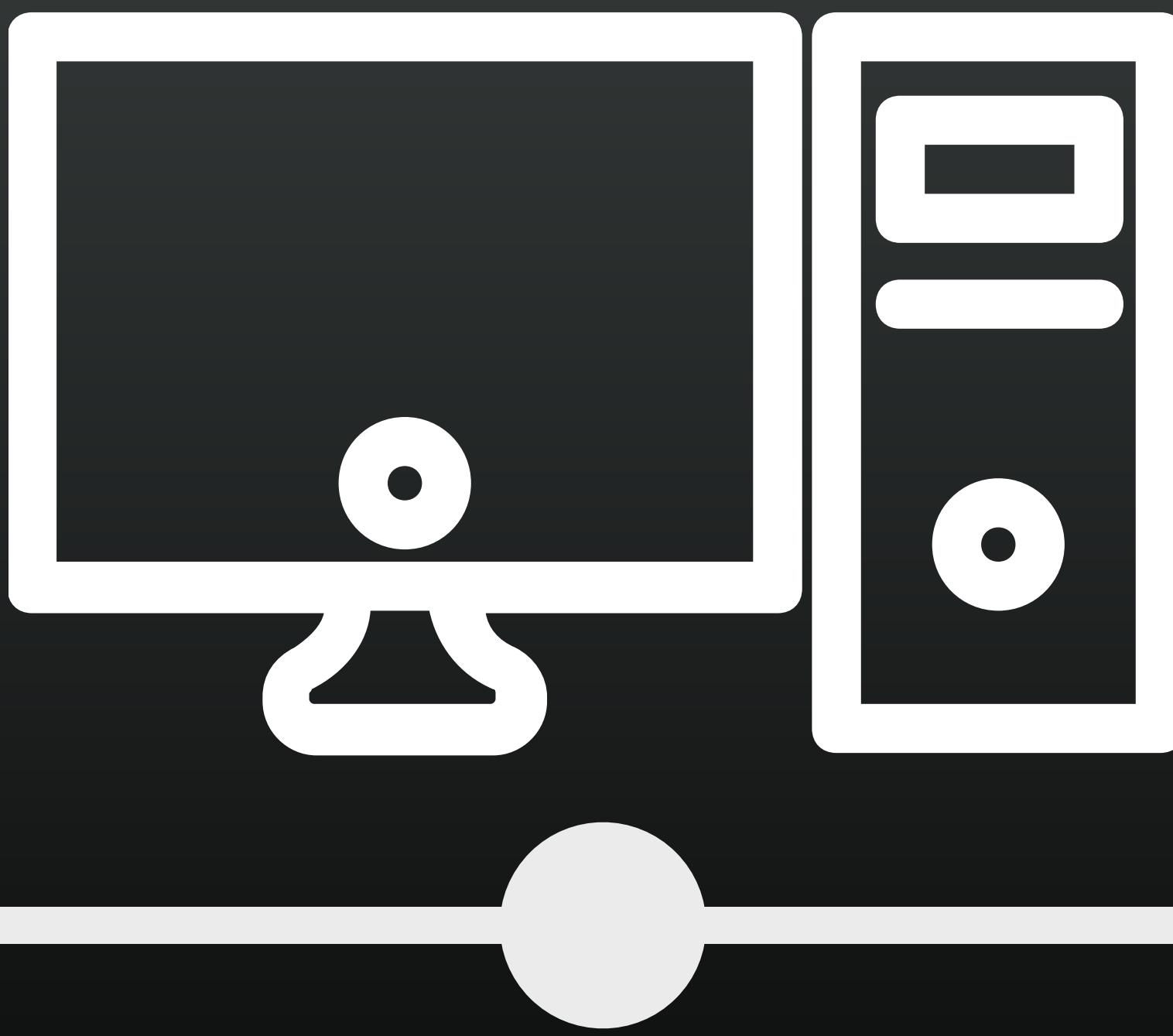
← → C ◻Secure | https://s.codepen.io/aarongustafson/debug/XzXmXG/bZAQWyQXJveM

This is a fixed width.

What is Lorem Ipsum?

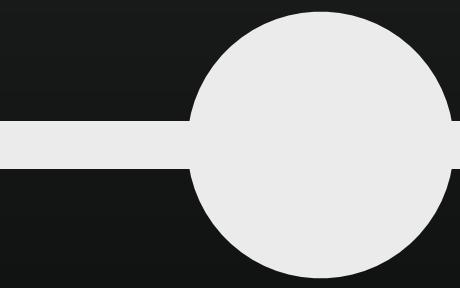
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Ok, a bit larger, but that's it

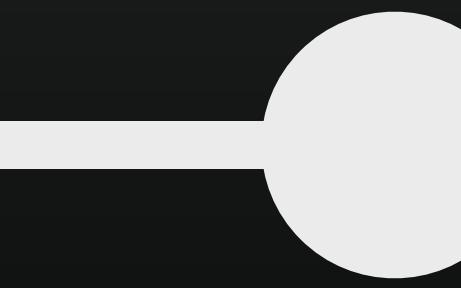


1024 × 768

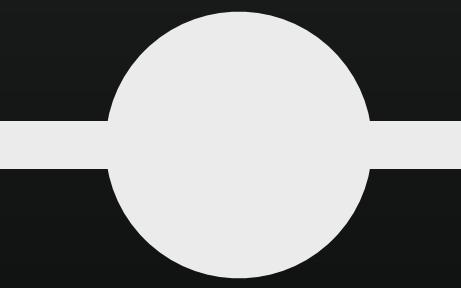
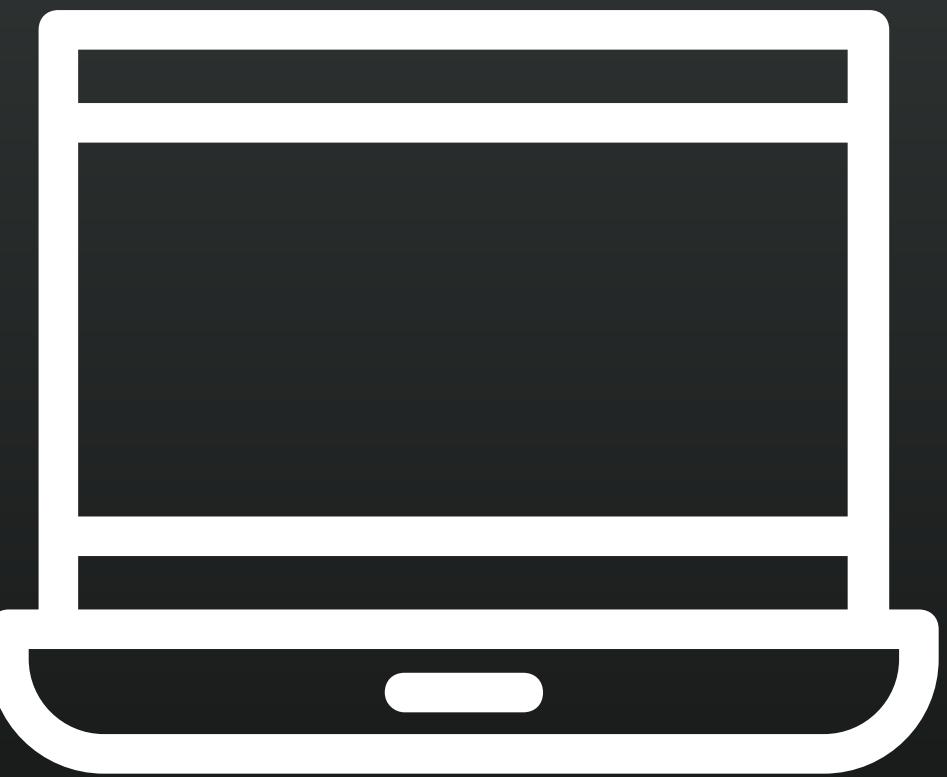
Of course laptops...



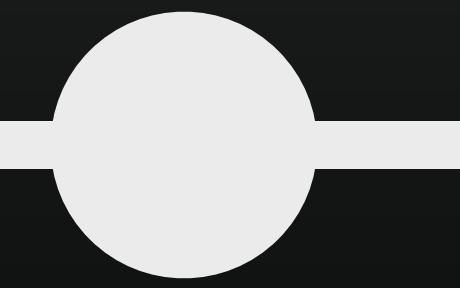
800 × 600



1024 × 600

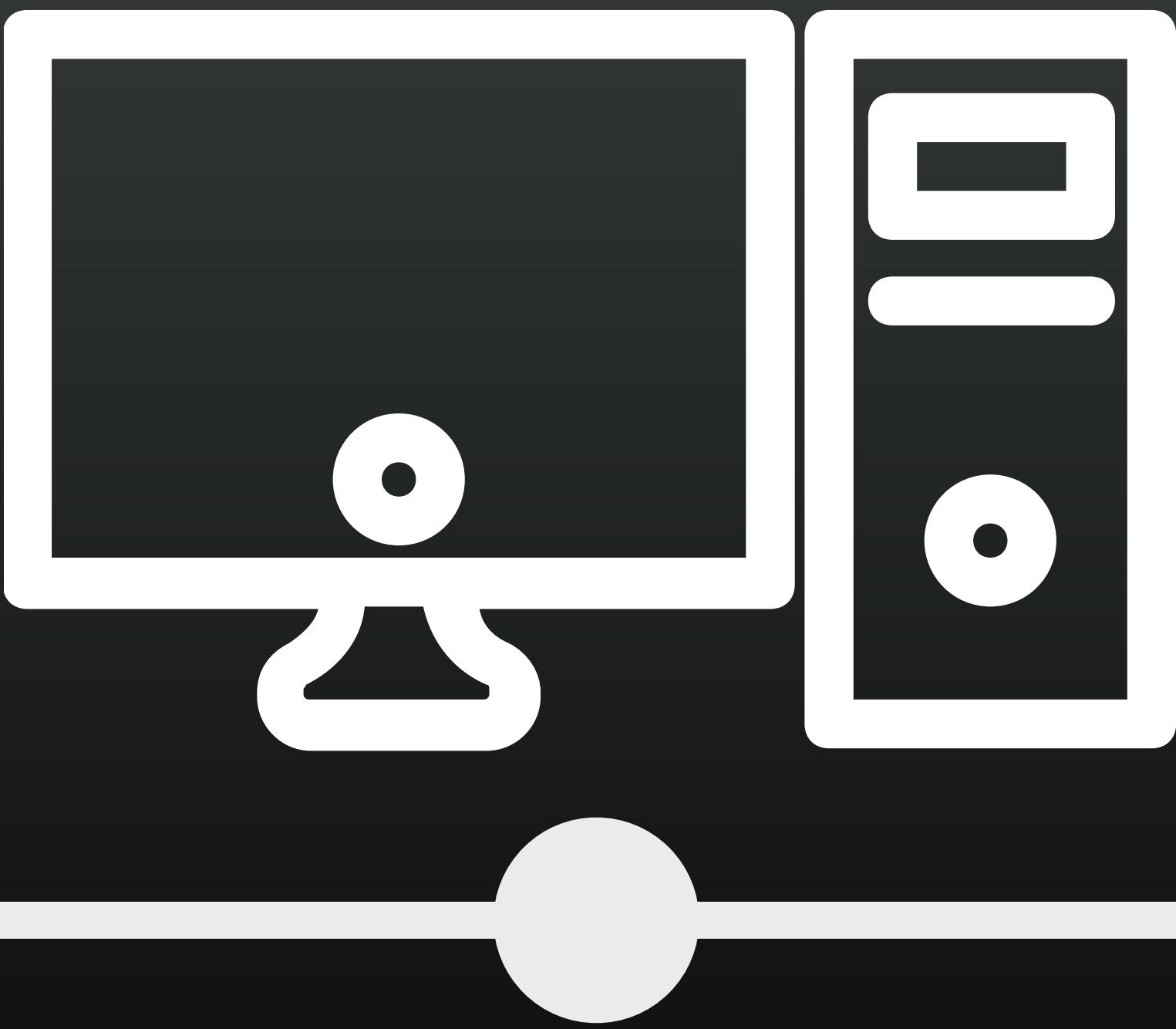


1280 × 800



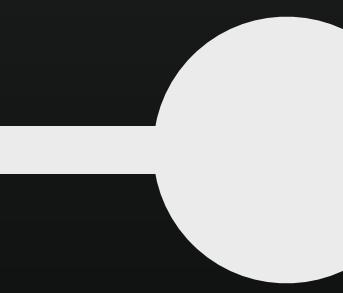
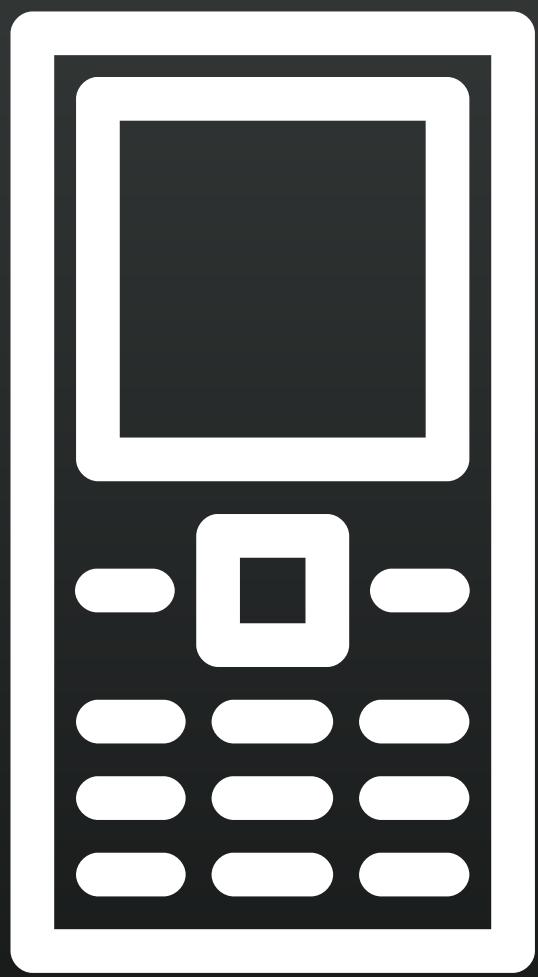
1366 × 768

The web's “happy place”

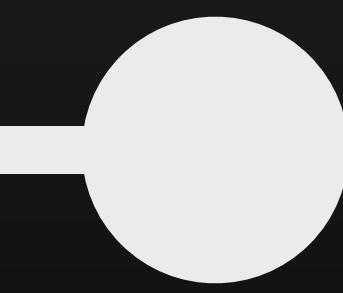
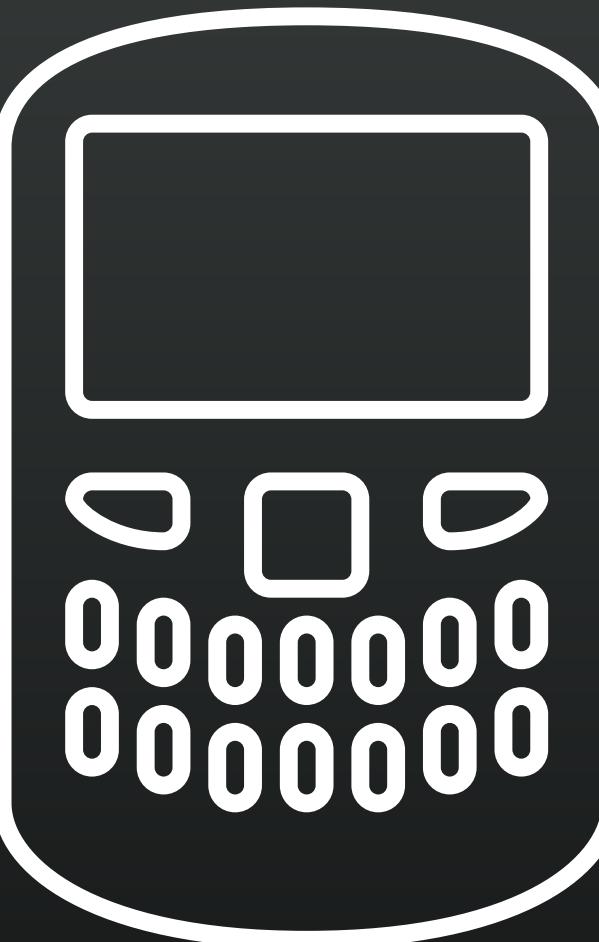


1024 × 768

We were ignoring mobile...

