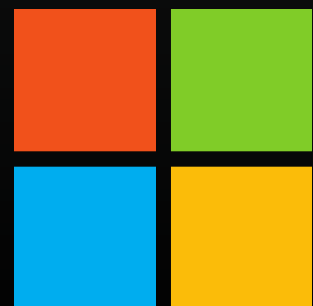


Adapting to Reality



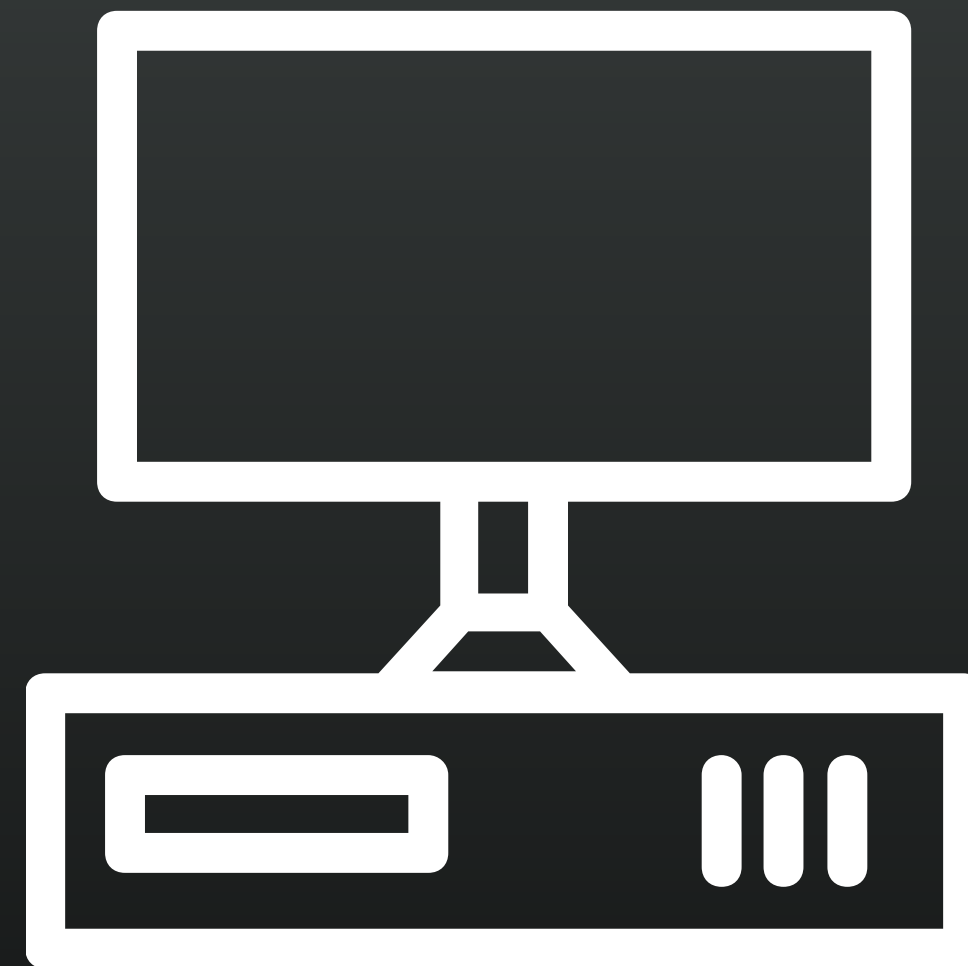
Aaron Gustafson

@AaronGustafson

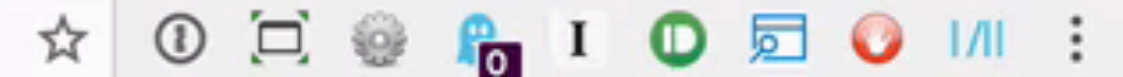
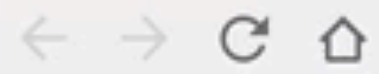
slideshare.net/AaronGustafson

Web design &
development is **hard**

In the beginning...



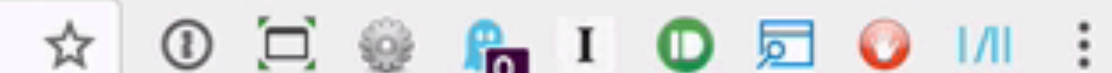
640 × 480



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 centerd.

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Ok, we can go a little larger



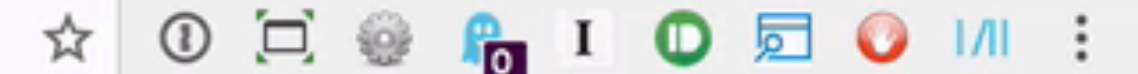
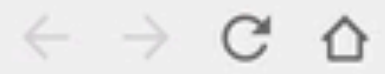
800 × 600



This is a fixed width at 800px.

What is Lorem Ipsum?

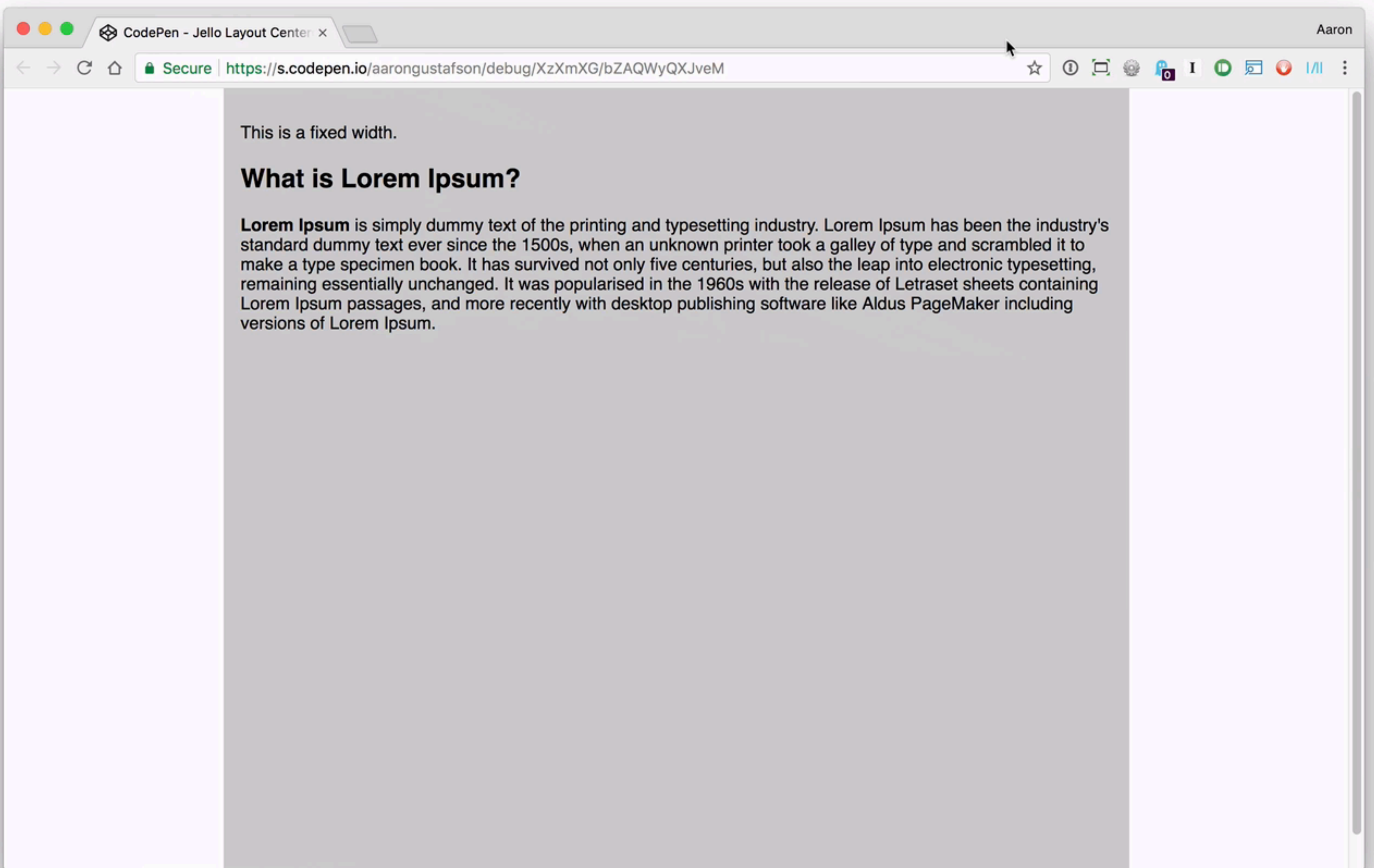
Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap 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 liquid width.

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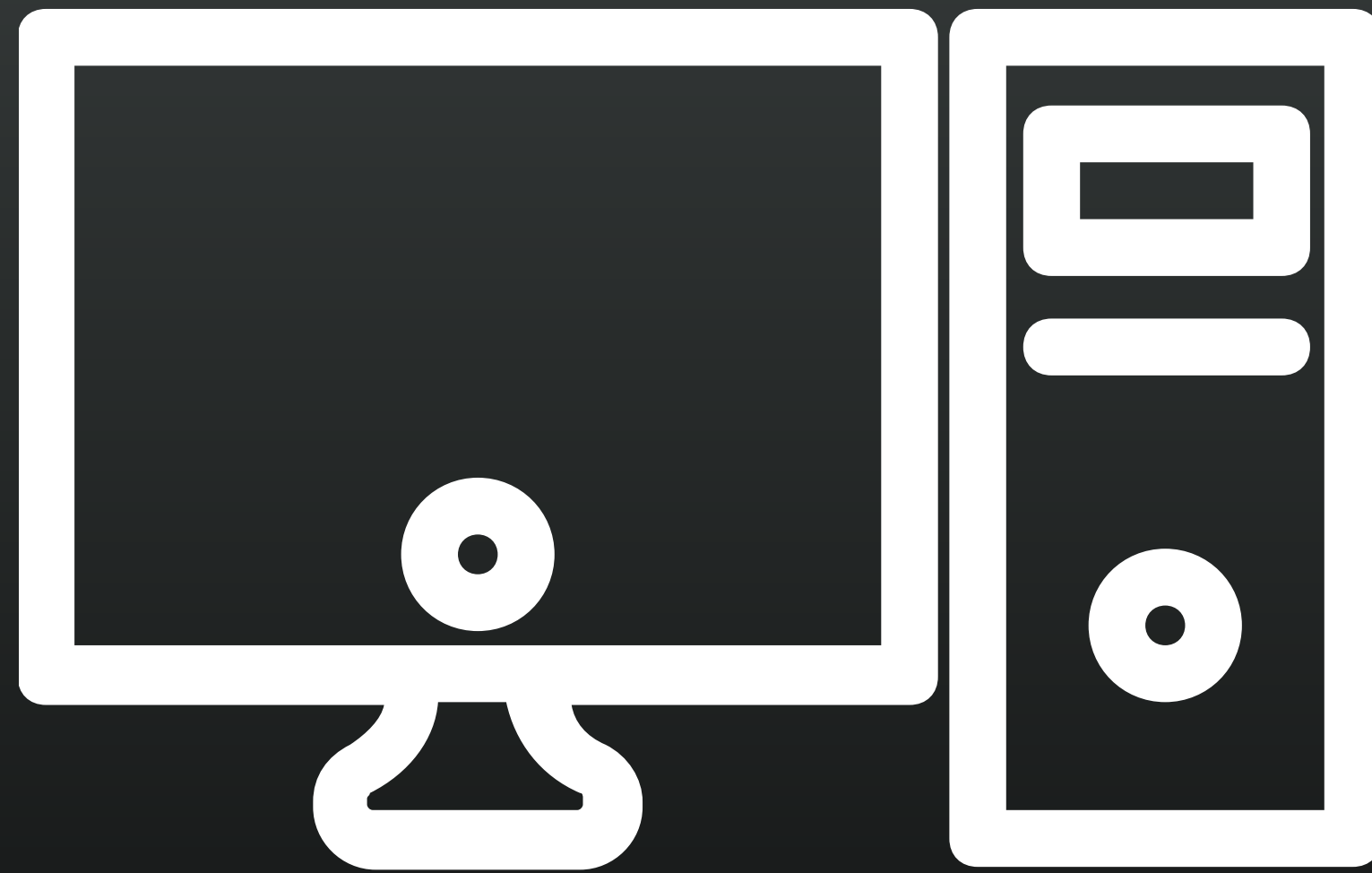