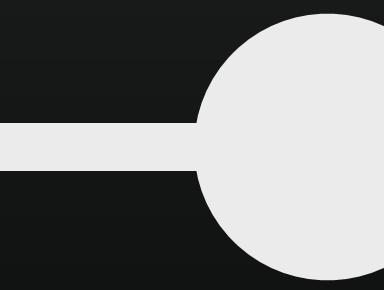
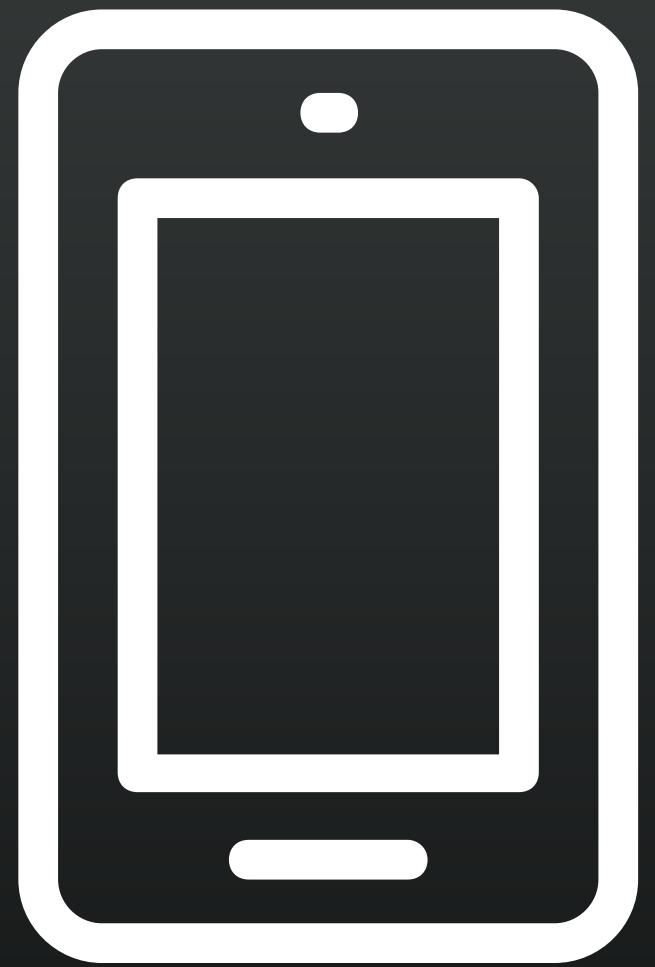


240 × 240

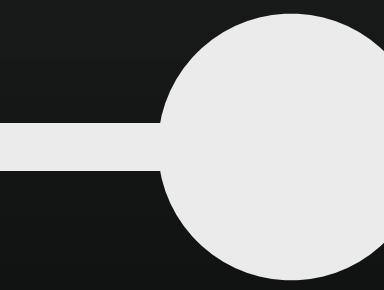


640 × 200

Until this happened



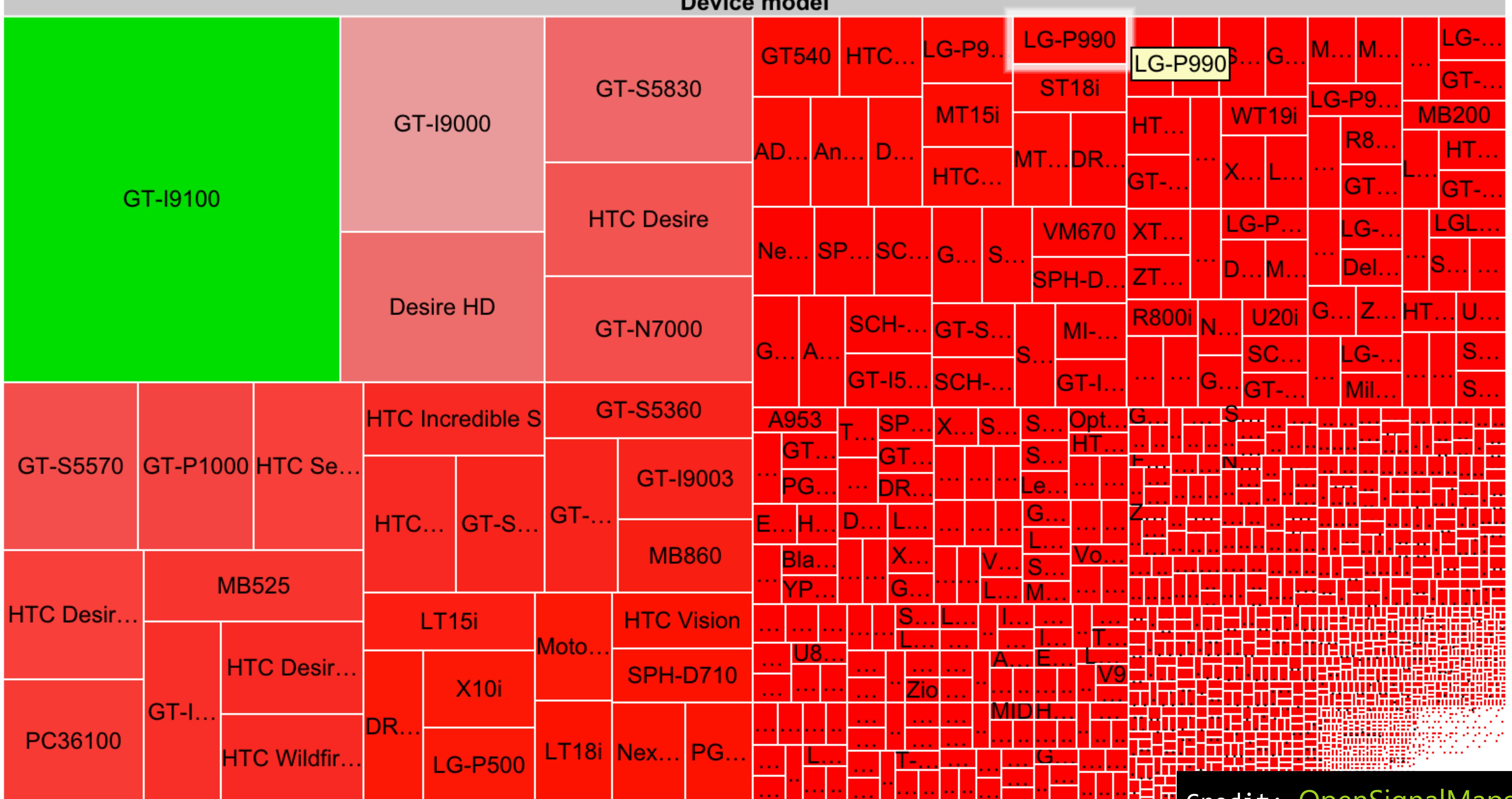
320 × 480

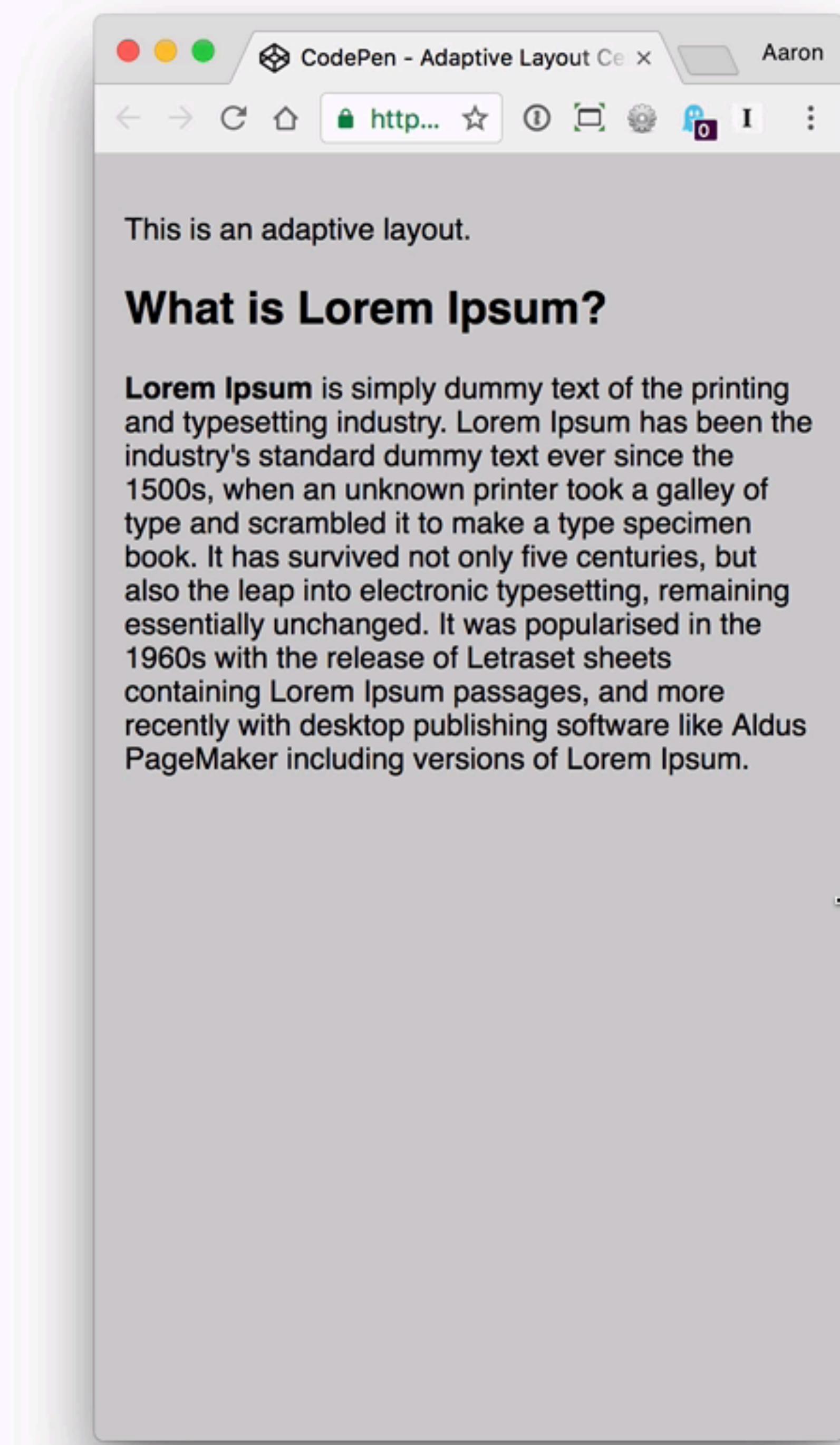


3840 × 2160

Don't even get me
started on tablets

Device model

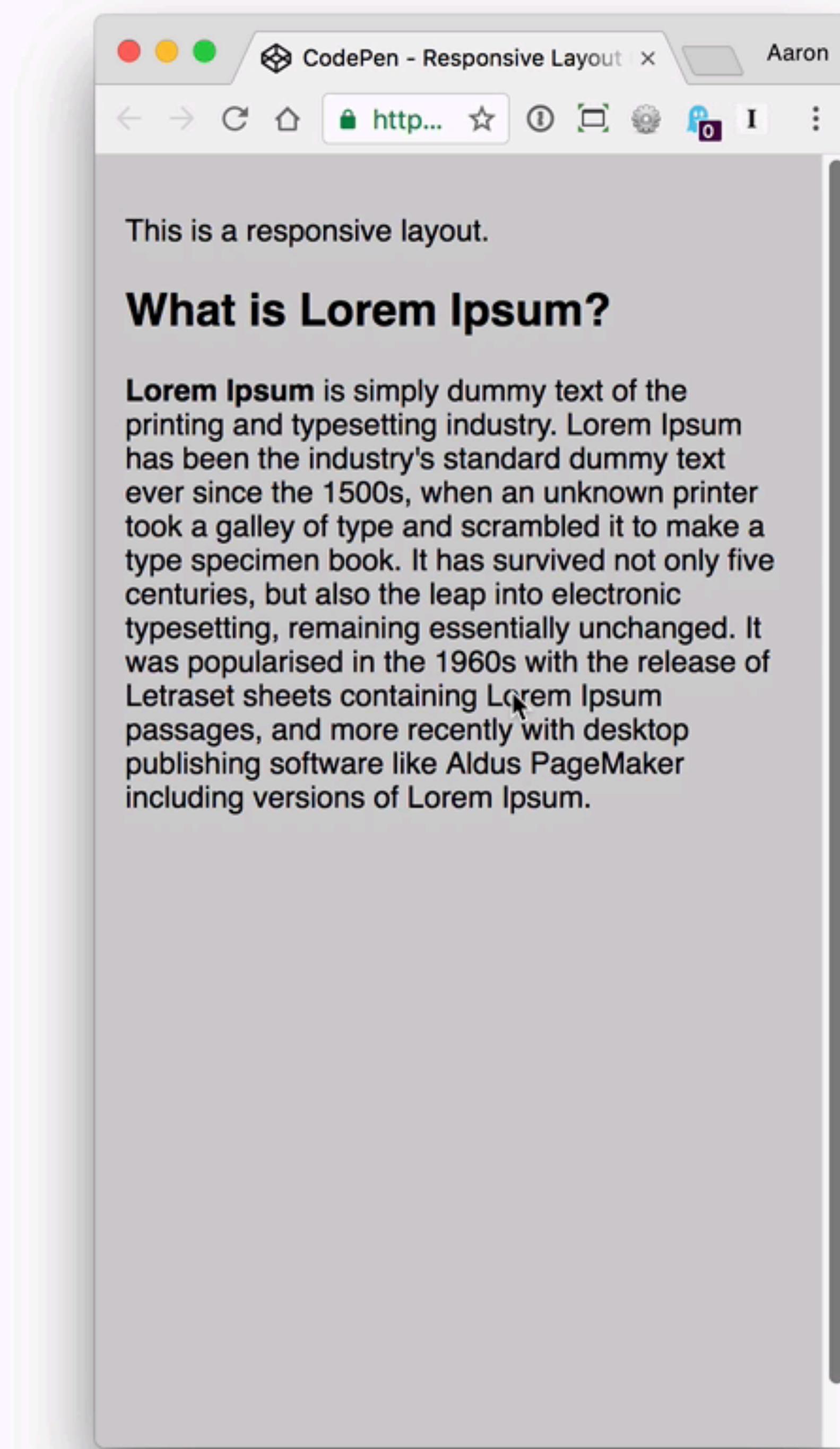




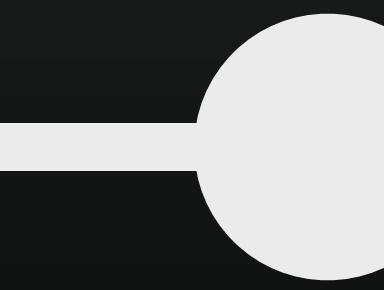
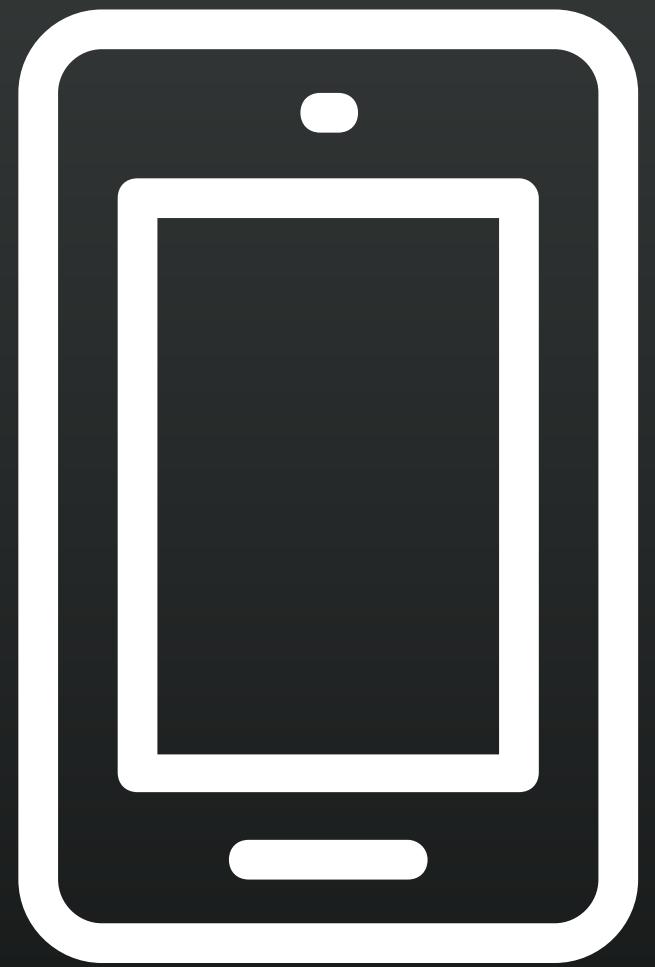
This is an adaptive layout.

What is Lorem Ipsum?

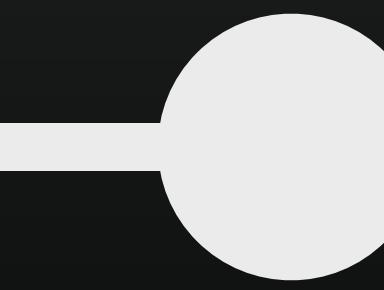
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Until this happened

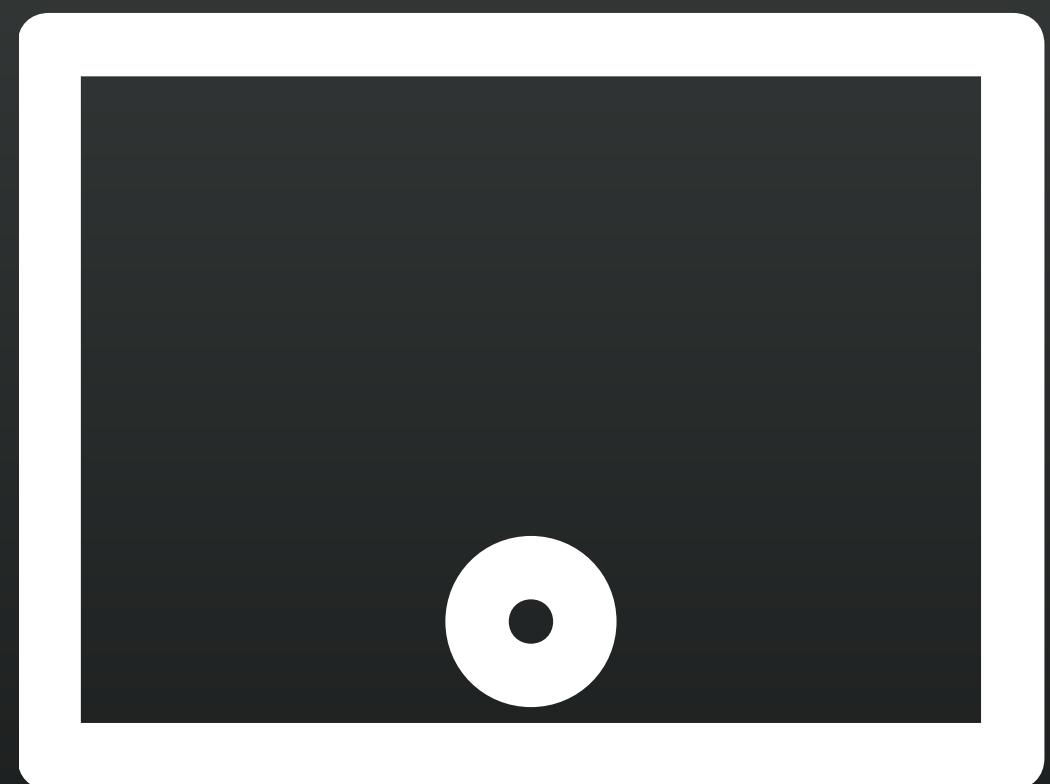


320 × 480

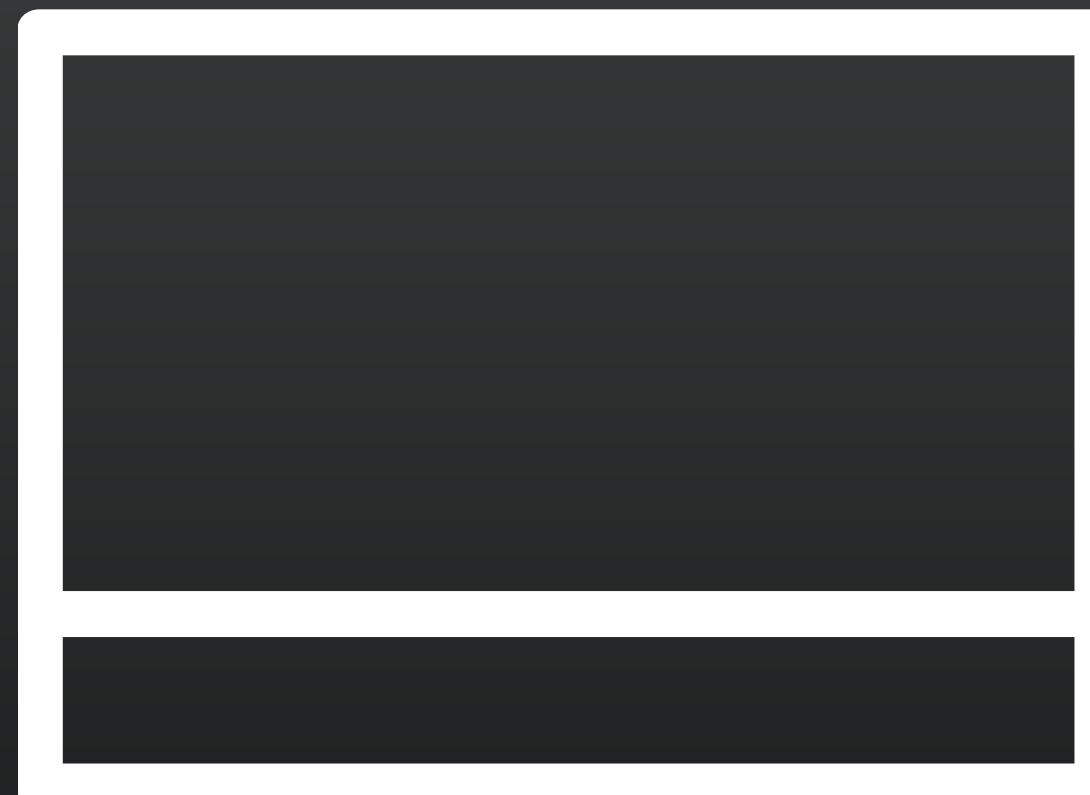


3840 × 2160

Desktops today...



1920 × 1080



7680 × 4320

Chasing screen
sizes is clearly a
fool's errand

5 years ago!

“

In the second quarter of 2008
we detected 71 different
screen resolutions among our
visitors. In the first quarter of
2014 we detected

1062

One year after the iPhone

— Jason Samuels
IT Manager,
National Council on Family Relations

Source

“ In 2008, 27 screen resolutions showed up with more than 10 visits, in 2014 that number was **200**

— Jason Samuels
IT Manager,
National Council on Family Relations

Chasing screen
sizes is clearly a
fool's errand

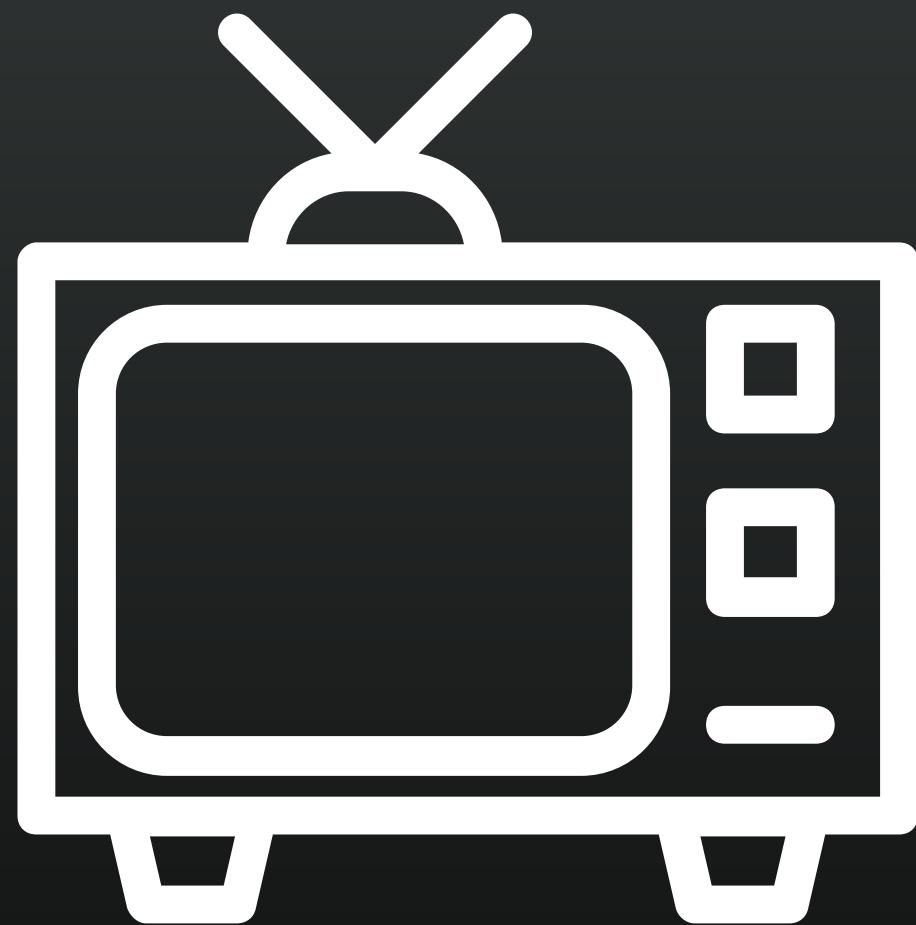
Designing for
screens is hard

And then there's
everything else

Your content can and will go
anywhere that's connected



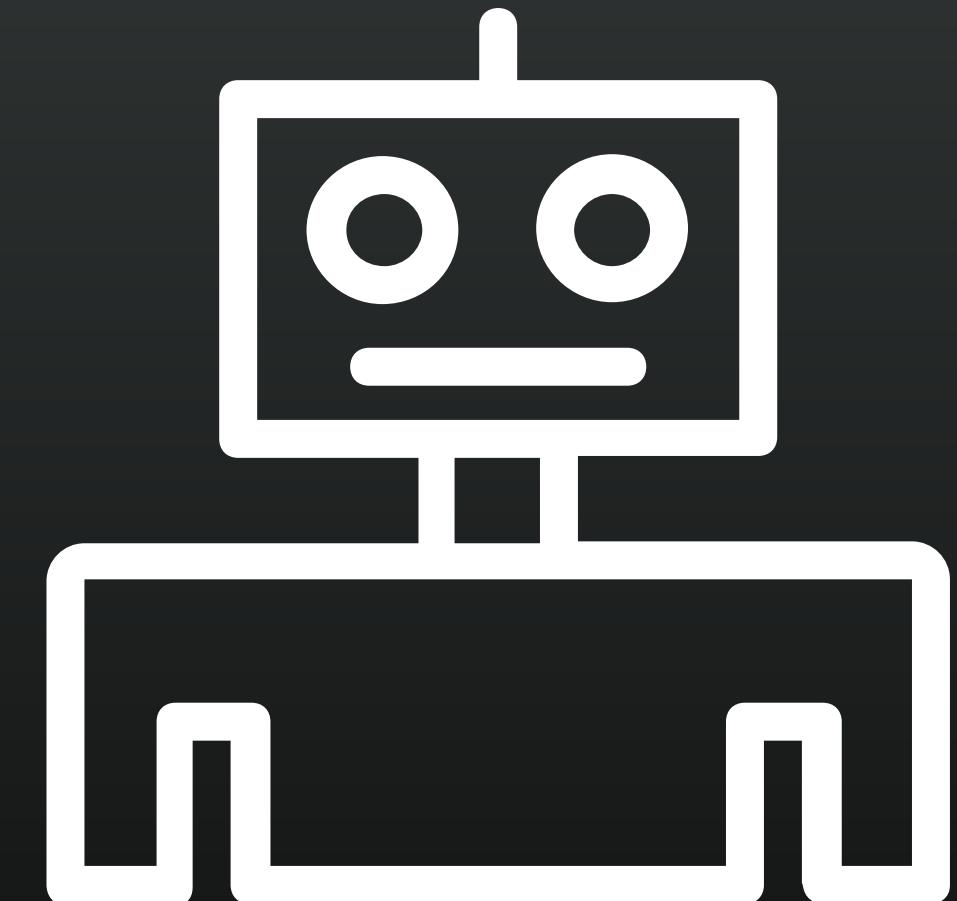
wearables



smart tvs



IoT



assistants

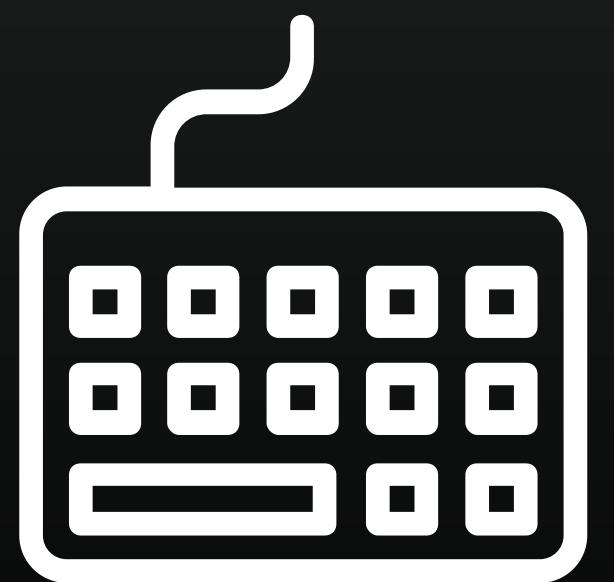
Meaning users will need to interact in different ways



touch

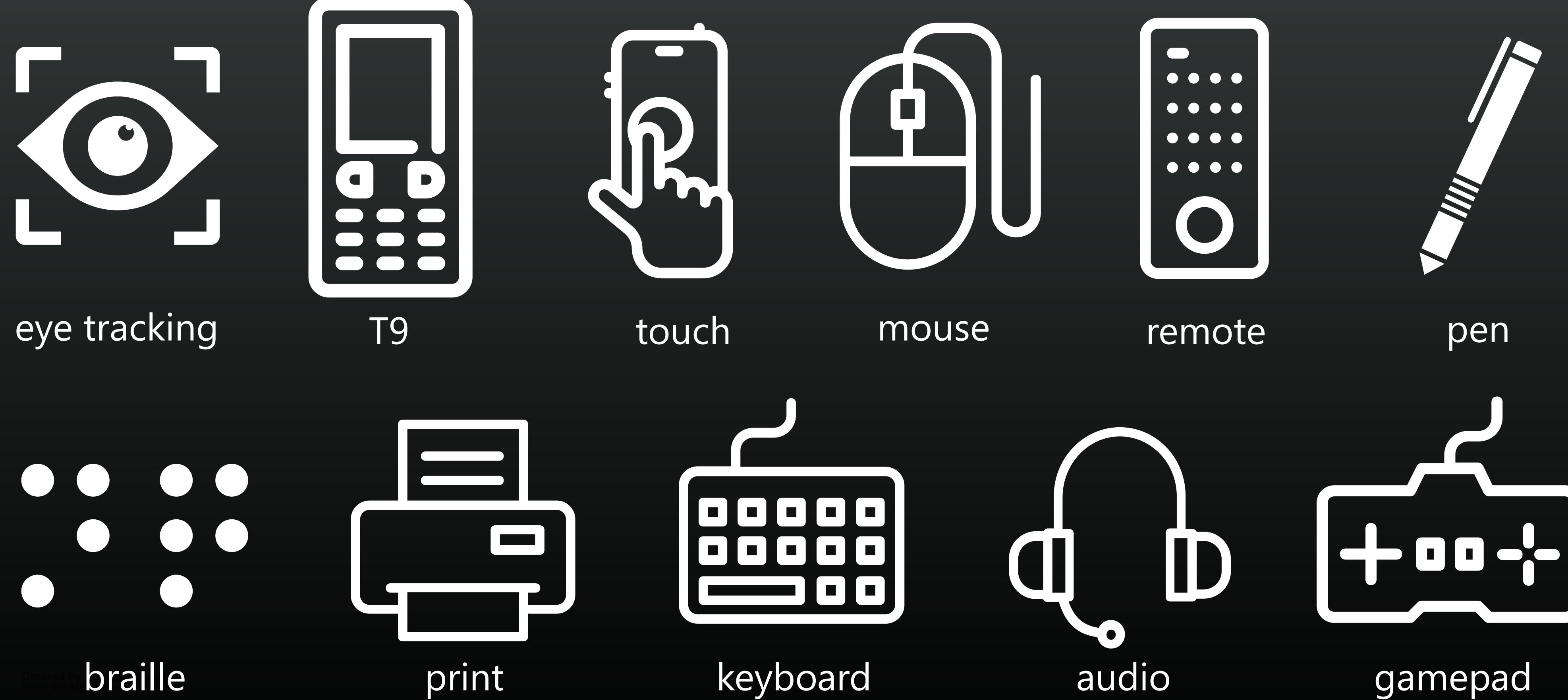


mouse



keyboard

Meaning users will need to interact in different ways



Over varied networks and in changing conditions



wifi



hardline



mobile



homes



buildings



cars



buses



trains



airplanes

And, ultimately, our users all
have different needs too



Anyone notice I
haven't even
mentioned
browsers?