This is a fixed width.

What is Lorem Ipsum?

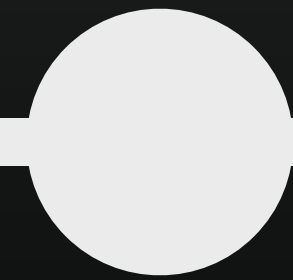
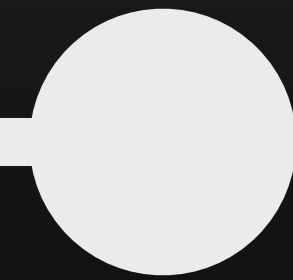
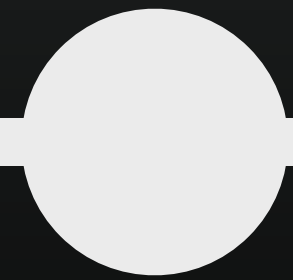
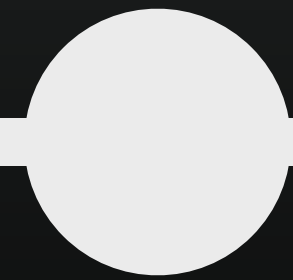
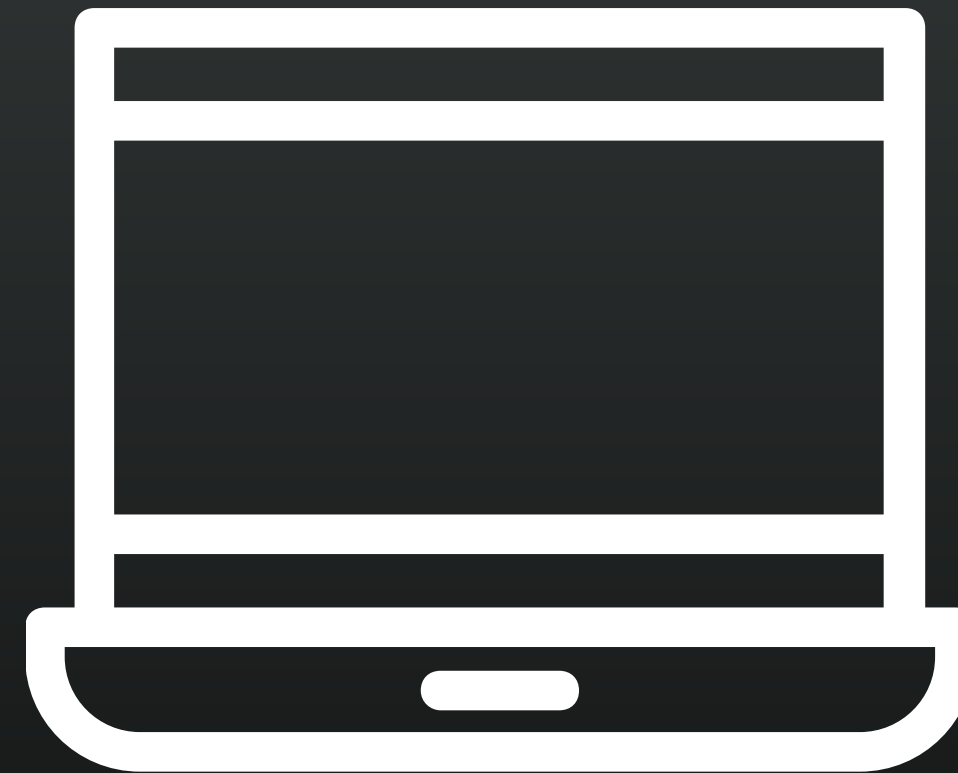
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Ok, a bit larger, but that's it



1024 × 768

Of course laptops...



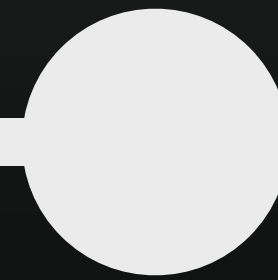
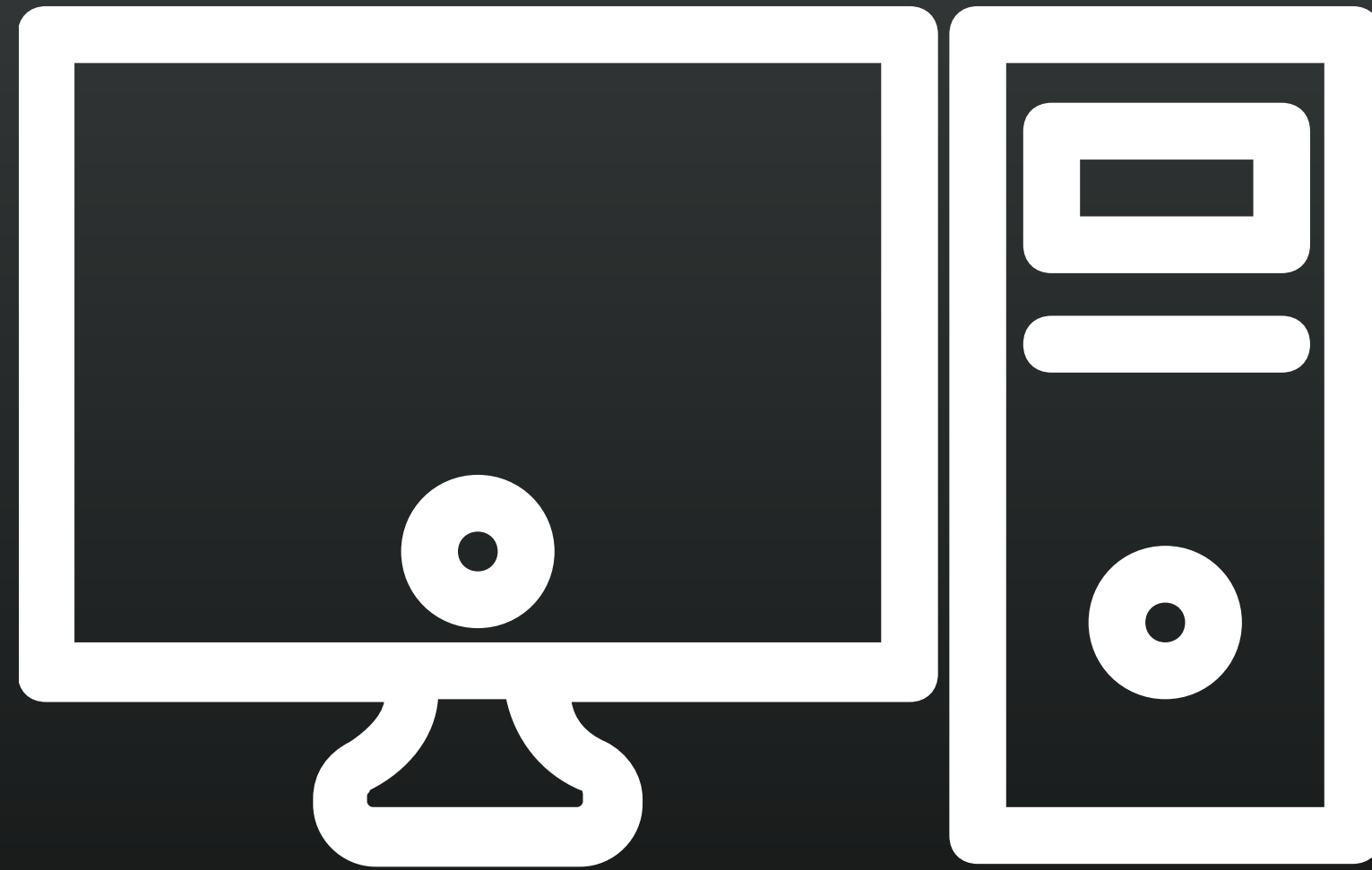
800 × 600

1024 × 600

1280 × 800

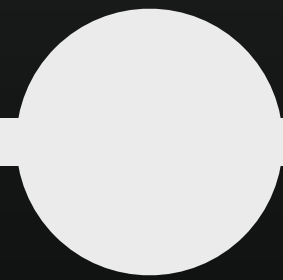
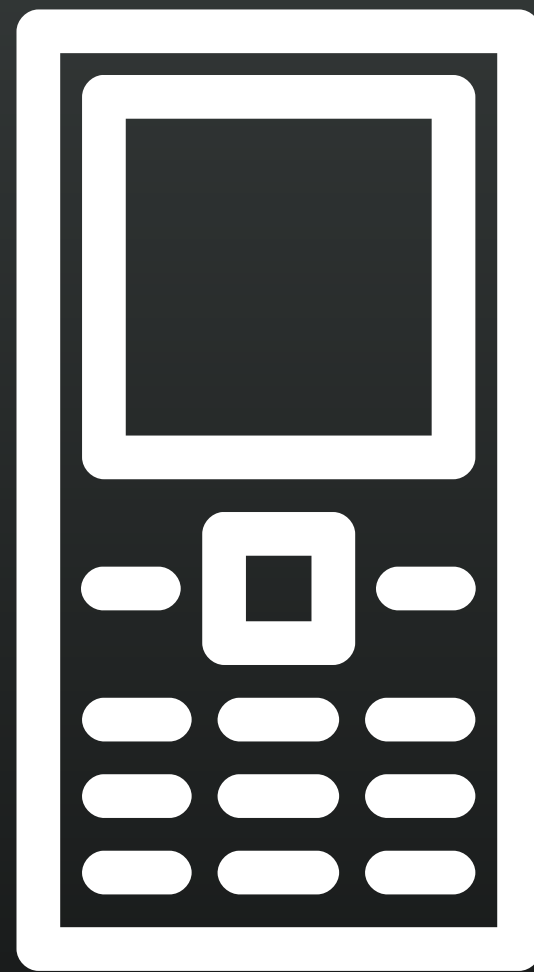
1366 × 768