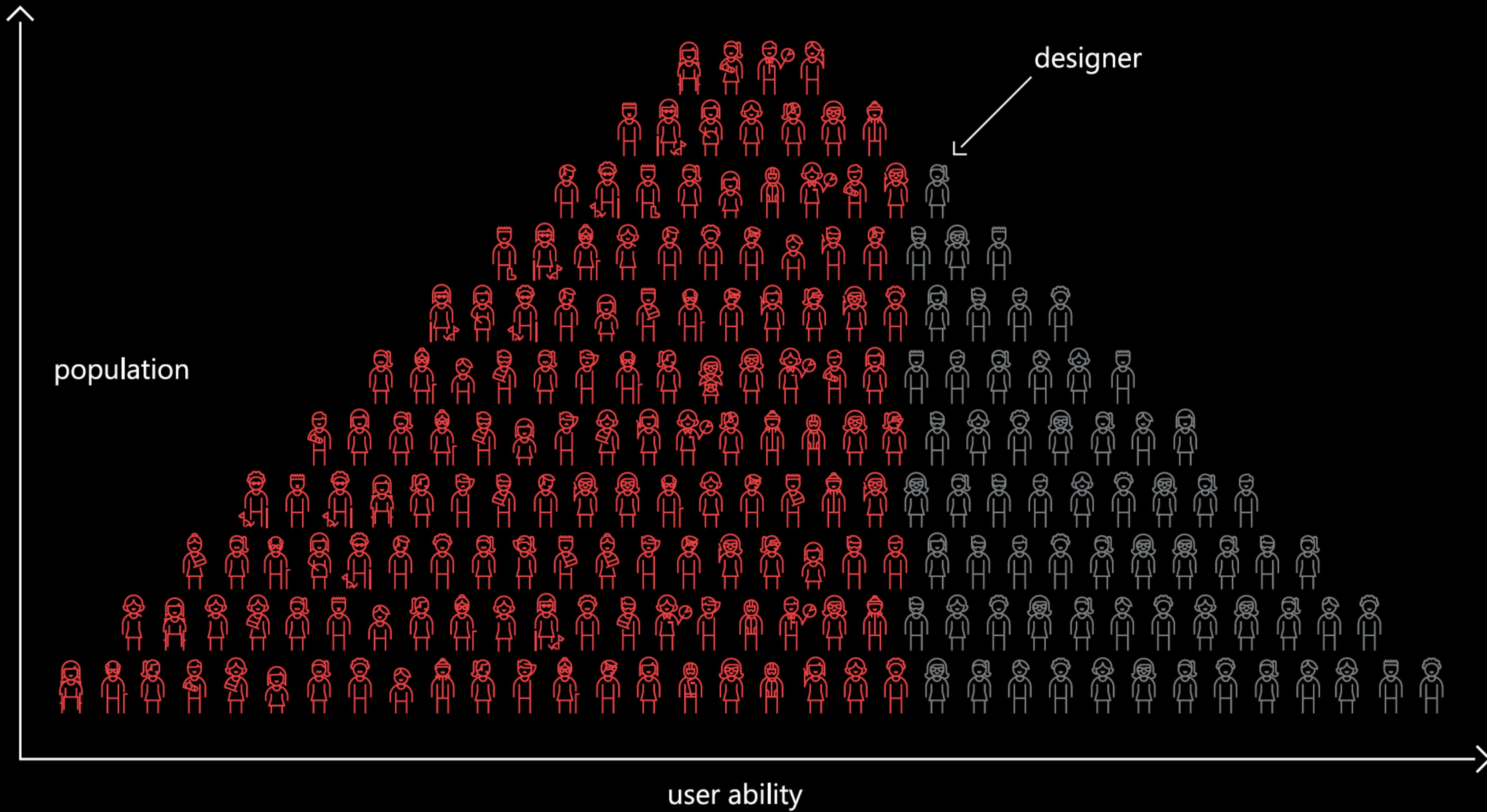
;-)

So...?

REALITY CHECK

Nothing about our users' experiences of the web has ever been as homogenous as we imagined.

Treat your
ideal scenario
as an **edge case**



excluded

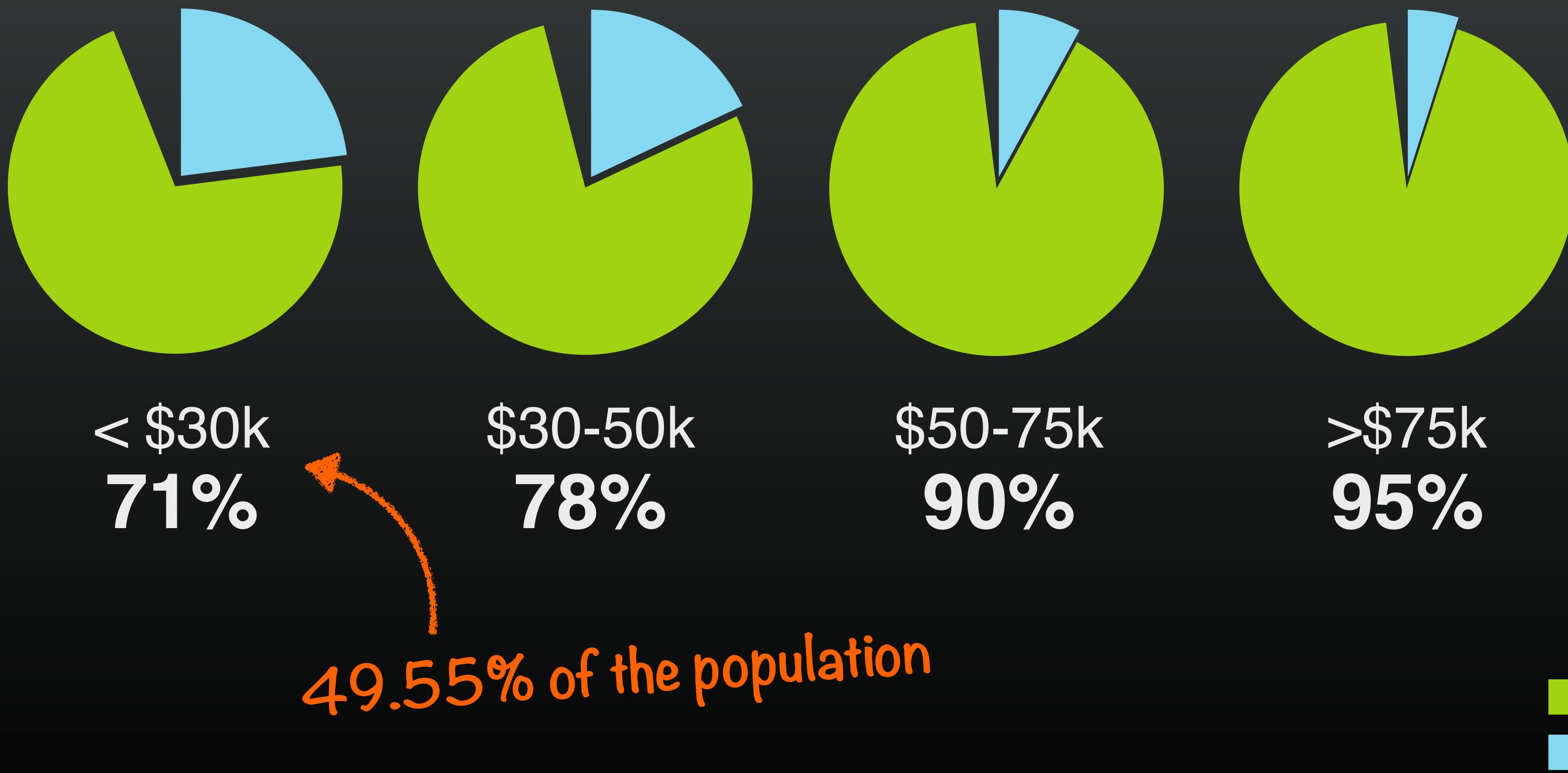


included





U.S. Smartphone penetration



U.S. Smartphone penetration



Urban
83%



Suburban
83%



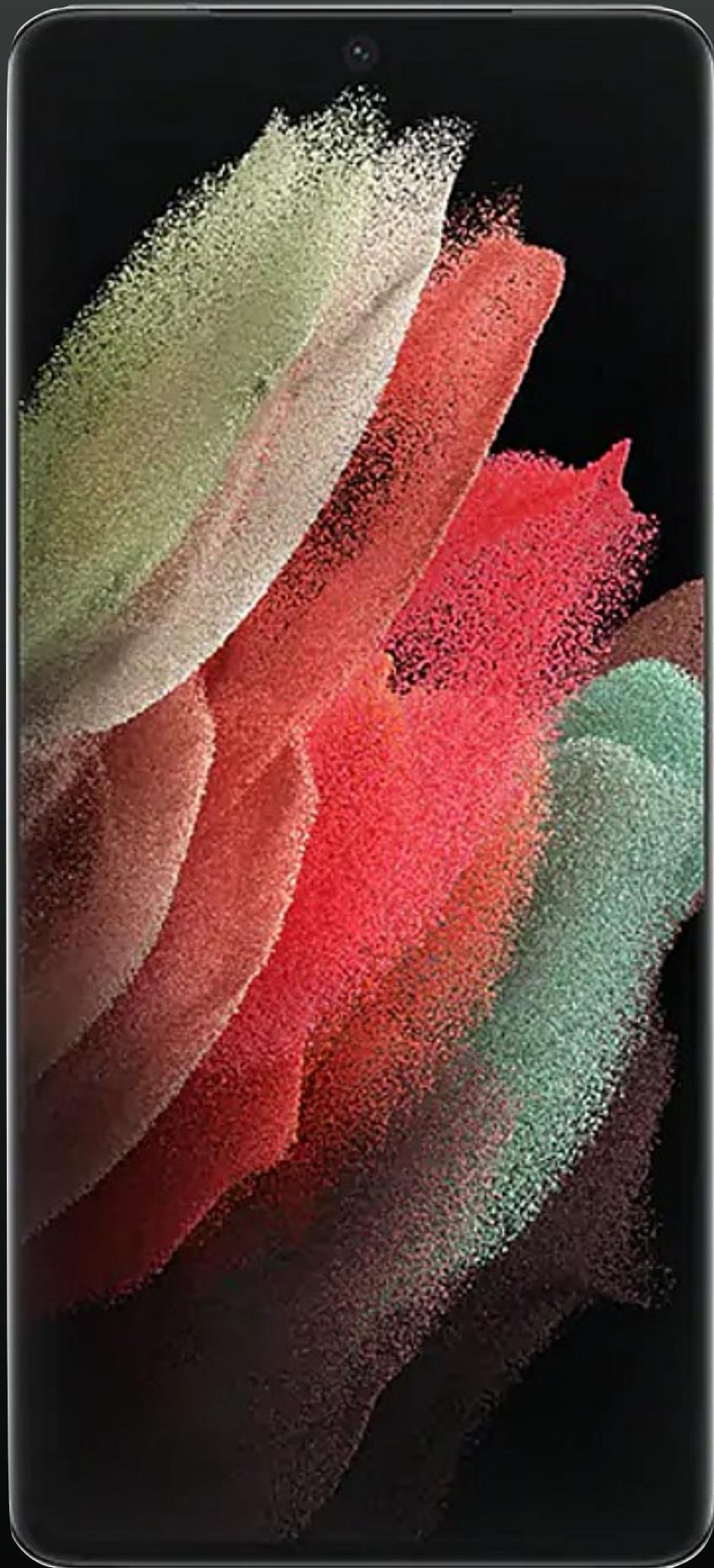
Rural
71%

■ Smartphone
■ Other

One in 5 U.S. adults is a
smartphone-only Internet
user.



Not all smartphones are equal



Galaxy S21 Ultra 5G

6.8" (3200 × 1440)
12 GB RAM
128 GB Storage
4 Cameras (10–108 MP)
2.8GHz (1) / 2.4GHZ (3) / 1.8GHZ (4)
Android 11
\$999

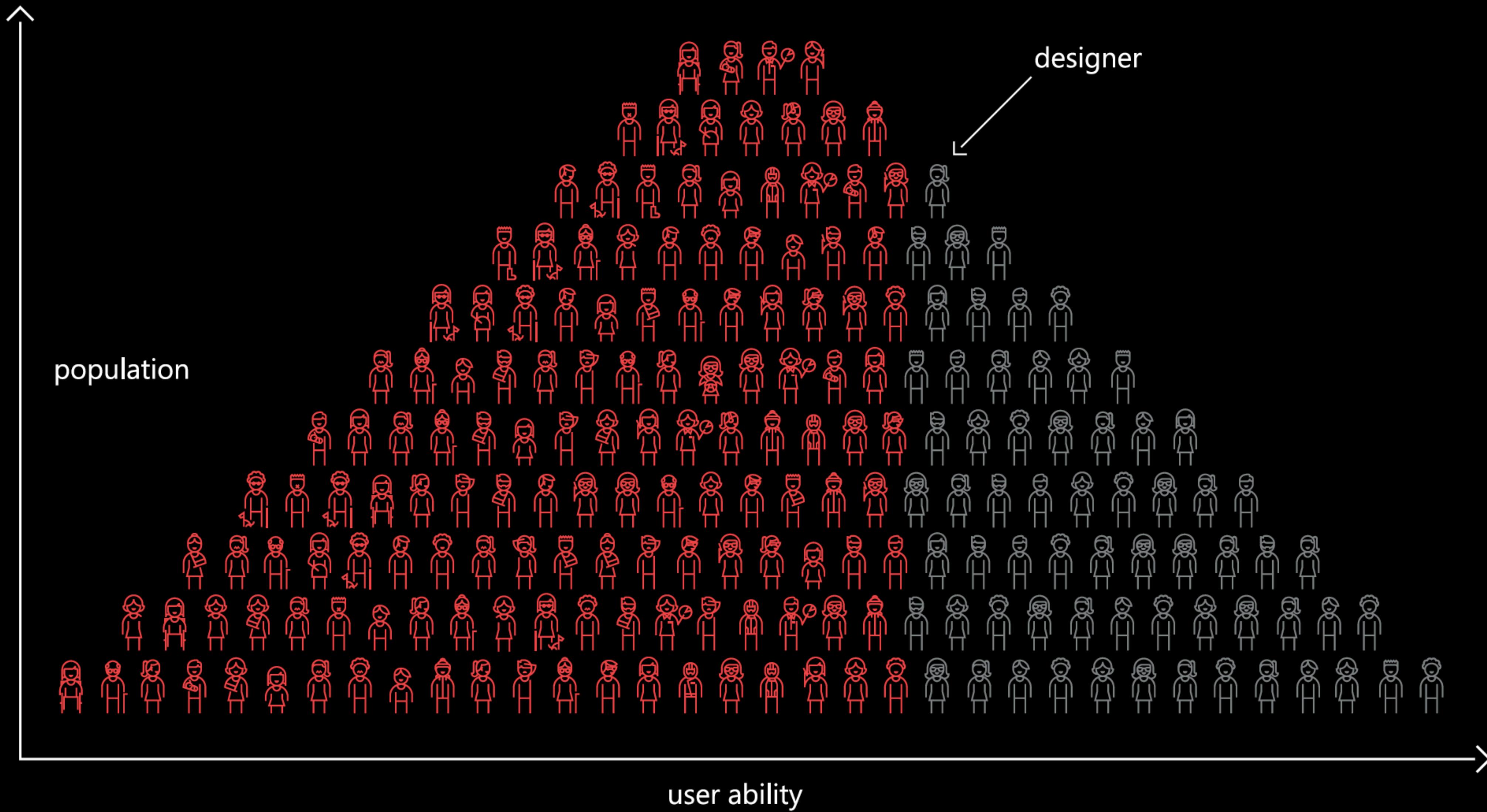
BLU Studio Mini

5.5" (1440 × 720)
2 GB RAM
32 GB Storage
13 MP Camera
1.6 GHz Octo-core
Android 9
\$79





In the 2017 survey, Smartphone users
making < \$30k/yr experienced app errors
52% of the time



excluded



included



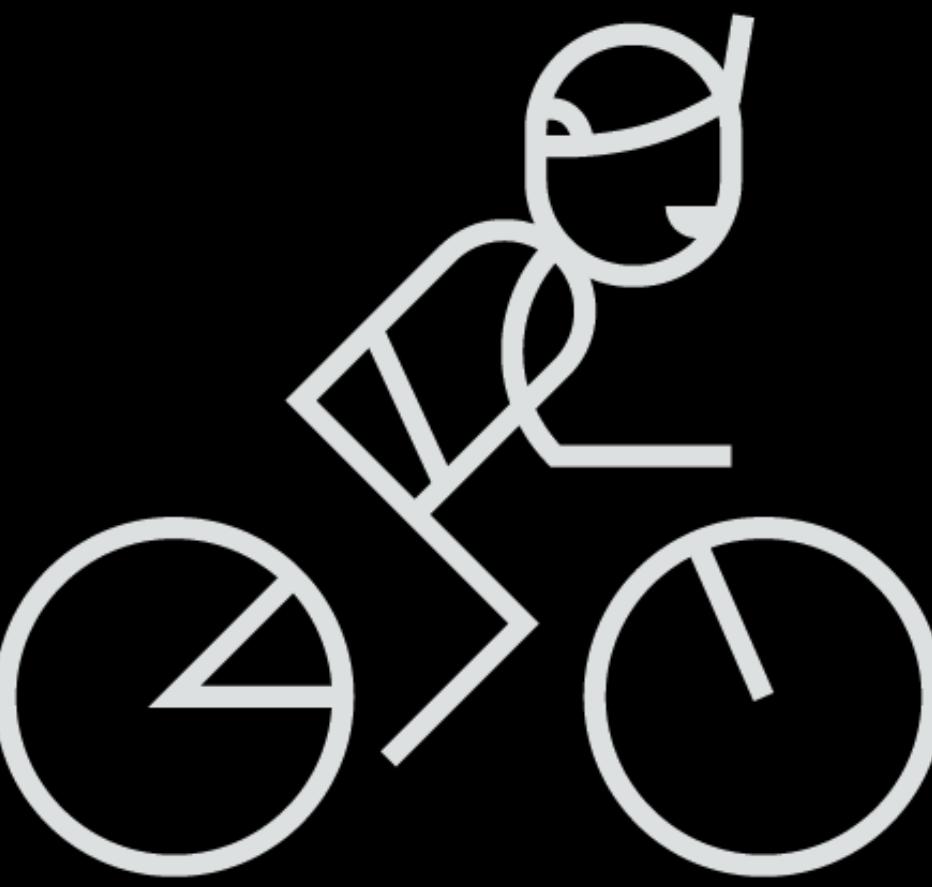
Photo Credit: Dylan Passmore



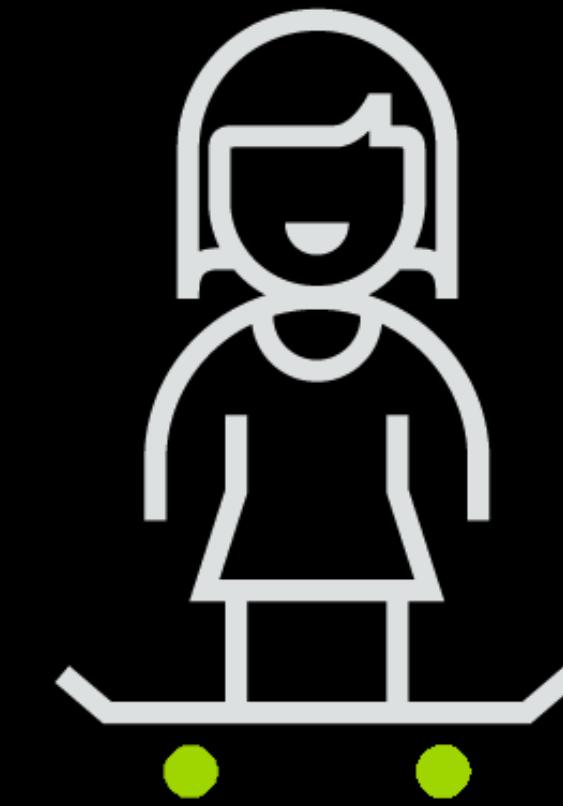
wheelchairs



strollers

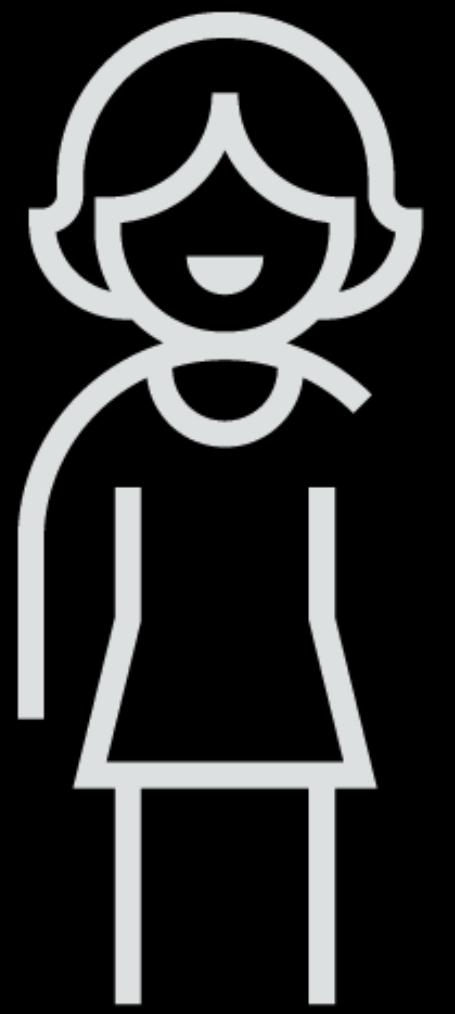


bicycles



skateboards





one arm



arm injury



new parent

permanent



situational



26K + 13M + 8M

one arm

arm injury

new parent

permanent



situational

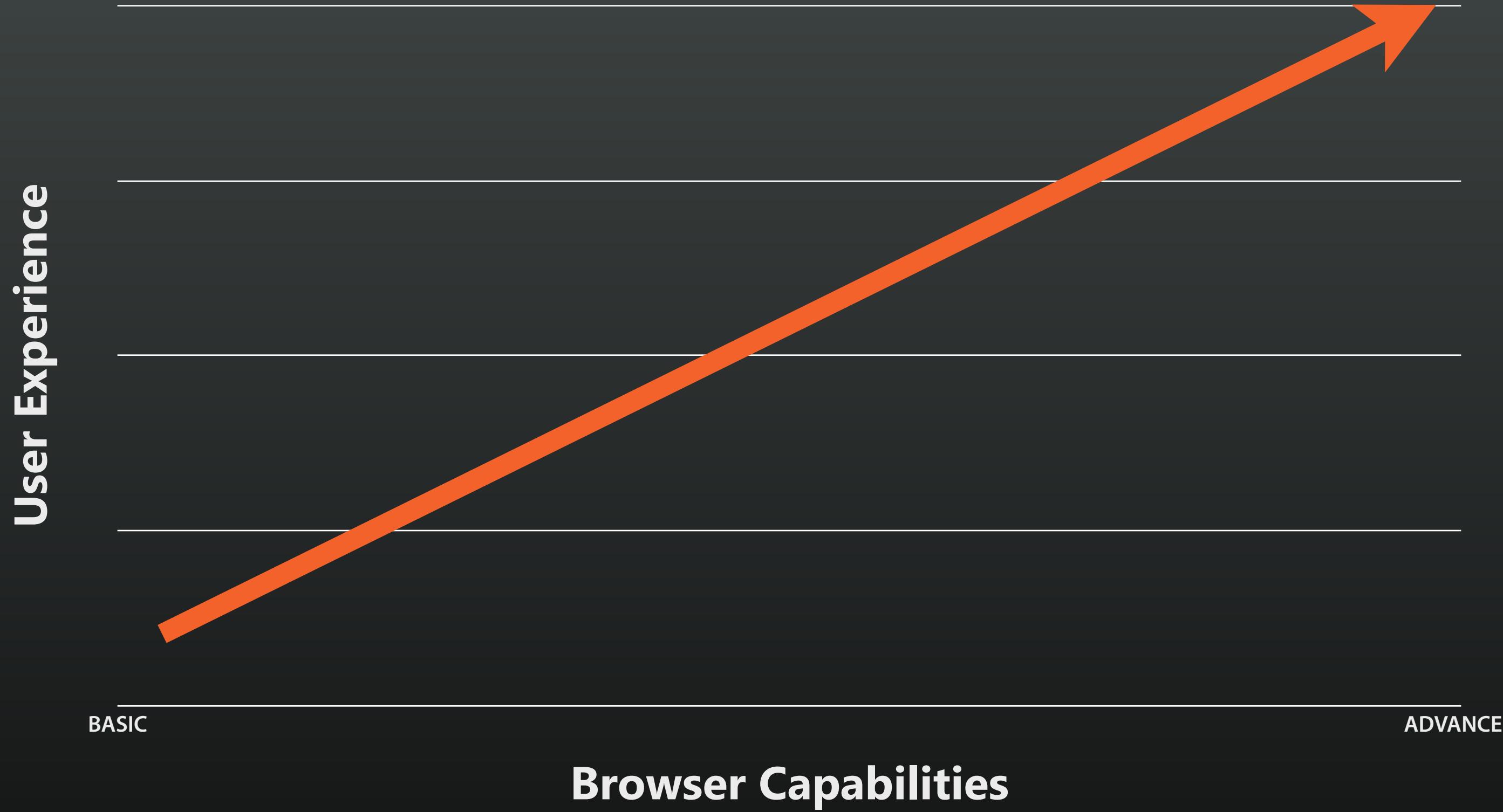
21 Million People

So how can we make
our interfaces work
for everyone?

Approach your job
with an open mind
and empathy for
your users.

We try stuff,
make mistakes,
& learn from them

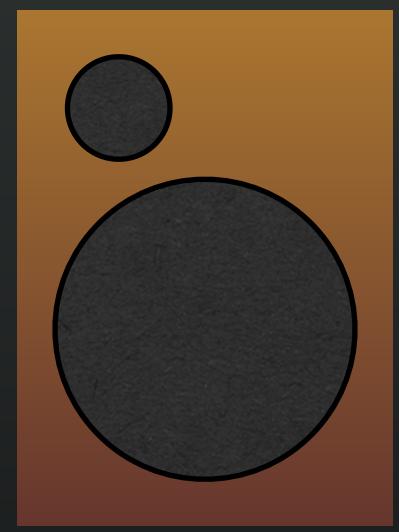
Progressive Enhancement



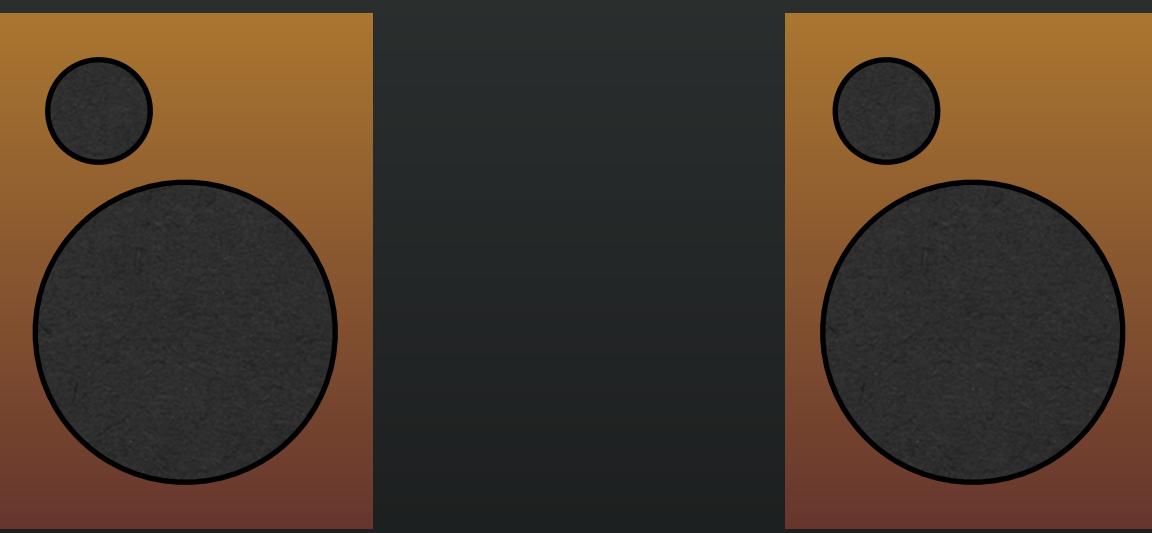
*I like an escalator because
an escalator can never break,
it can only become stairs.*

— Mitch Hedberg



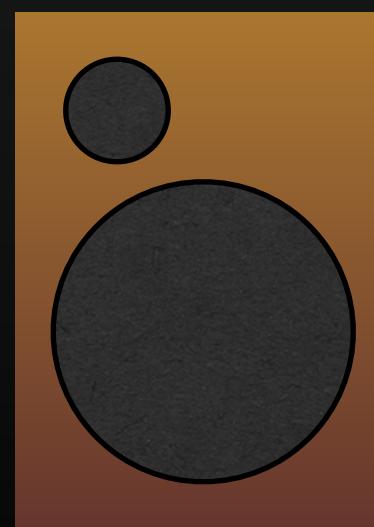
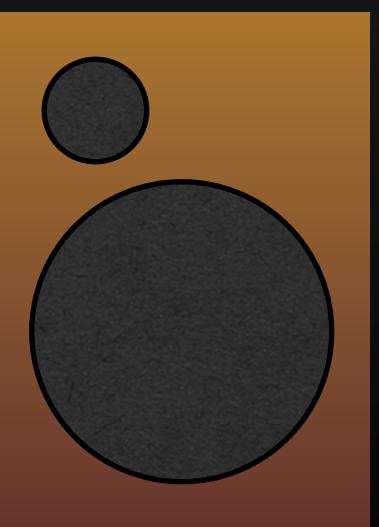
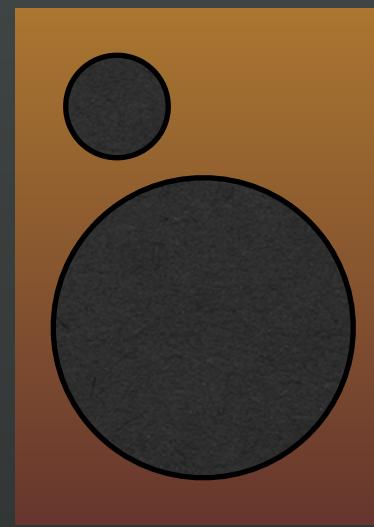
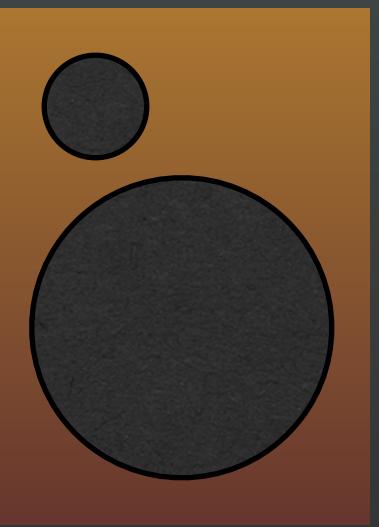