The web's "happy place"

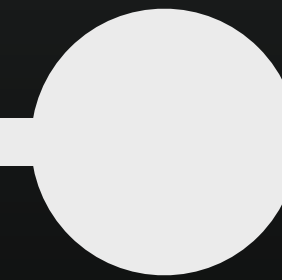
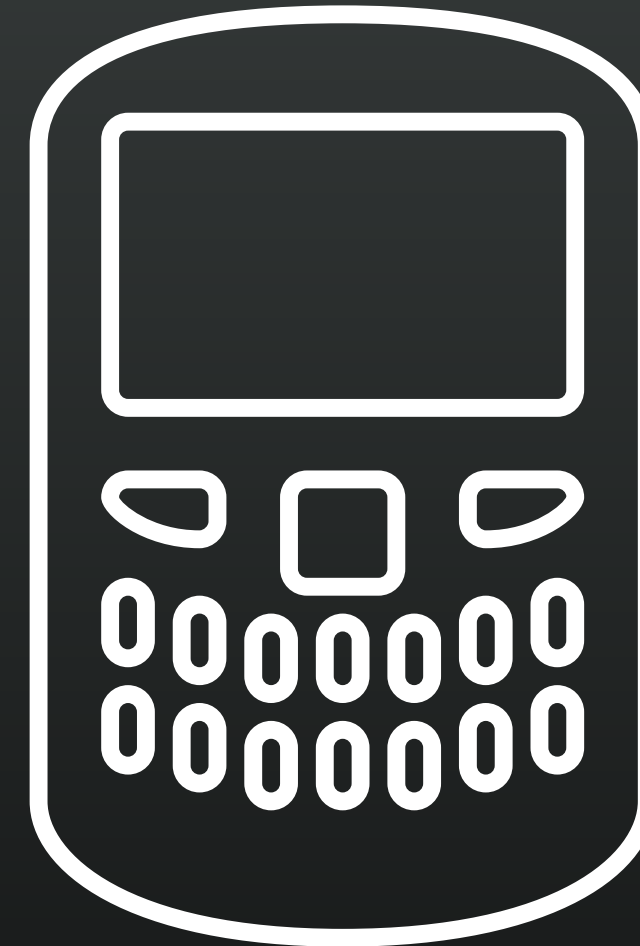


1024 × 768

We were ignoring mobile...