Mono



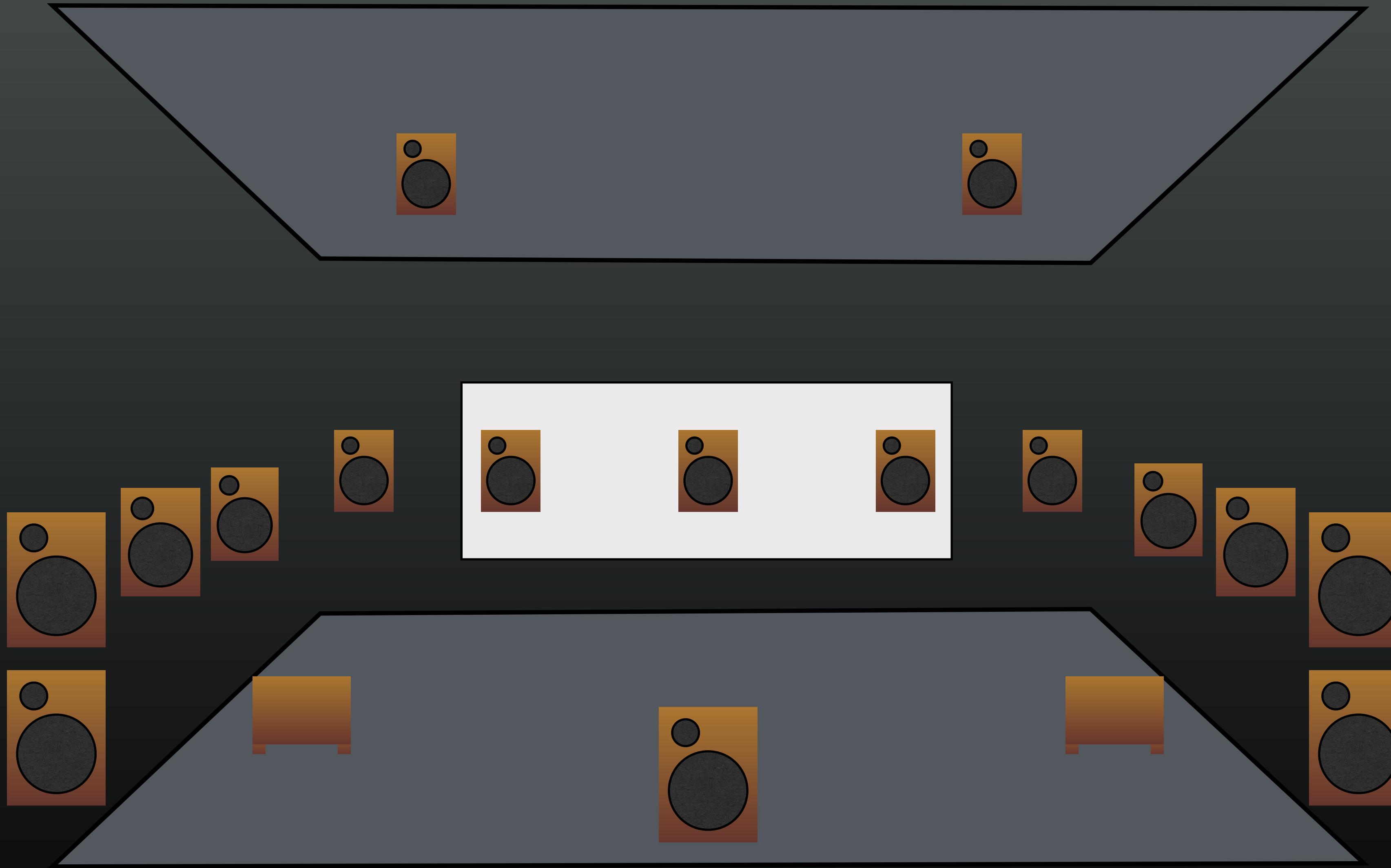
Stereo

Surround Sound

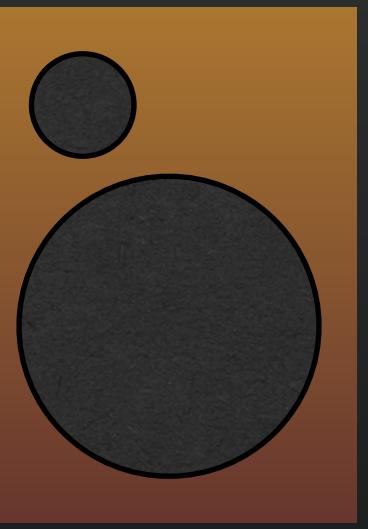


5.1 Channel Surround

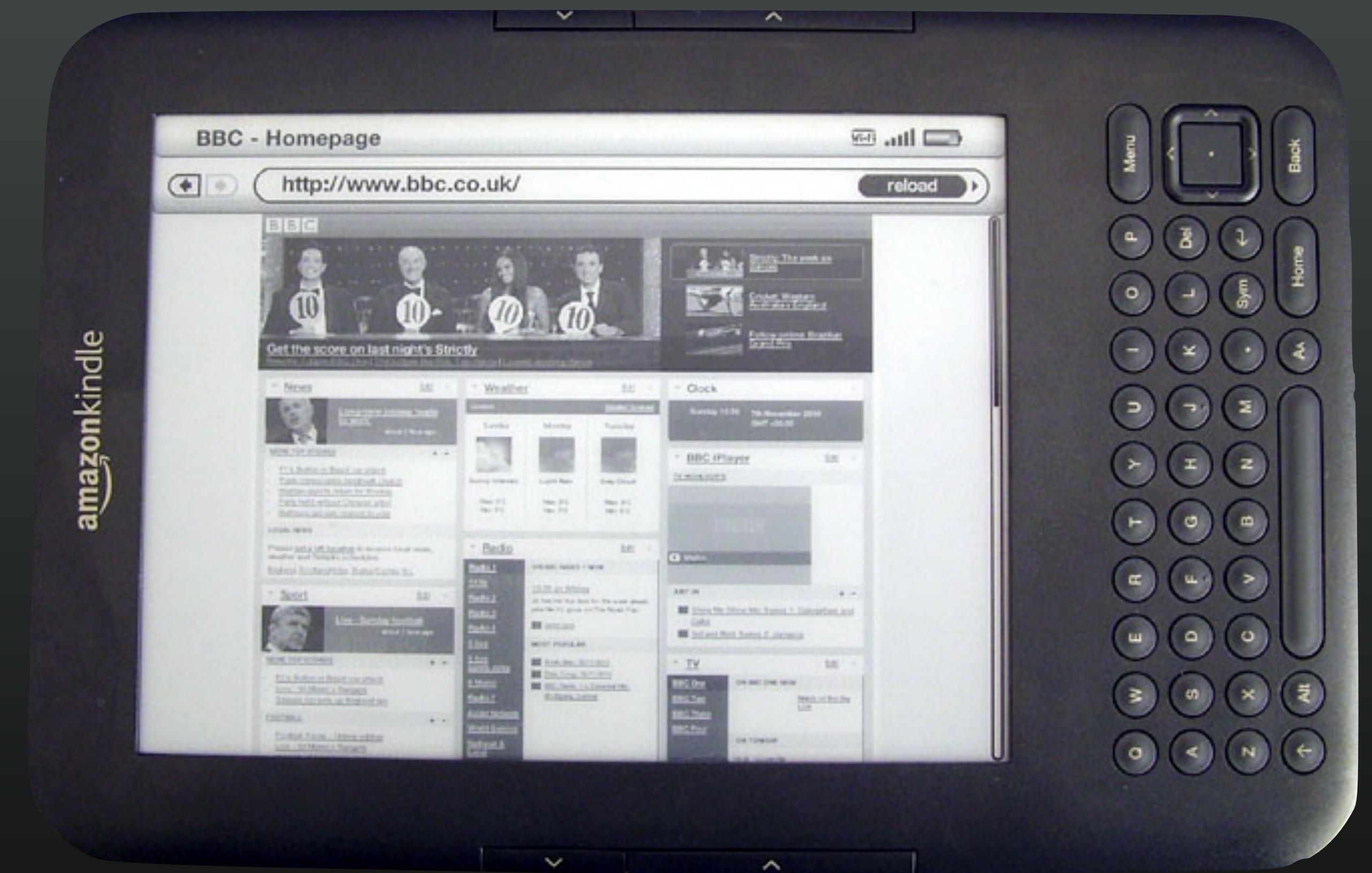
7.1 Channel Surround



16.2 Channel Surround



**Sometimes it's
all you need**



Kindle 3 = Free global data

Graceful Degradation

Modern Browsers



Older Browsers

Modern Browsers





Andrew Wight
@AndrewUX

Progressive enhancement is an escalator that becomes stairs.
Graceful degradation is building a lift then having to add
stairs.

14 May 12

 Reply  Retweet  Favorite

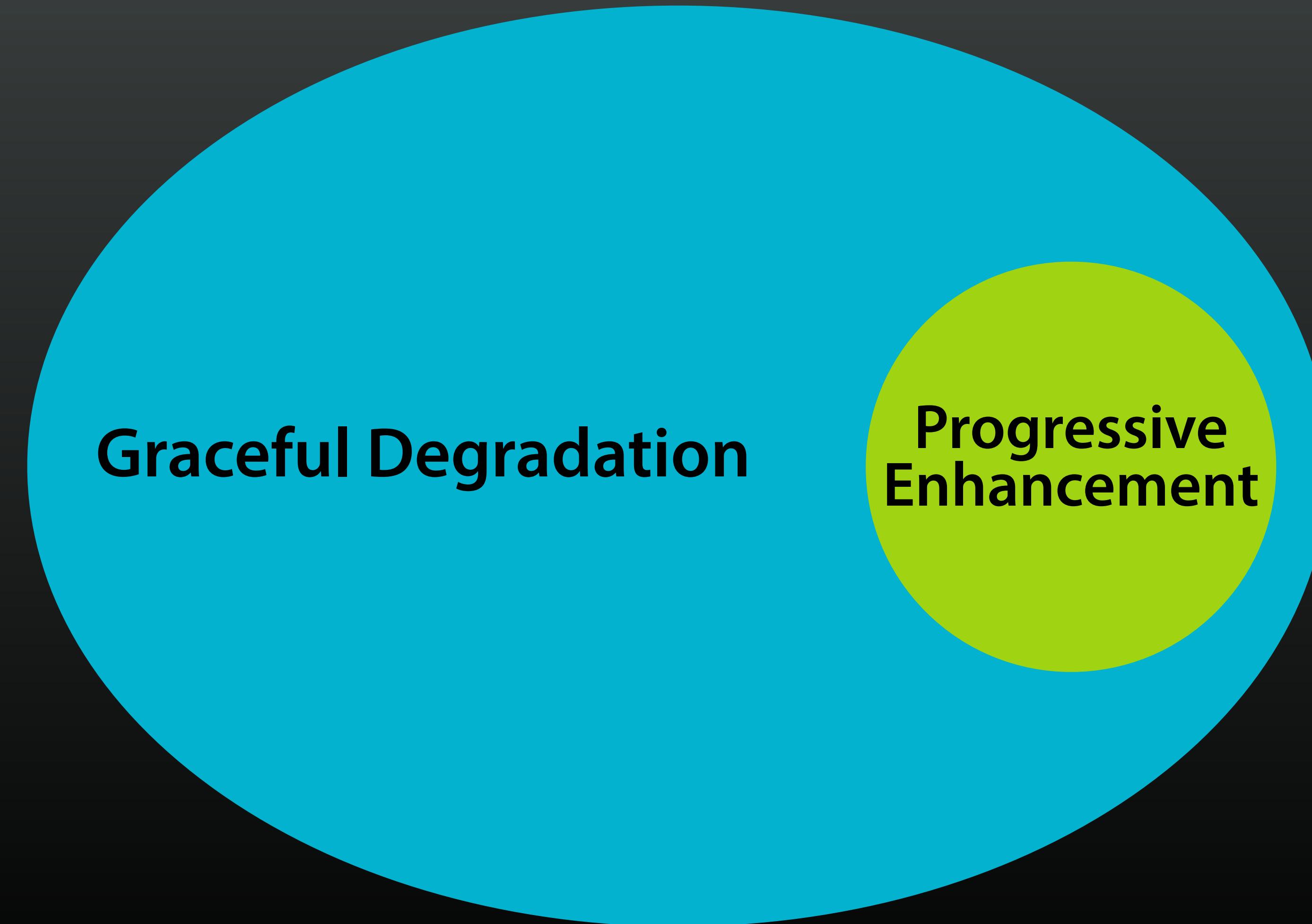


I'm sorry,
you need
more channels



**YOU MUST BE THIS TALL
TO RIDE WITH AN ADULT**

They're actually related





Technological
restrictions

[News](#) | [US](#) | [World](#) | [Sports](#) | [Comment](#) | [Culture](#) | [Business](#) | [Money](#) | [Environment](#) | [Science](#) | [Travel](#) | [Tech](#) | [Media](#) | [Life & style](#) | [Data](#)

[News](#) > [Technology](#)

Sky's internet service mistakenly blocks web-critical plugin

Sky blocked jQuery, a plugin crucial to the operation of many of the internet's biggest websites, after wrongly classifying it as malware on Sunday night

Alex Hern

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[Follow @guardiantech](#)

theguardian.com, Tuesday 28 January 2014 07.51 EST

[Jump to comments \(42\)](#)



Parts of the web were broken after a crucial plugin was mistakenly blocked.
Photograph: Culture RM/Alamy

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Technology

Web filtering · Internet · Broadband · Malware

Media

BSkyB

Business

BSkyB

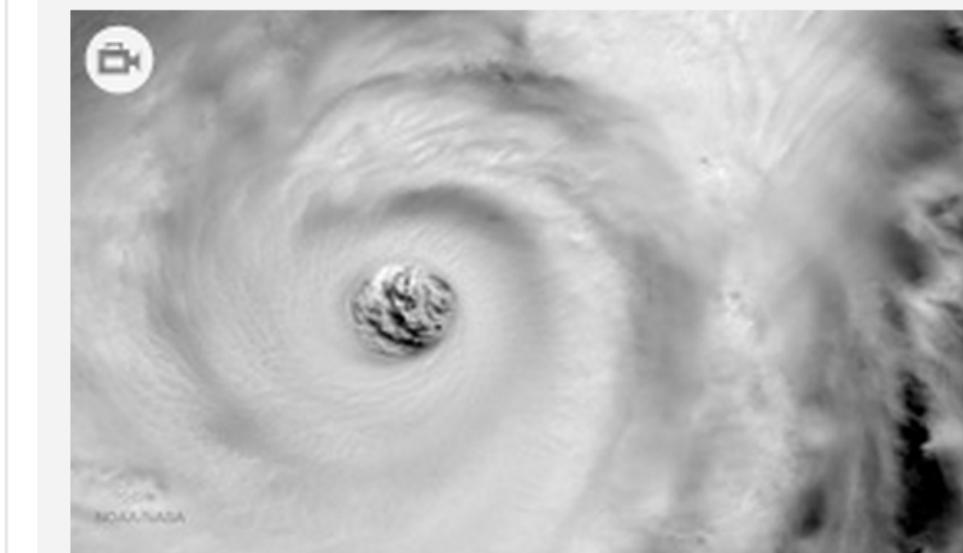
More news

More on this story



BSkyB signs new five-year deal for exclusive rights to HBO TV catalogue
Broadcaster struck

Today's best video



Japan's Typhoon Vongfong seen from International Space Station - video

Nasa footage shows the powerful eye of Typhoon Vongfong as it makes its way towards Okinawa, Japan



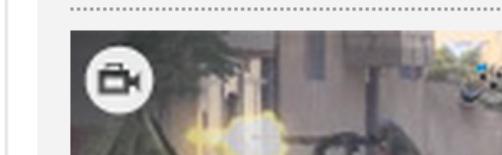
Ukrainian Darth Vader makes election run

Who knew Star Wars villain Darth Vader was in fact a Ukrainian Cossack at heart?