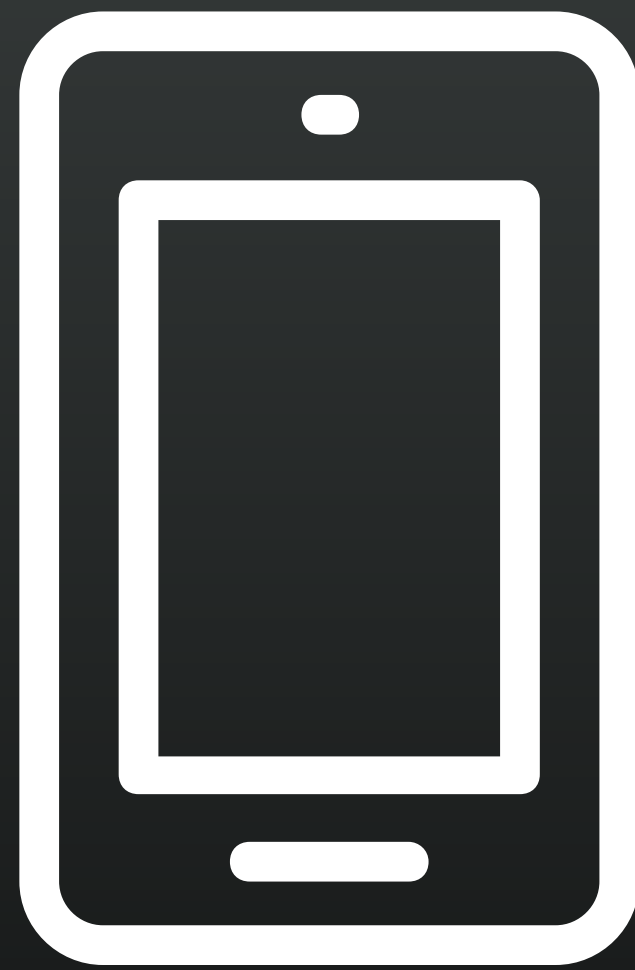


240×240



640×200

Until this happened

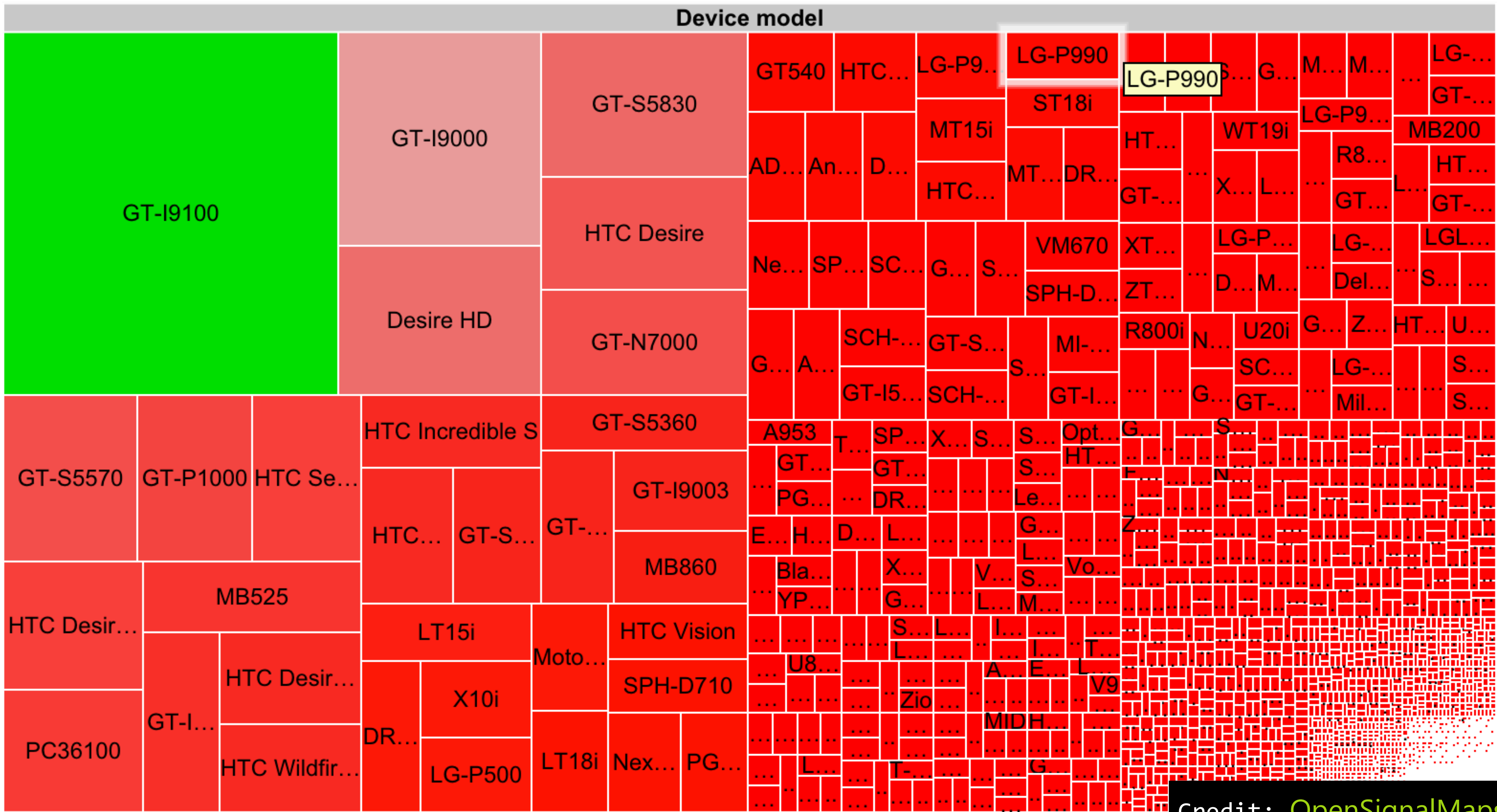


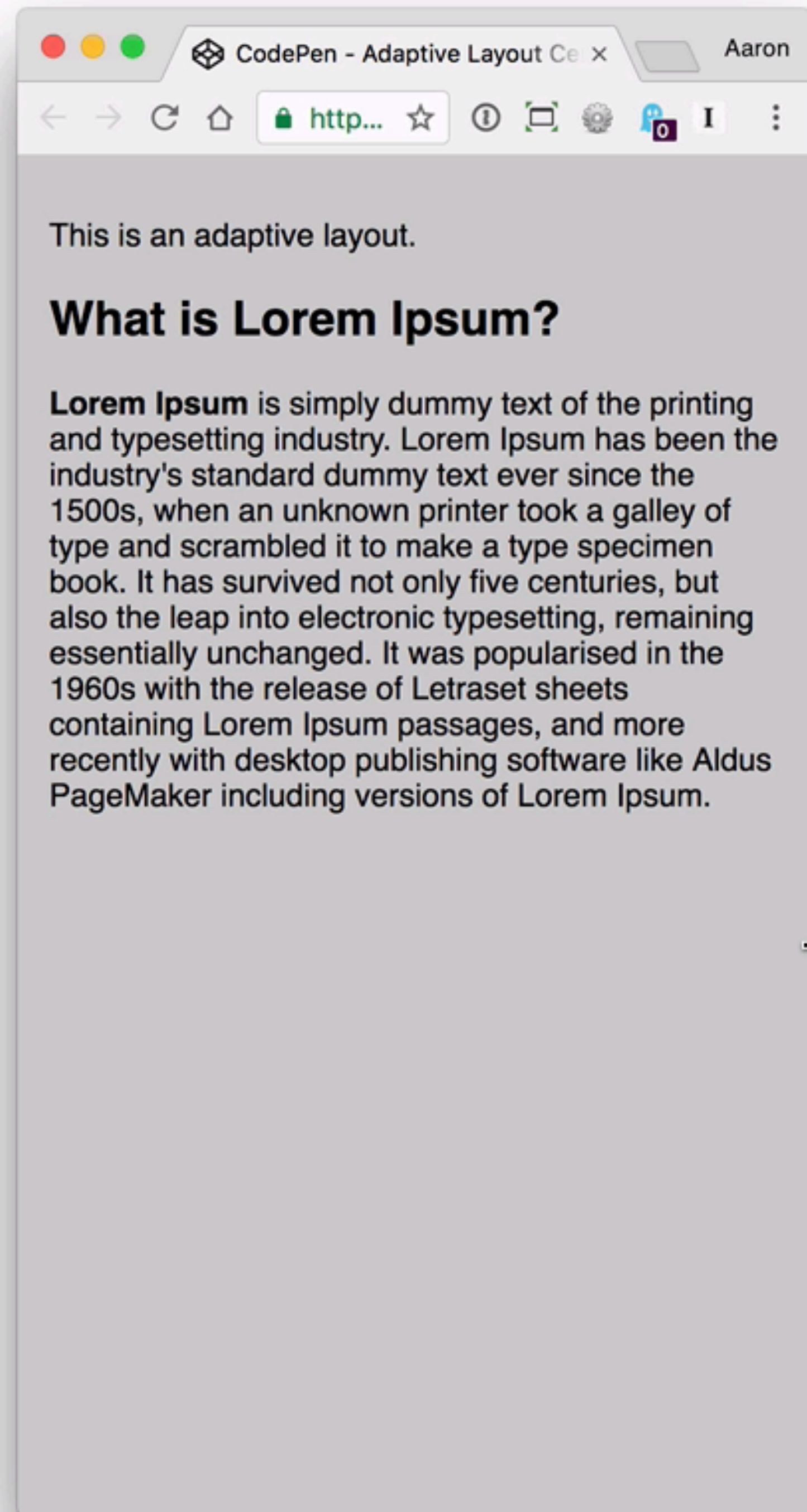
320×480

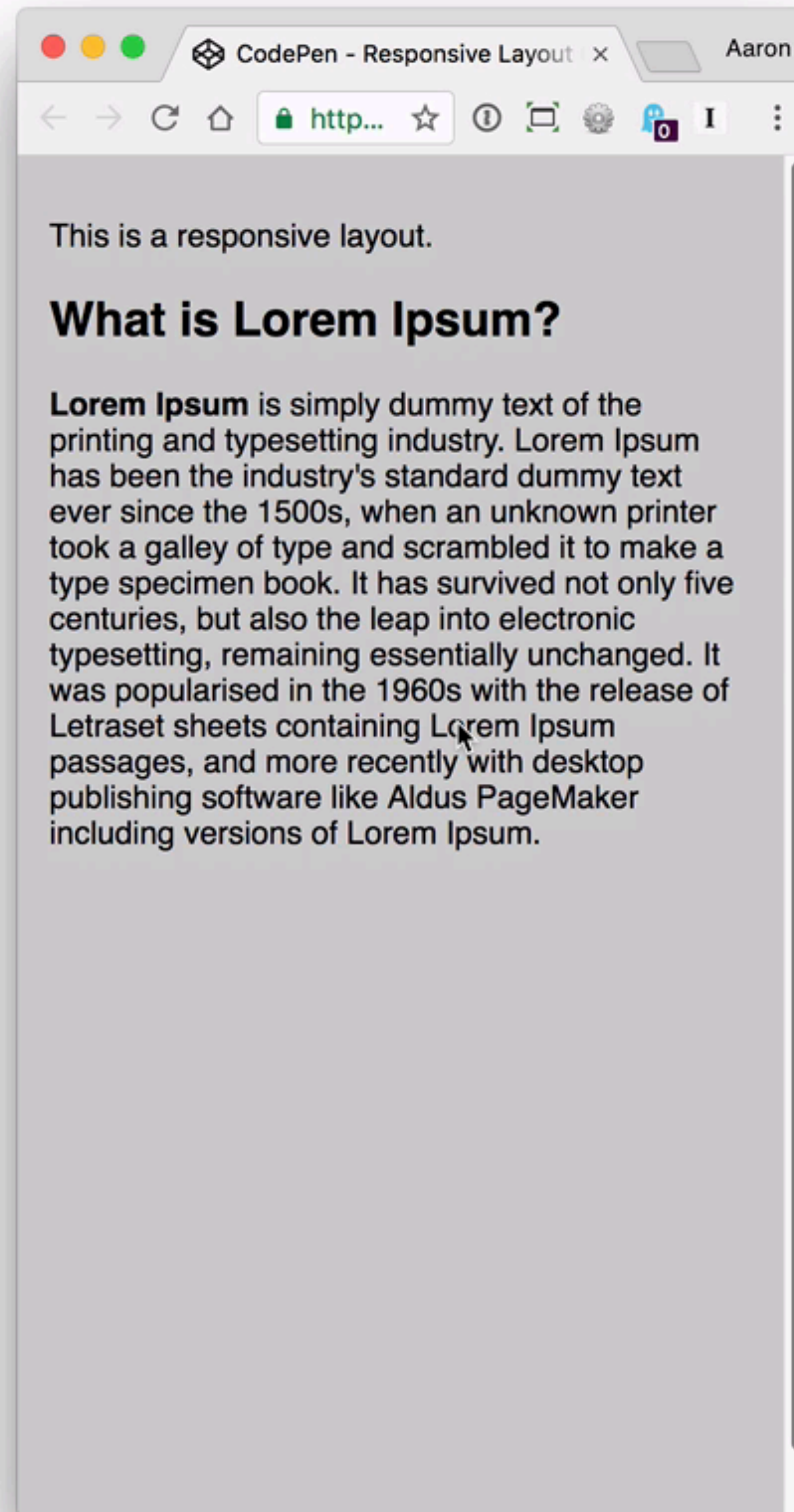


3840×2160

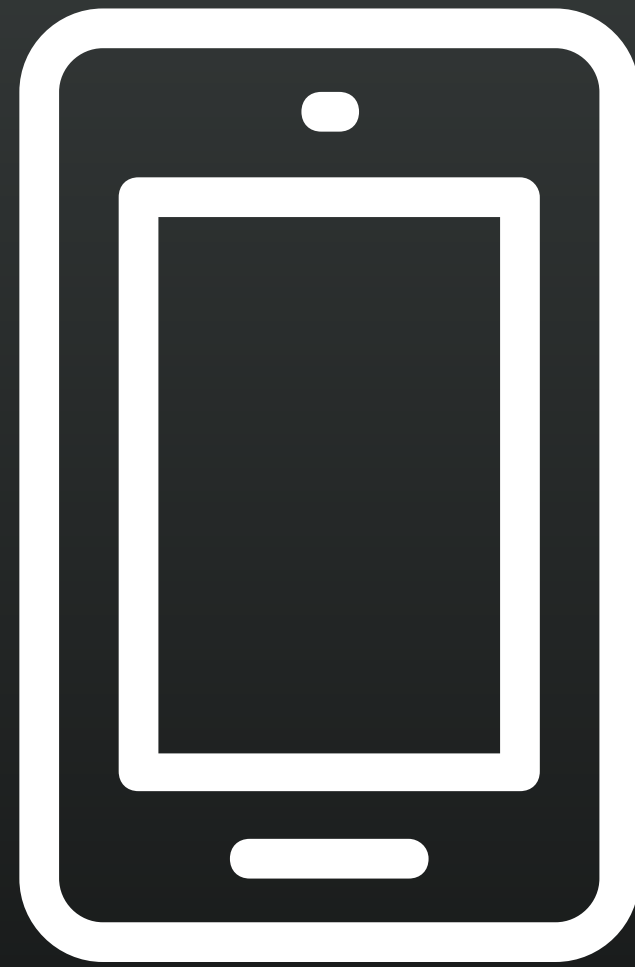
Don't even get me
started on tablets



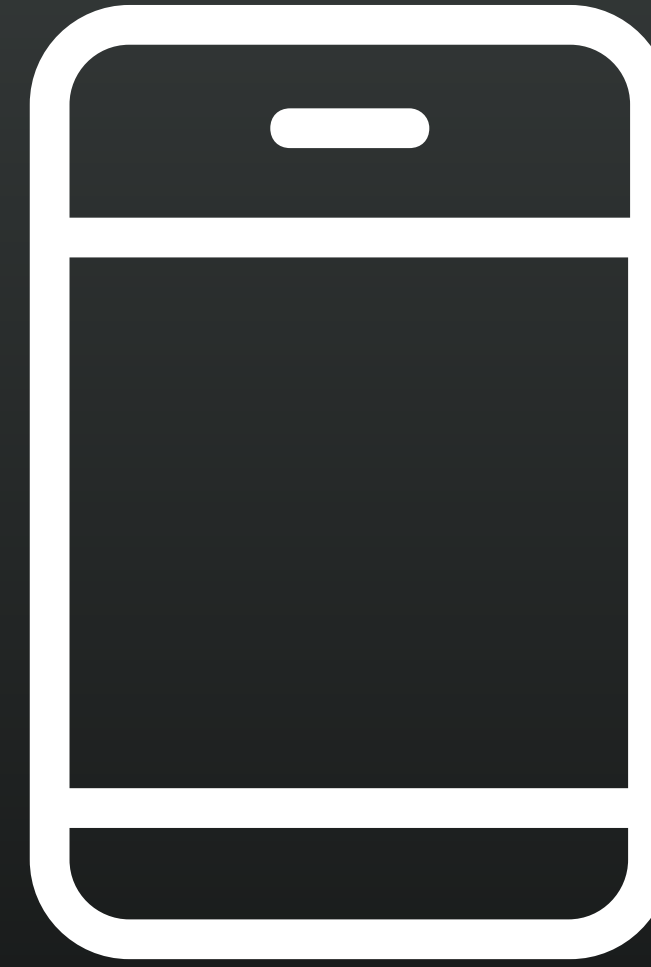




Until this happened

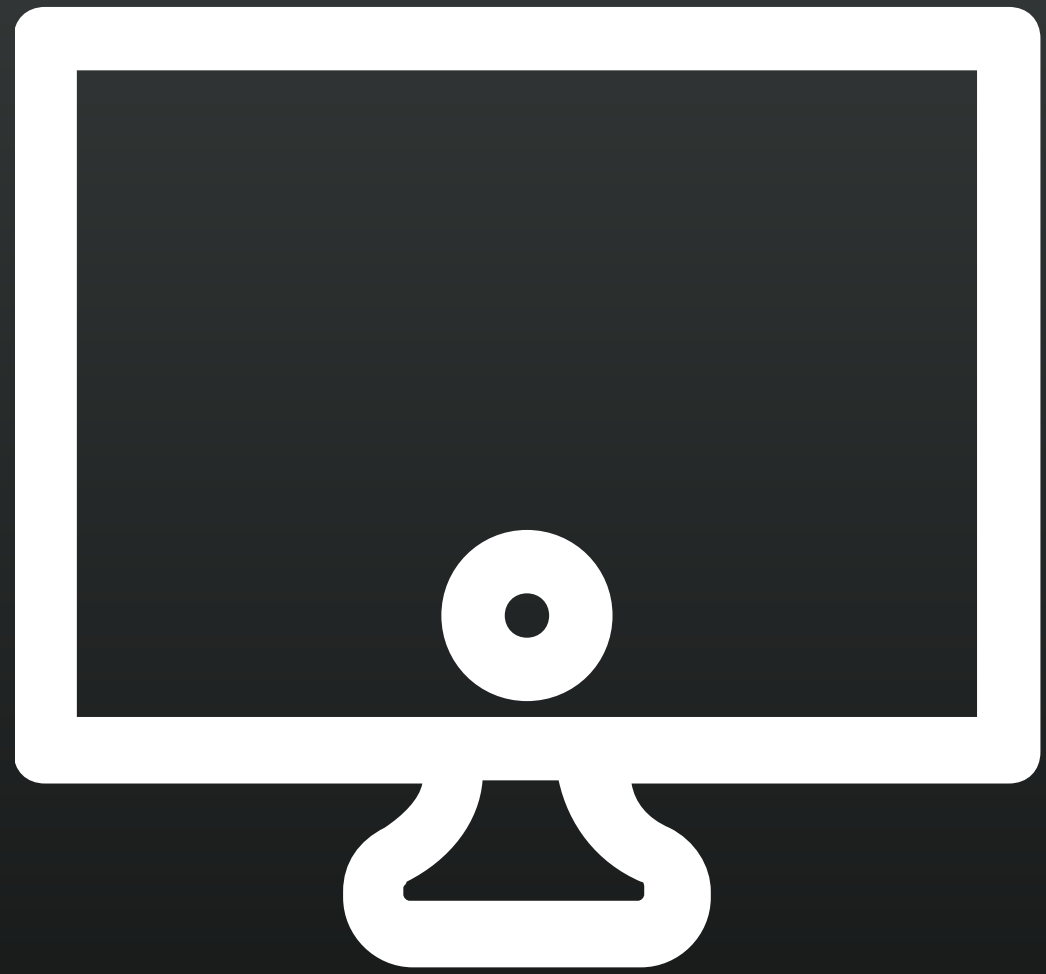


320×480



3840×2160

Desktops today...



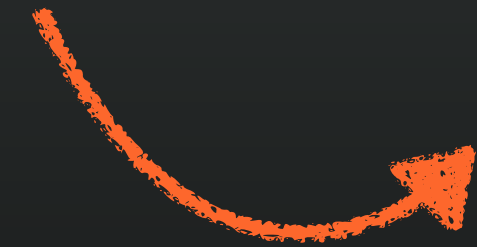
1920 × 1080