Robotic suit helps explore ancient wreck

New artifacts found in Greek island shipwreck, which sank in first century BC



Isis video 'shows street battle in Kobani'

Video posted on social

Sections ≡

The Washington Post

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Sign In

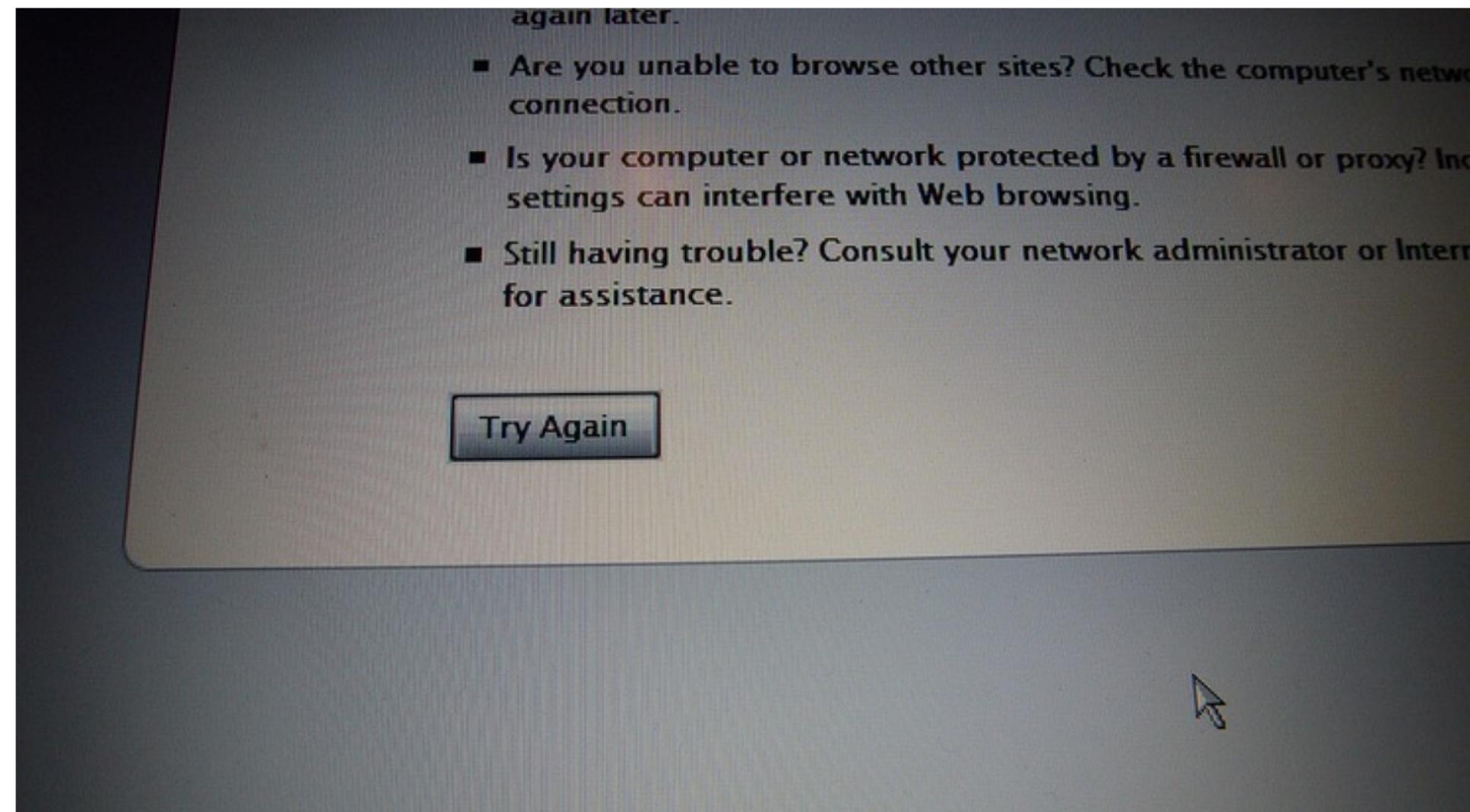
Subscribe

The Switch

FCC to Marriott: No, you can't force your customers onto terrible hotel WiFi



By Brian Fung October 3



Advertisement



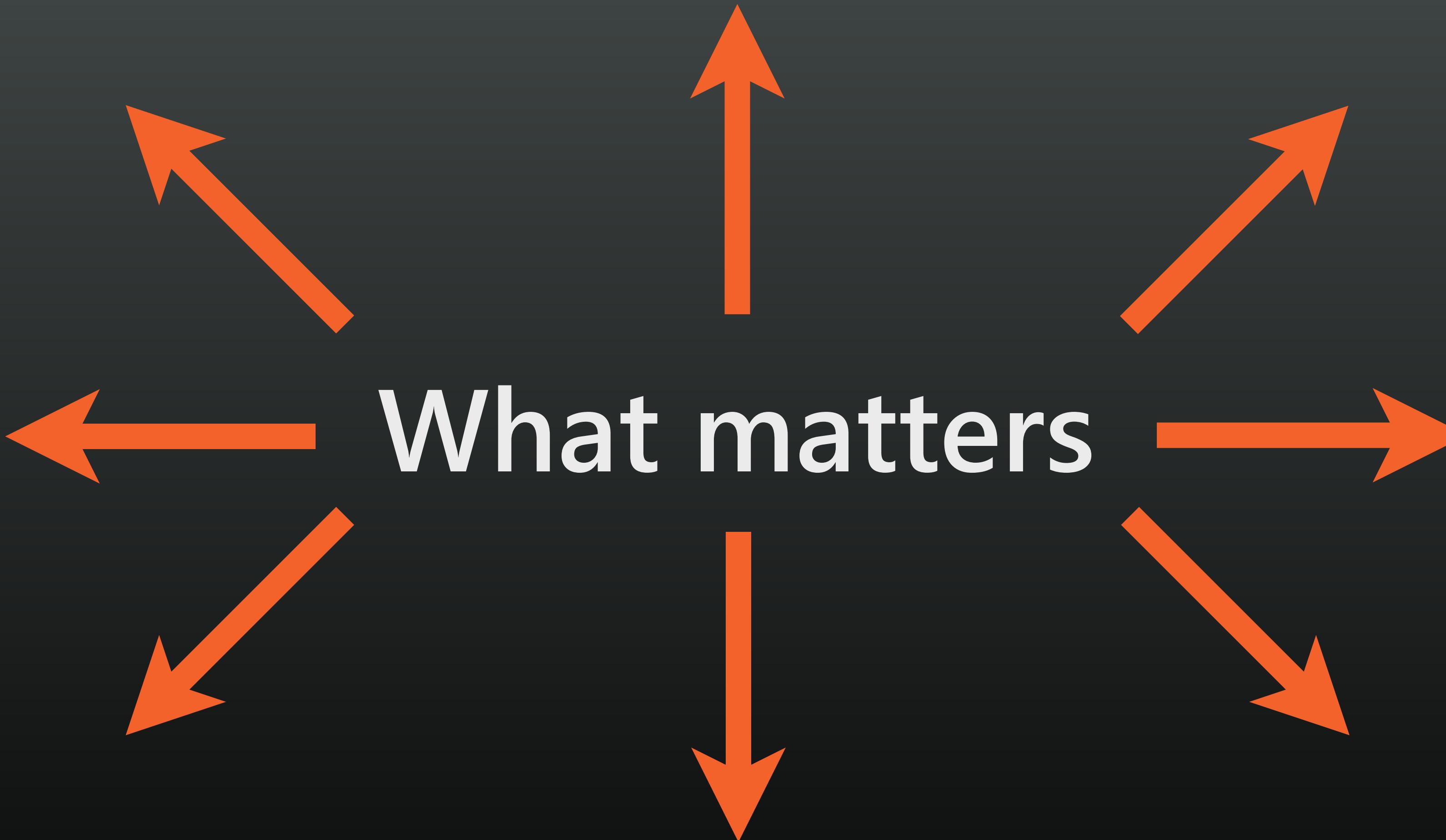
Aw, Snap!

Google Chrome ran out of memory while trying to display this webpage.

[Learn more](#)

[Send feedback](#)

What matters



“Mobile first”

It's all about process

Step by step

1. Focus on what matters.

The essential nugget



● GOVERNMENT

Obamacare sign-ups begin; cost-sharing reduction still available

By CHLOÉ MORRISON

Step by step

2. Write it out, then read it back.

How does this photo make you feel?

- Embarrassing
- Upsetting
- Saddening
- Bad Photo
- Other

Step by step

2. Write it out, then read it back.

How does this photo make you feel?