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

“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



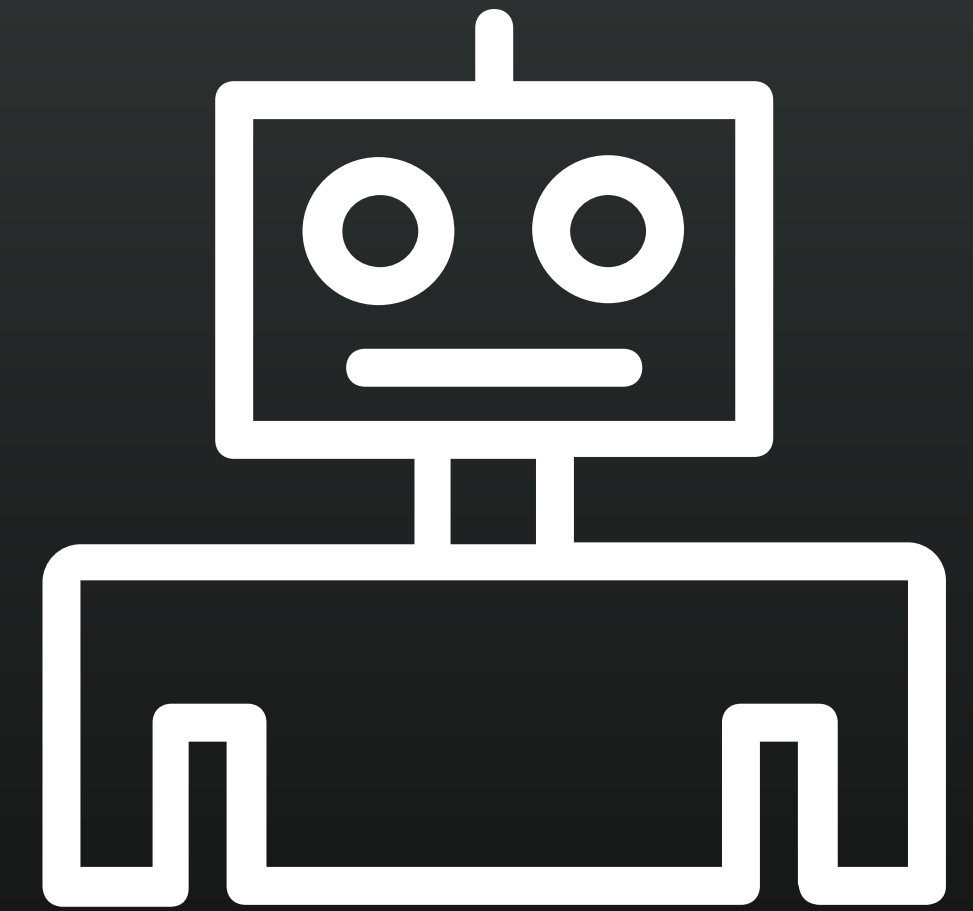
wearables



smart tvs



IoT

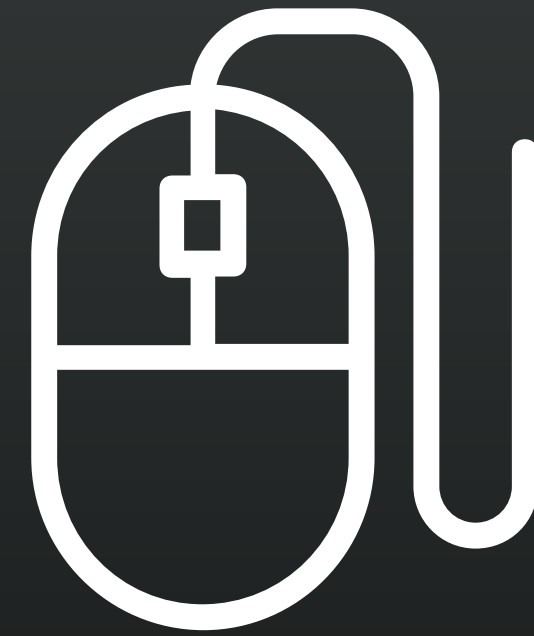


assistants

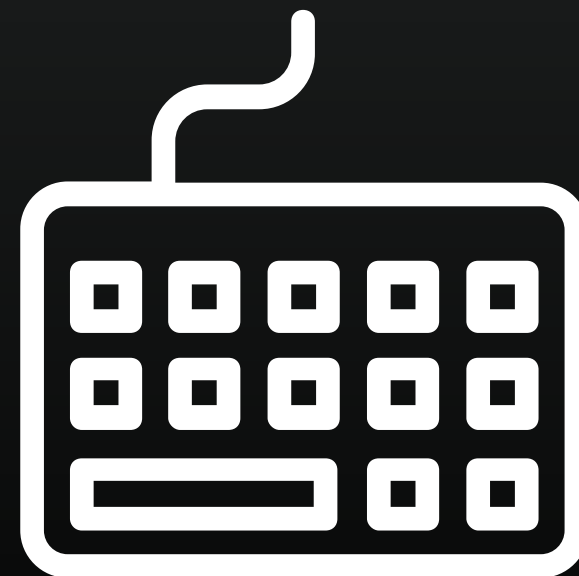
Meaning users will need to
interact in different ways



touch

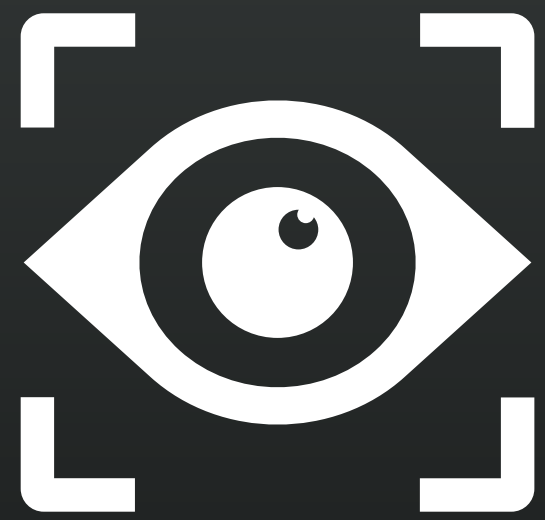


mouse

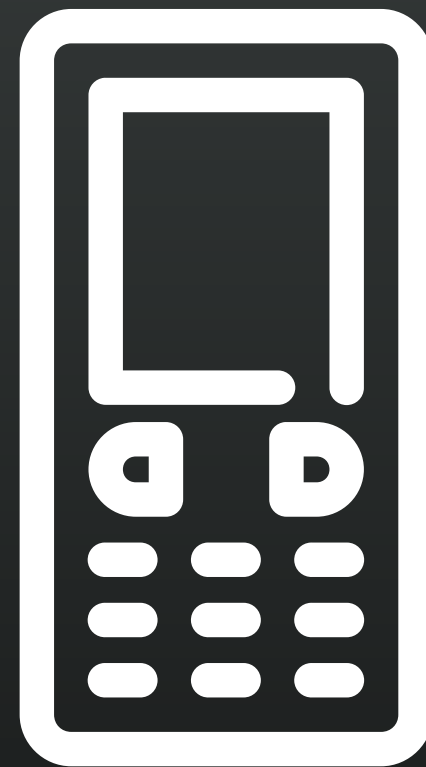


keyboard

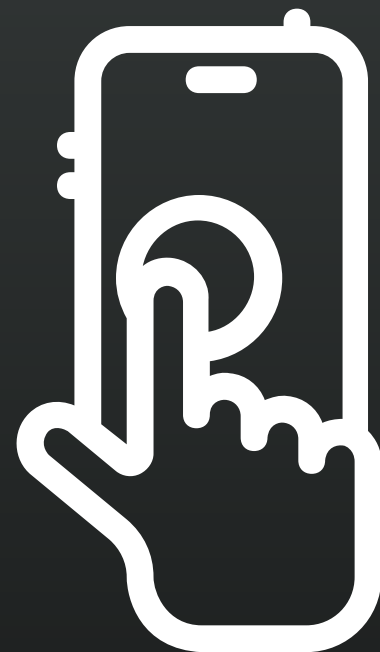
Meaning users will need to interact in different ways



eye tracking



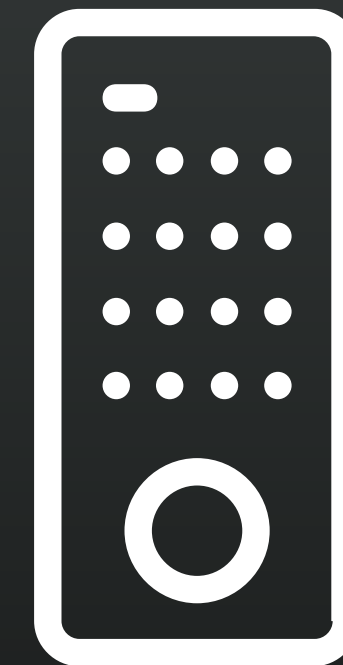
T9



touch



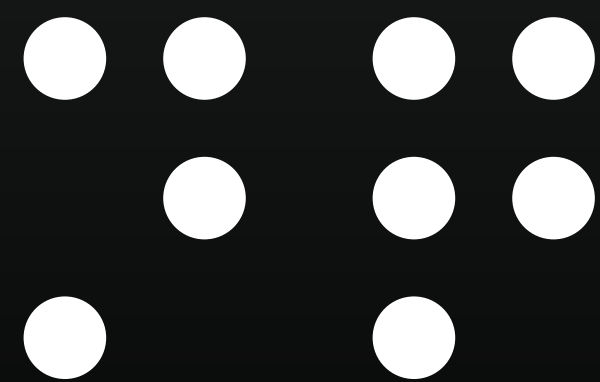
mouse



remote



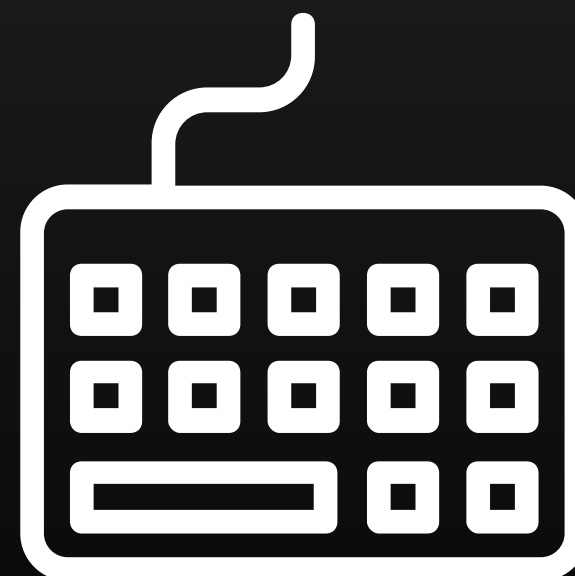
pen



braille



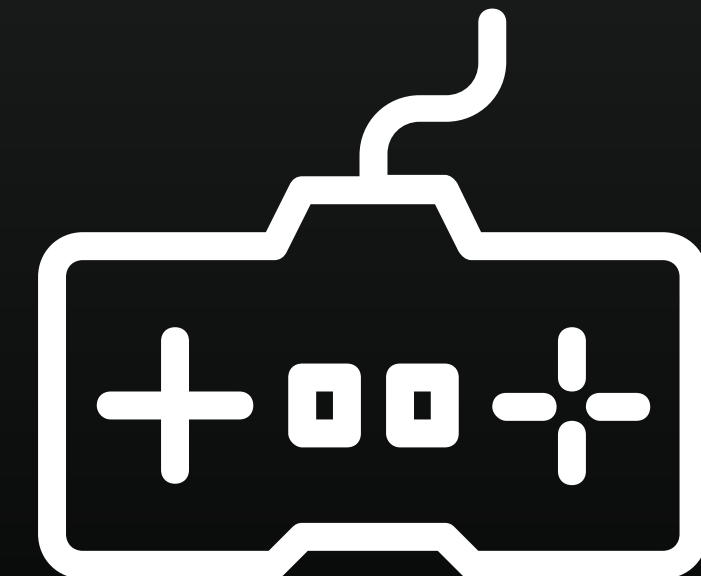
print



keyboard

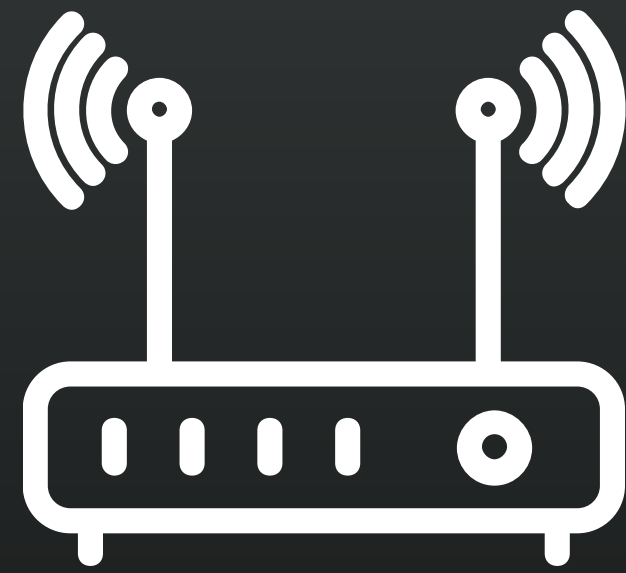


audio



gamepad

Over **varied networks** and in changing conditions



wifi



hardline



mobile



homes



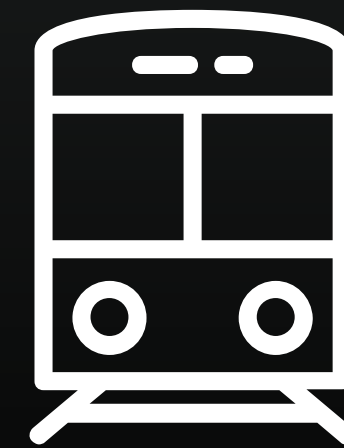
buildings



cars



buses

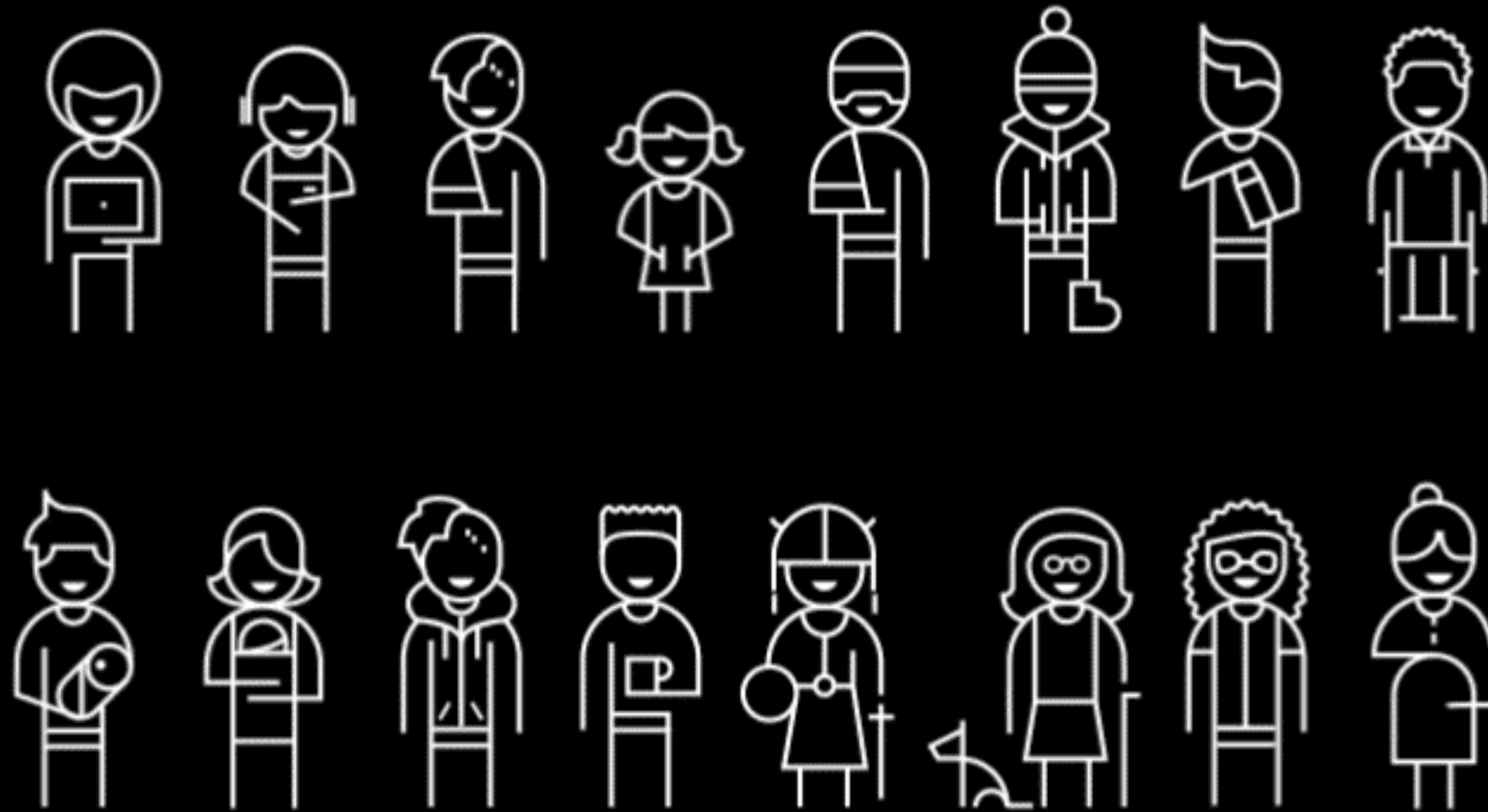


trains



airplanes

And, ultimately, **our users all
have different needs too**



Anyone notice I
haven't even
mentioned
browsers?