- Embarrassing
- Upsetting
- Saddening
- Bad Photo
- Other it's embarrassing

Step by step

2. Write it out, then read it back.

Please describe the photo

- It's embarrassing
- It's a bad photo of me
- It makes me sad

Step by step

3. Look for semantics that support 1 & 2.



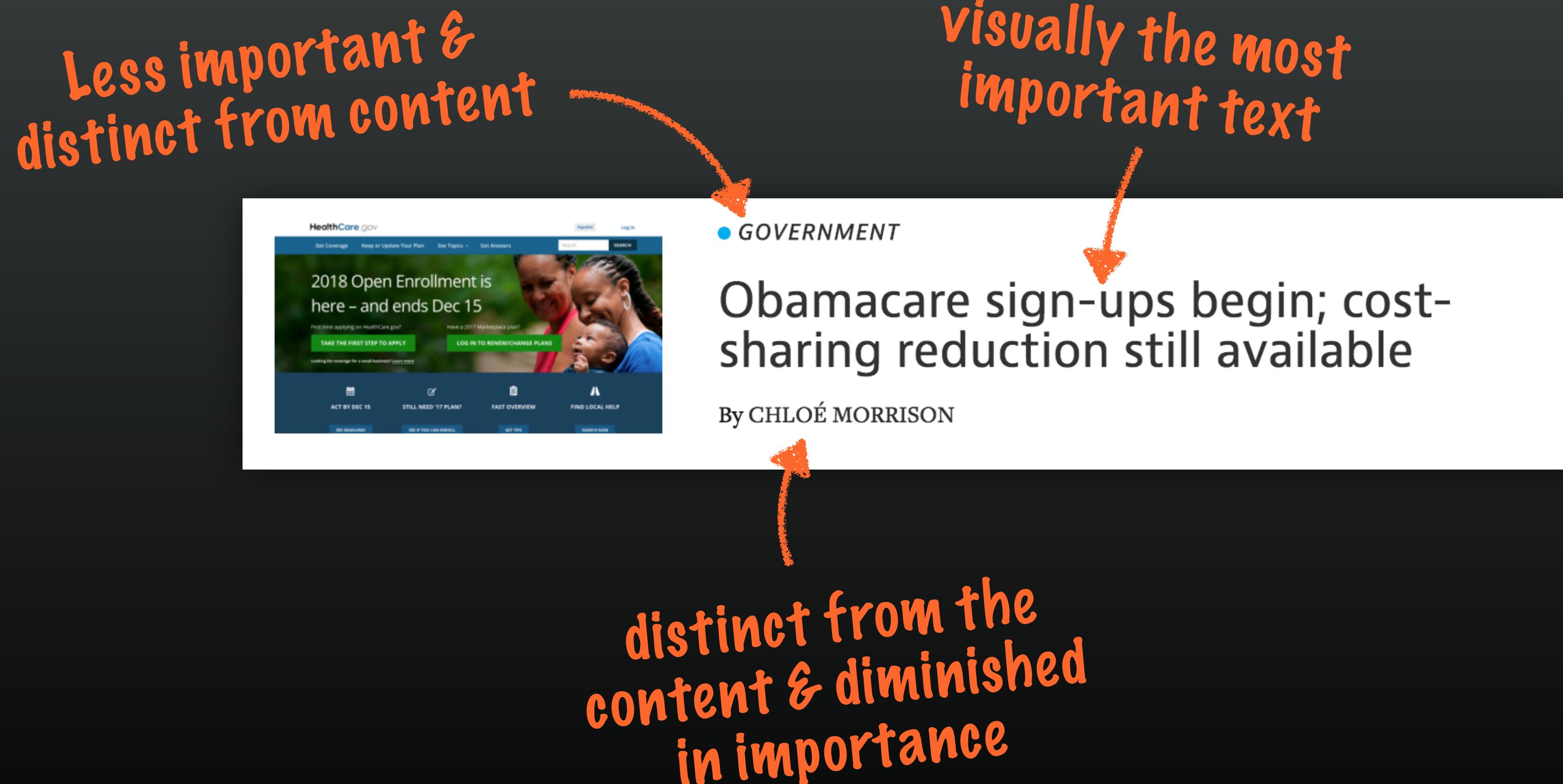
Step by step

3. Look for semantics that support 1 & 2.



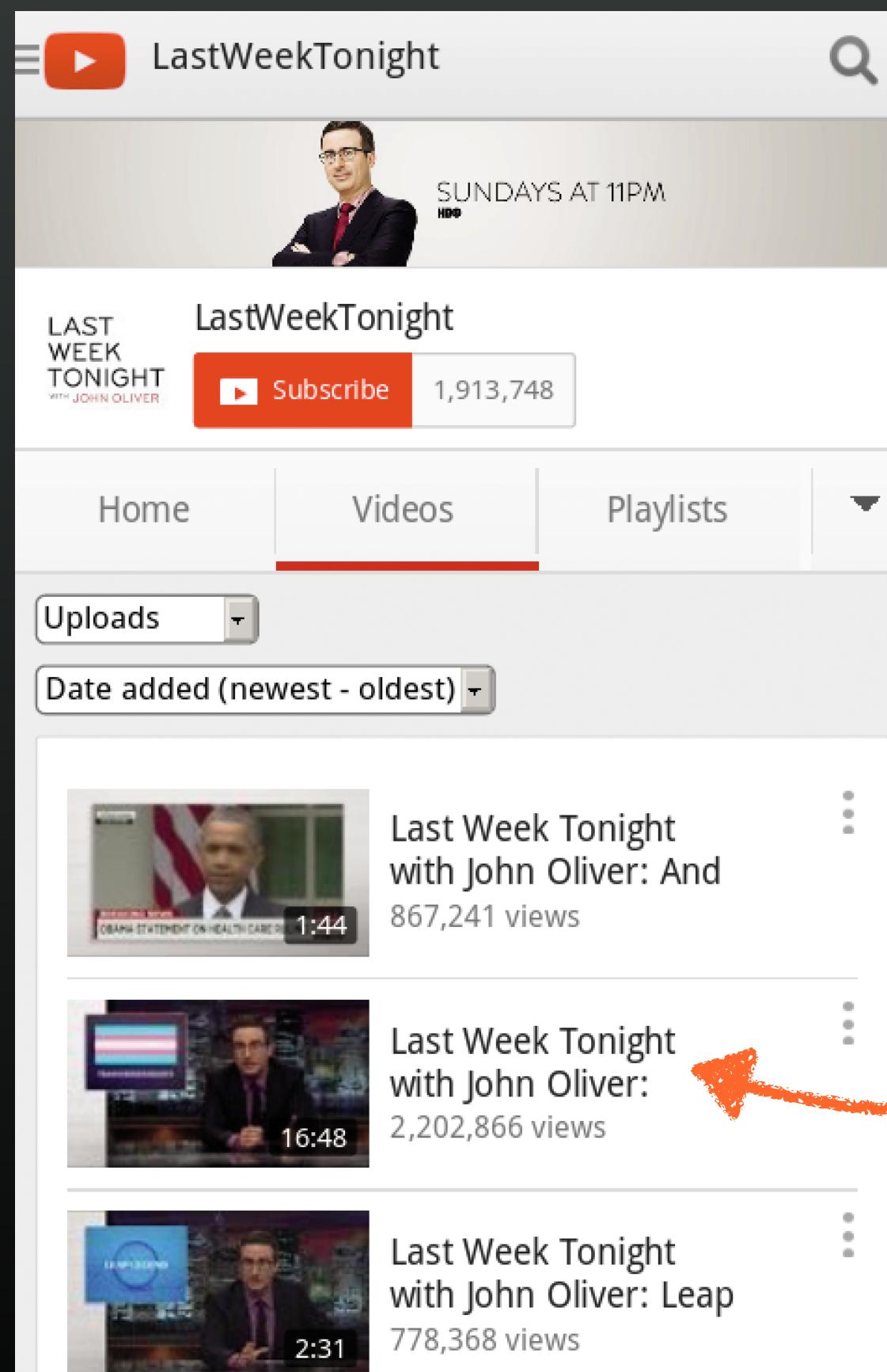
Step by step

4. Think about how design can improve comprehension.



Step by step

5. Consider how your design choices impact the reading experience.



Can't tell what the
episode is called



Step by step

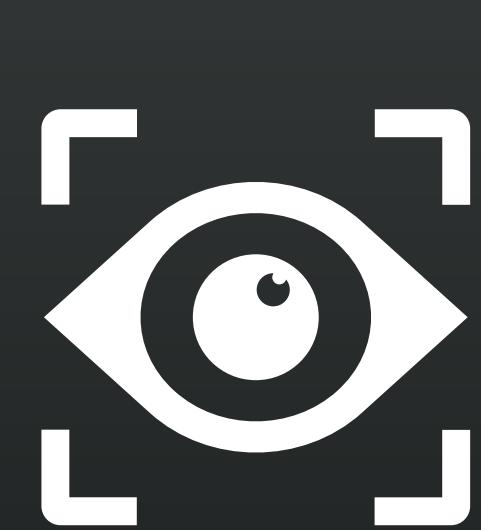
5. Consider how your design choices impact the reading experience.

Floated images crush the
text on small screens

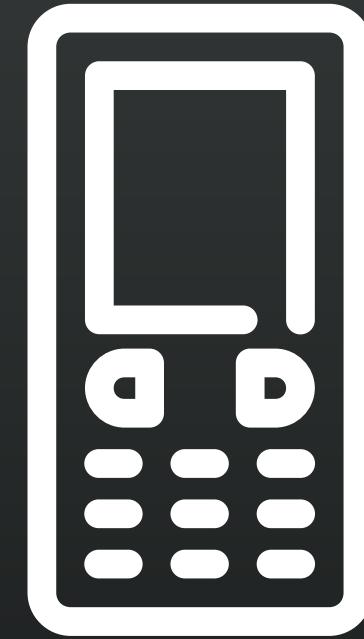


Step by step

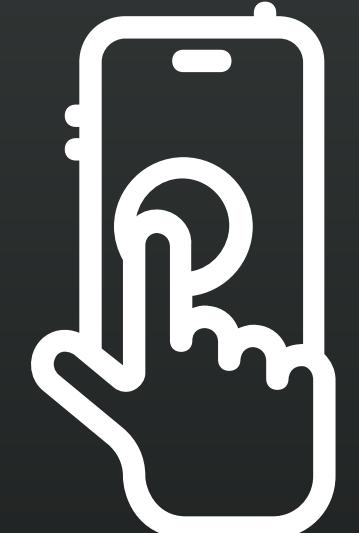
6. Think about the many different ways folks might interact.



eye tracking



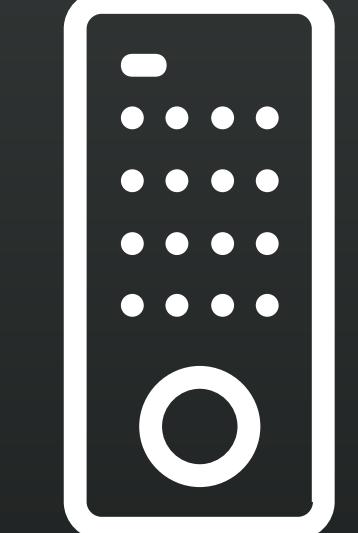
T9



touch



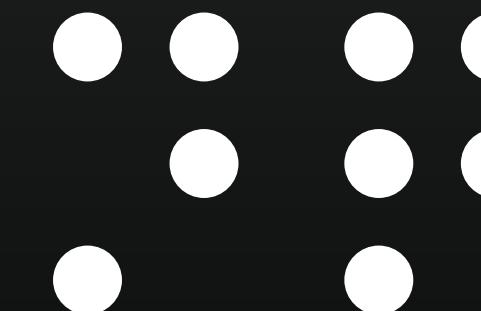
mouse



remote



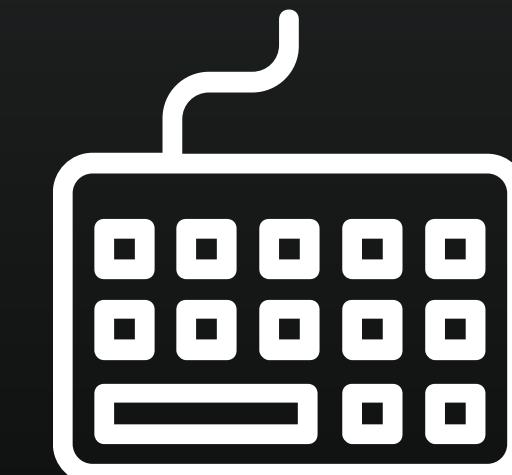
pen



braille



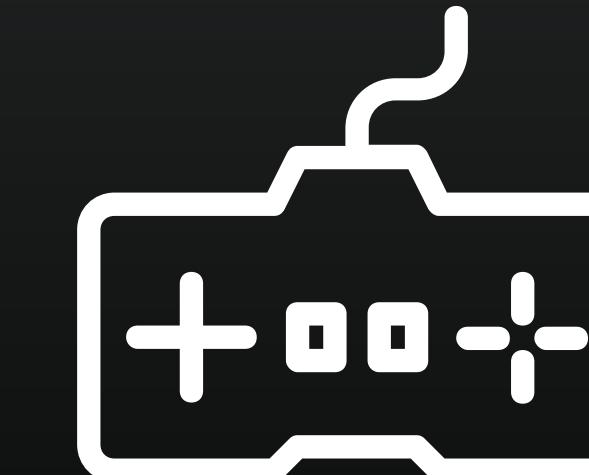
print



keyboard



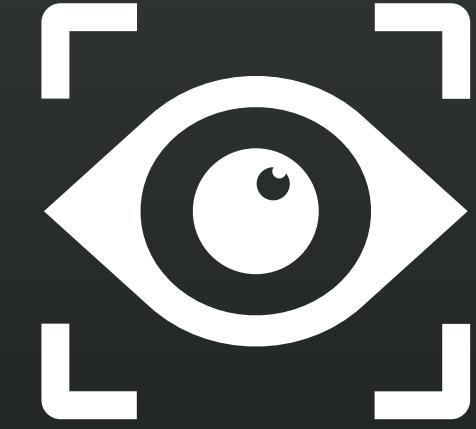
audio



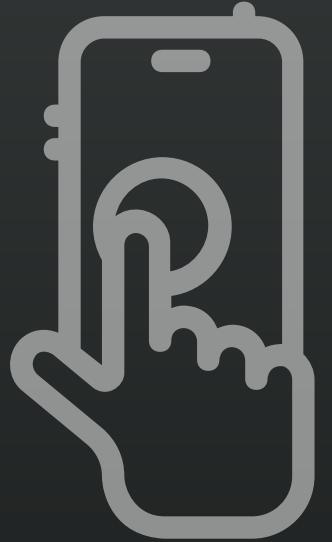
gamepad

Step by step

6. Think about the many different ways folks might interact.



eye tracking



touch



mouse

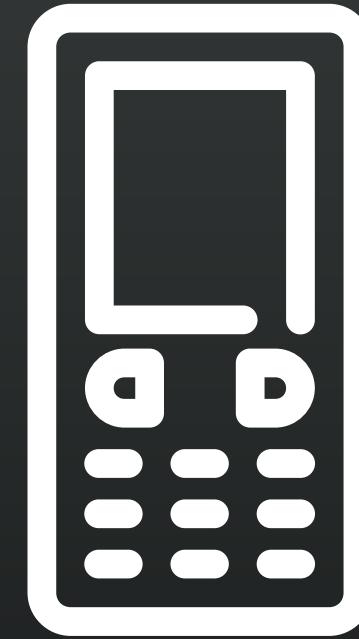
Hover?

Step by step

6. Think about the many different ways folks might interact.



eye tracking



T9



touch



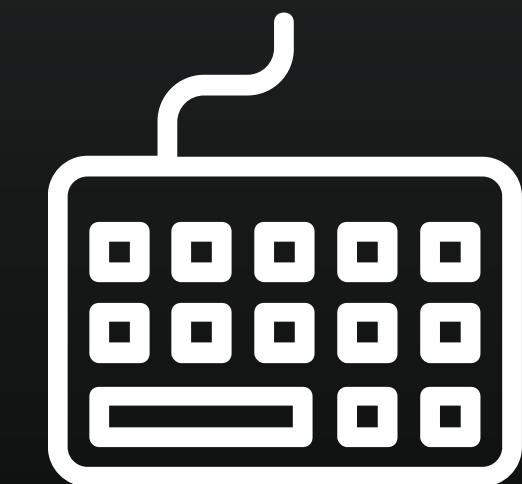
mouse



remote



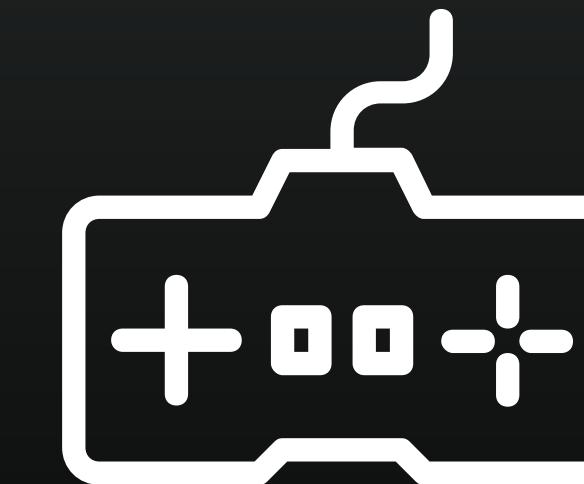
pen



keyboard



audio



gamepad

Focus & target?

Step by step

6. Think about the many different ways folks might interact.



touch



mouse

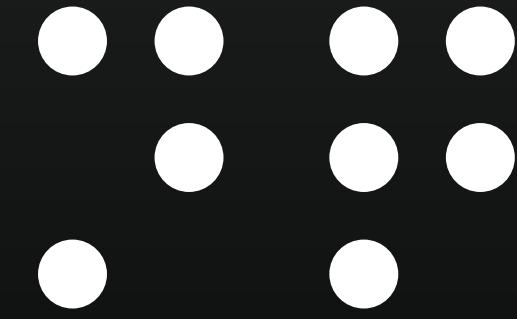


pen

Gestures?

Step by step

6. Think about the many different ways folks might interact.



braille



print



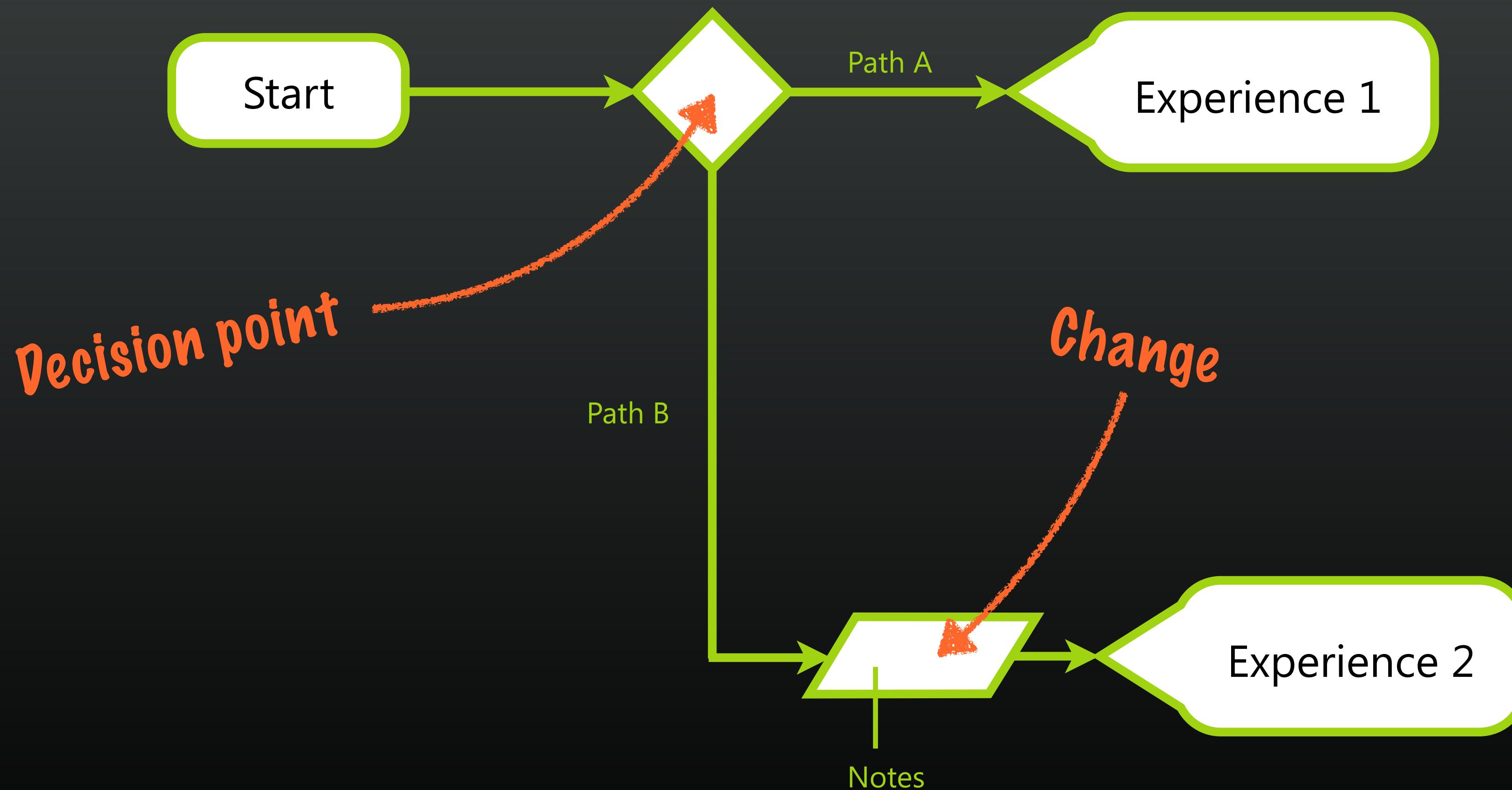
audio

Text expansions?

Created by
from the N

Step by step

7. Map the potential experiences.



Step by step

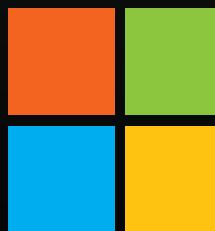
1. Focus on what matters.
2. Write it out, then read it back.
3. Look for semantics that support 1 & 2.
4. Think about how design can improve comprehension.
5. Consider how your design choices impact the reading experience.
6. Think about the many different ways folks might interact.
7. Map the potential experiences.
8. Iterate.

Thank you!

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Microsoft