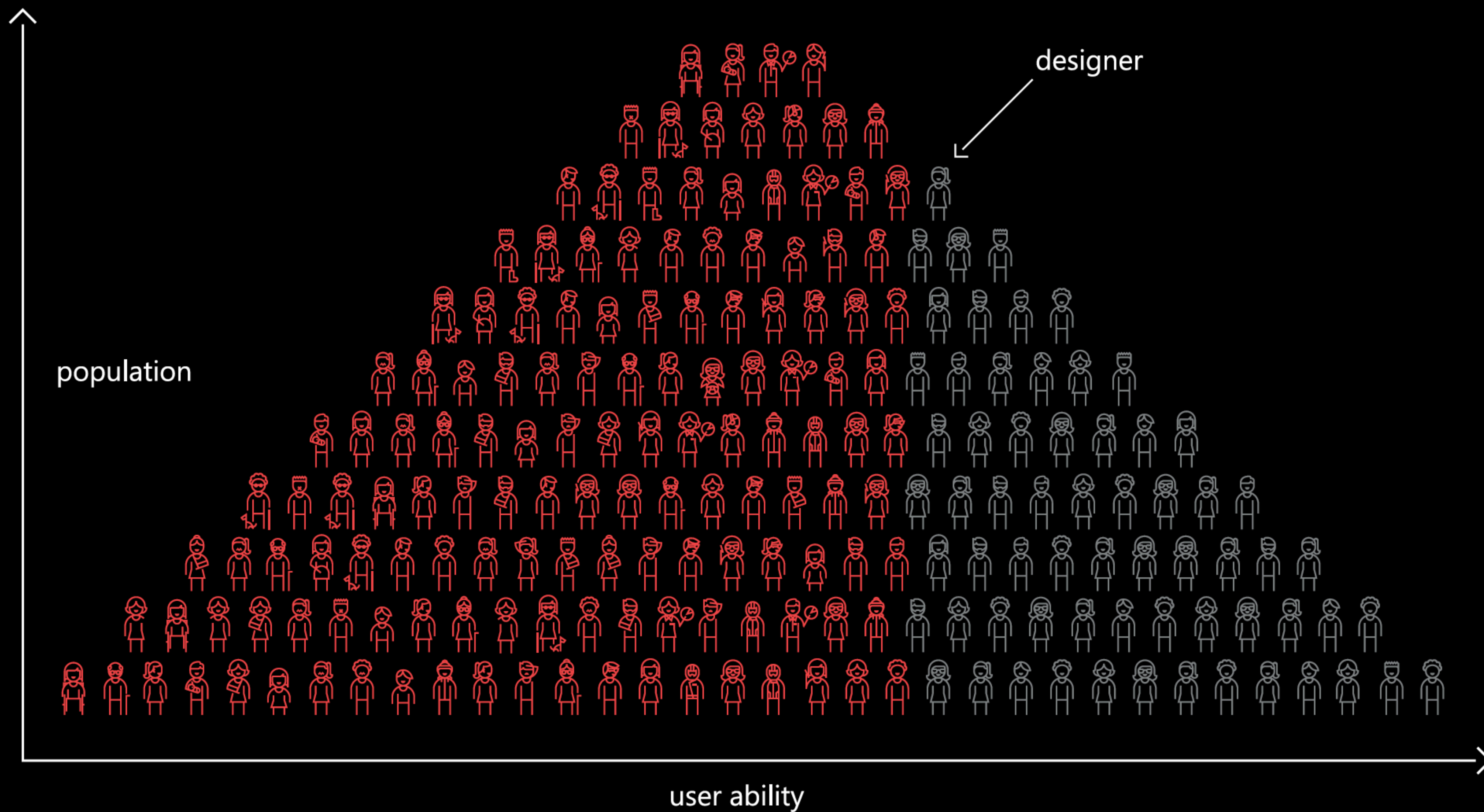
;-)

So...?

REALITY CHECK

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

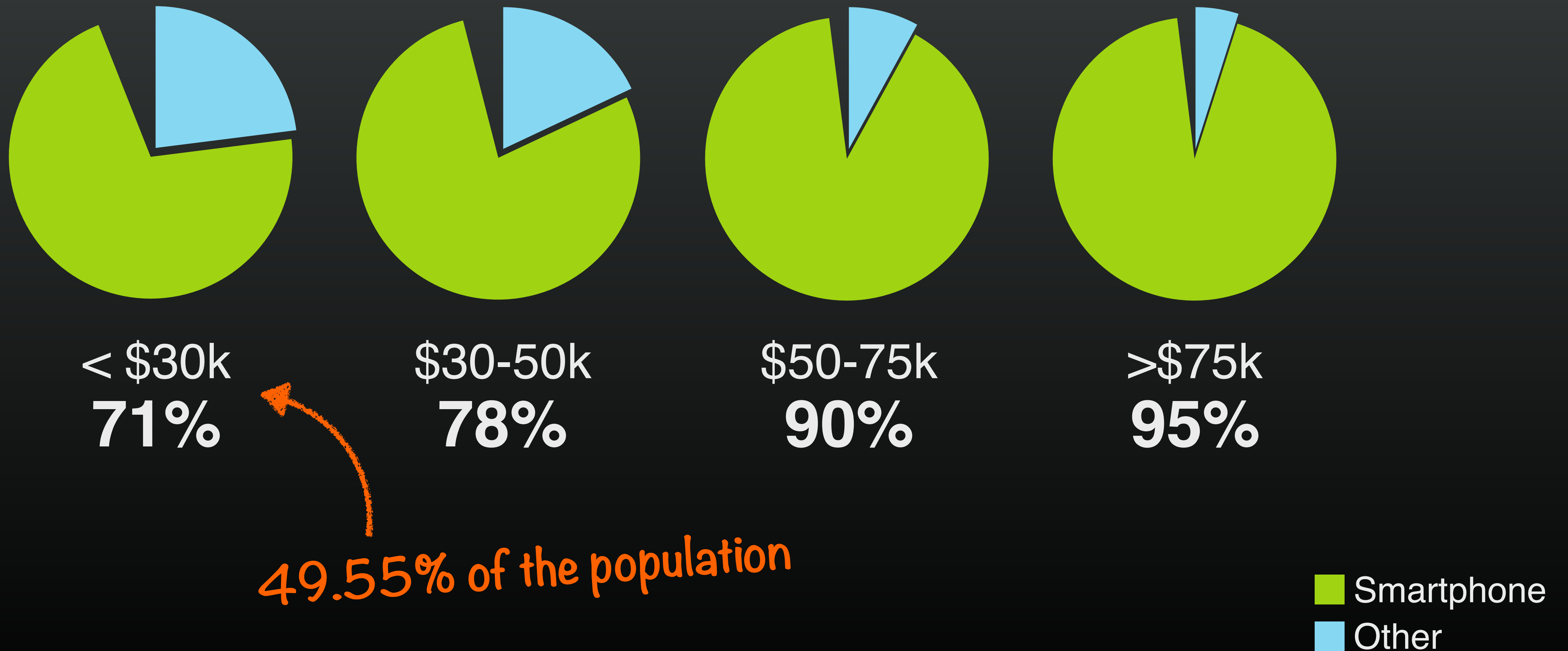
Treat your
ideal scenario
as an **edge case**







U.S. Smartphone penetration



U.S. Smartphone penetration



Urban
83%



Suburban
83%



Rural
71%



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



■ Smartphone
■ Other

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

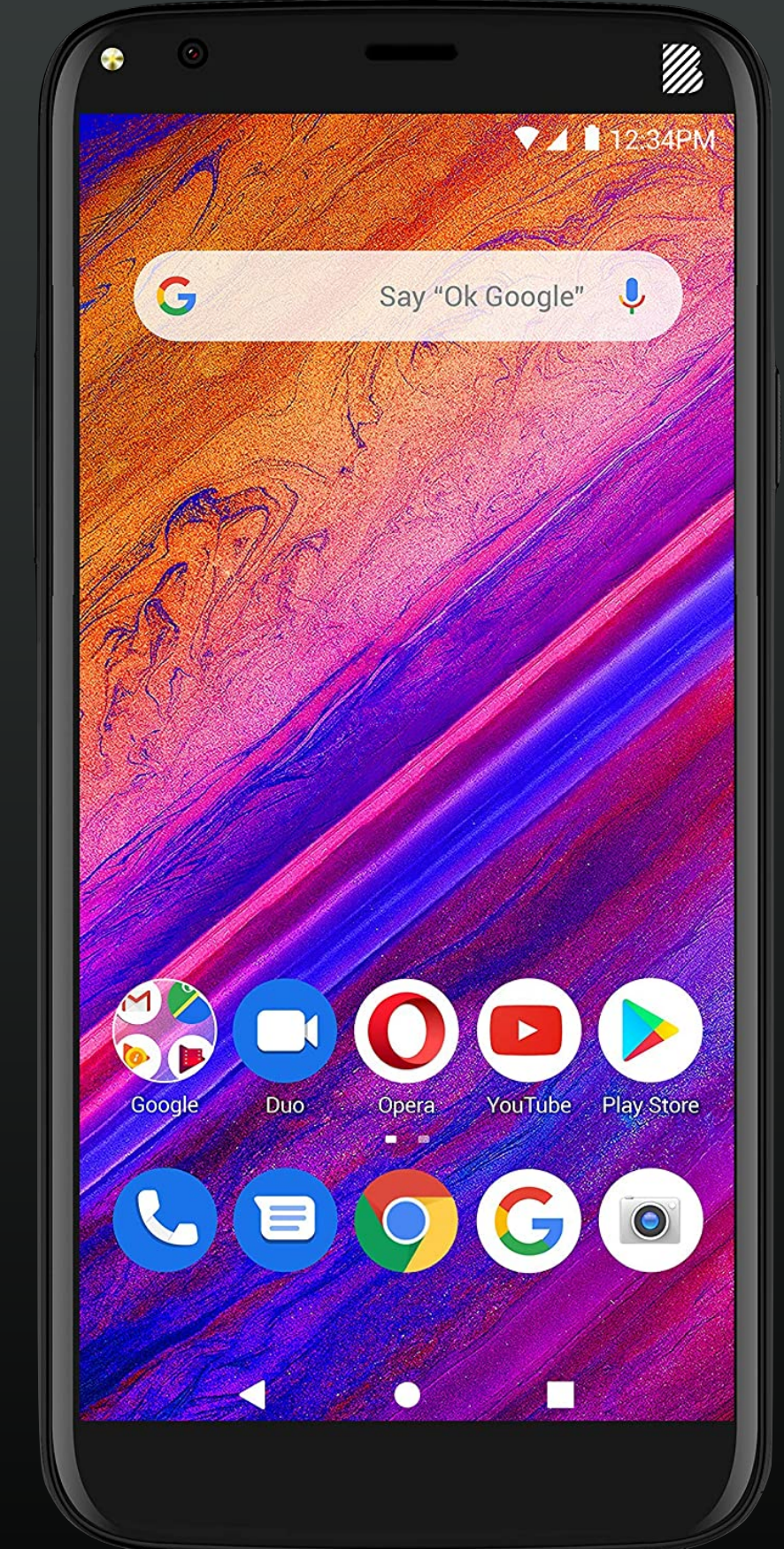
32 GB Storage

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

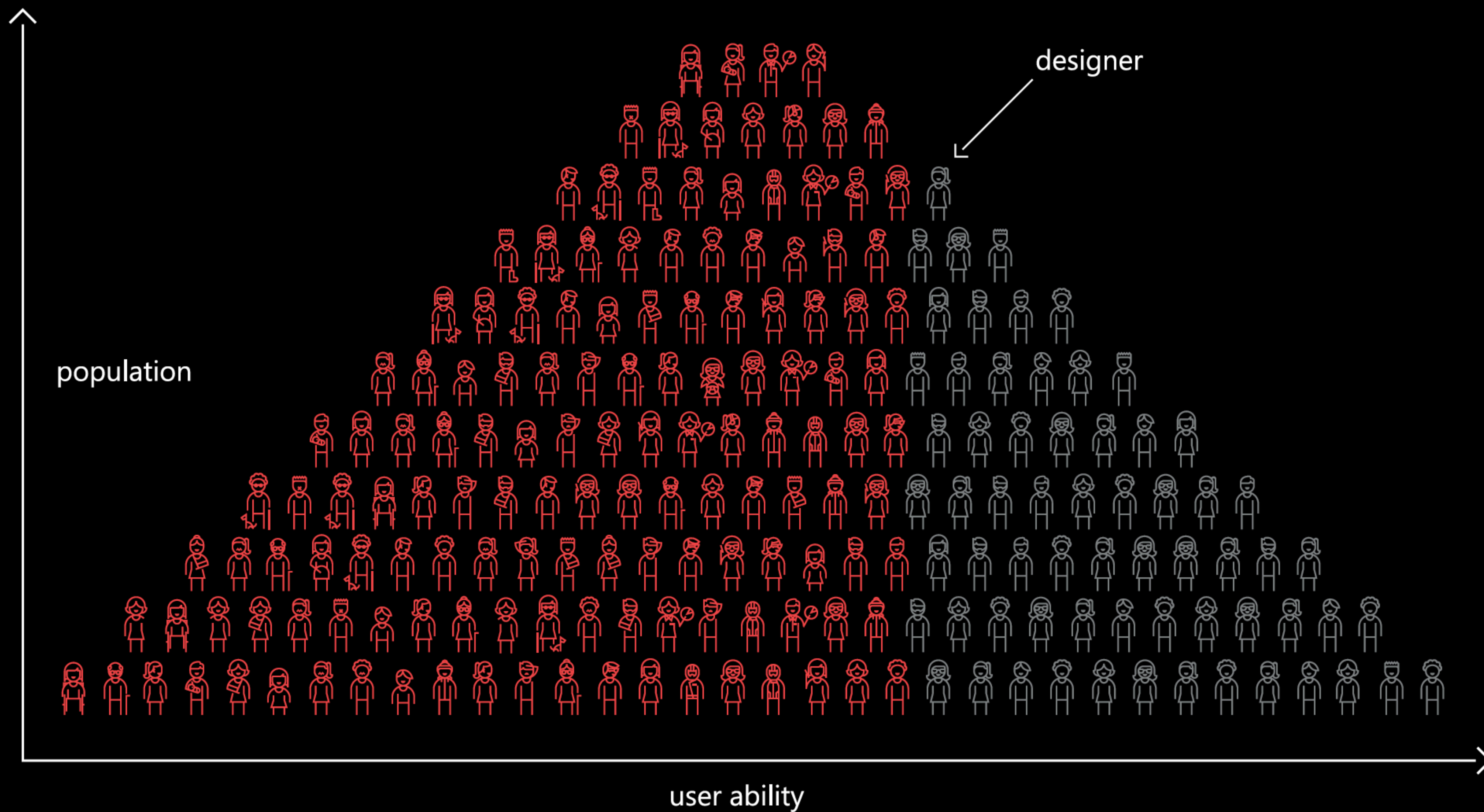
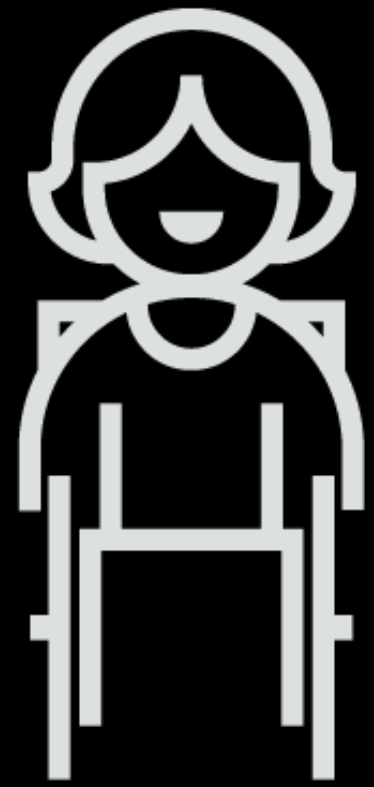




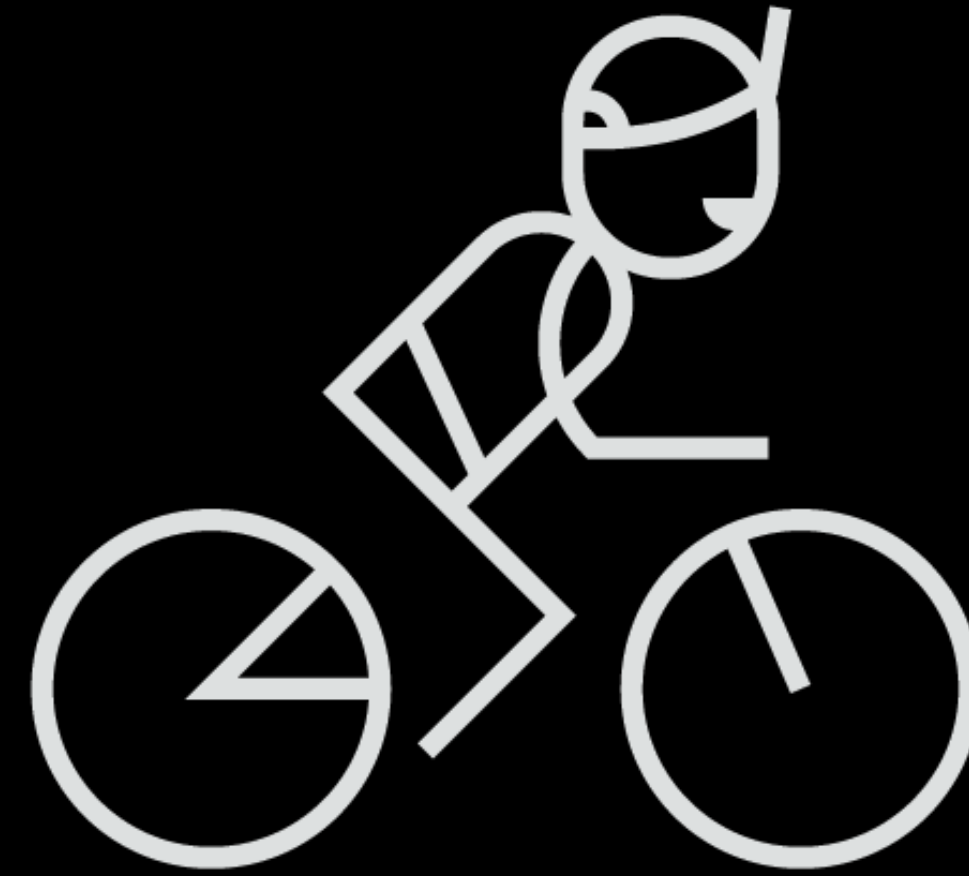
Photo Credit: [Dylan Passmore](#)



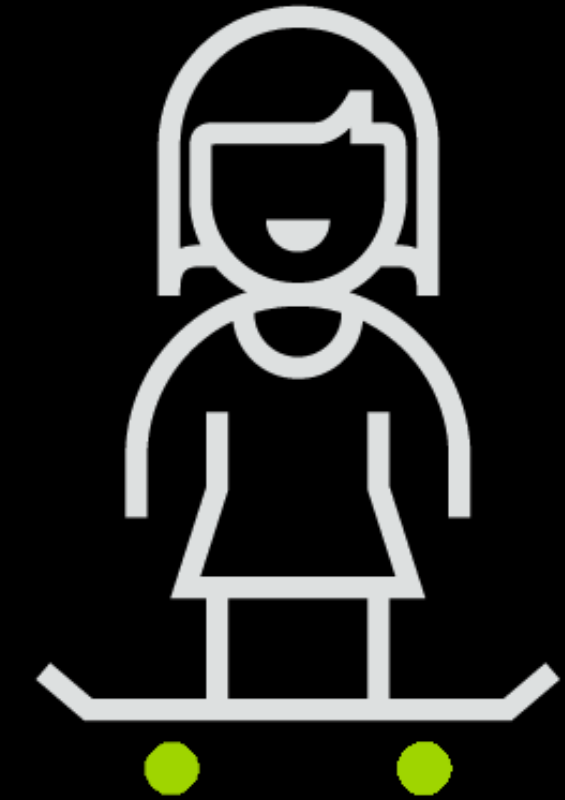
wheelchairs



strollers

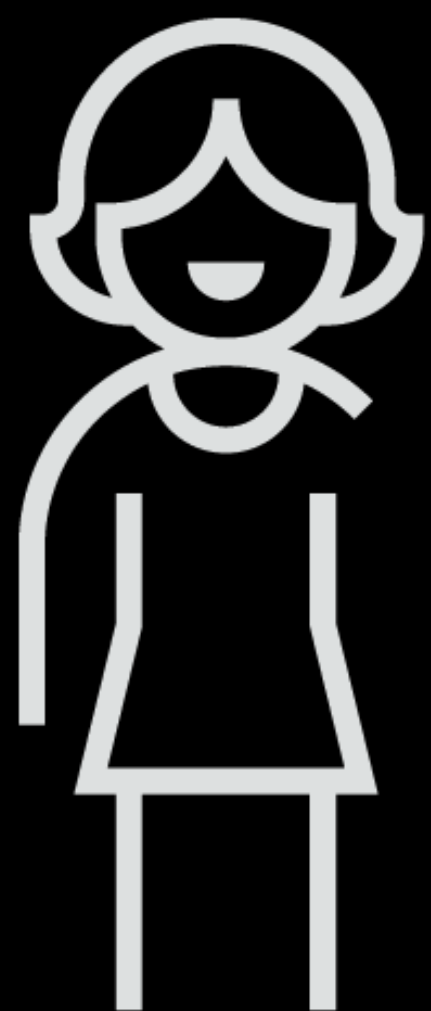


bicycles



skateboards





one arm



arm injury



new parent

permanent



situational



26K

one arm

+



13M

arm injury

+



8M

new parent

permanent



situational

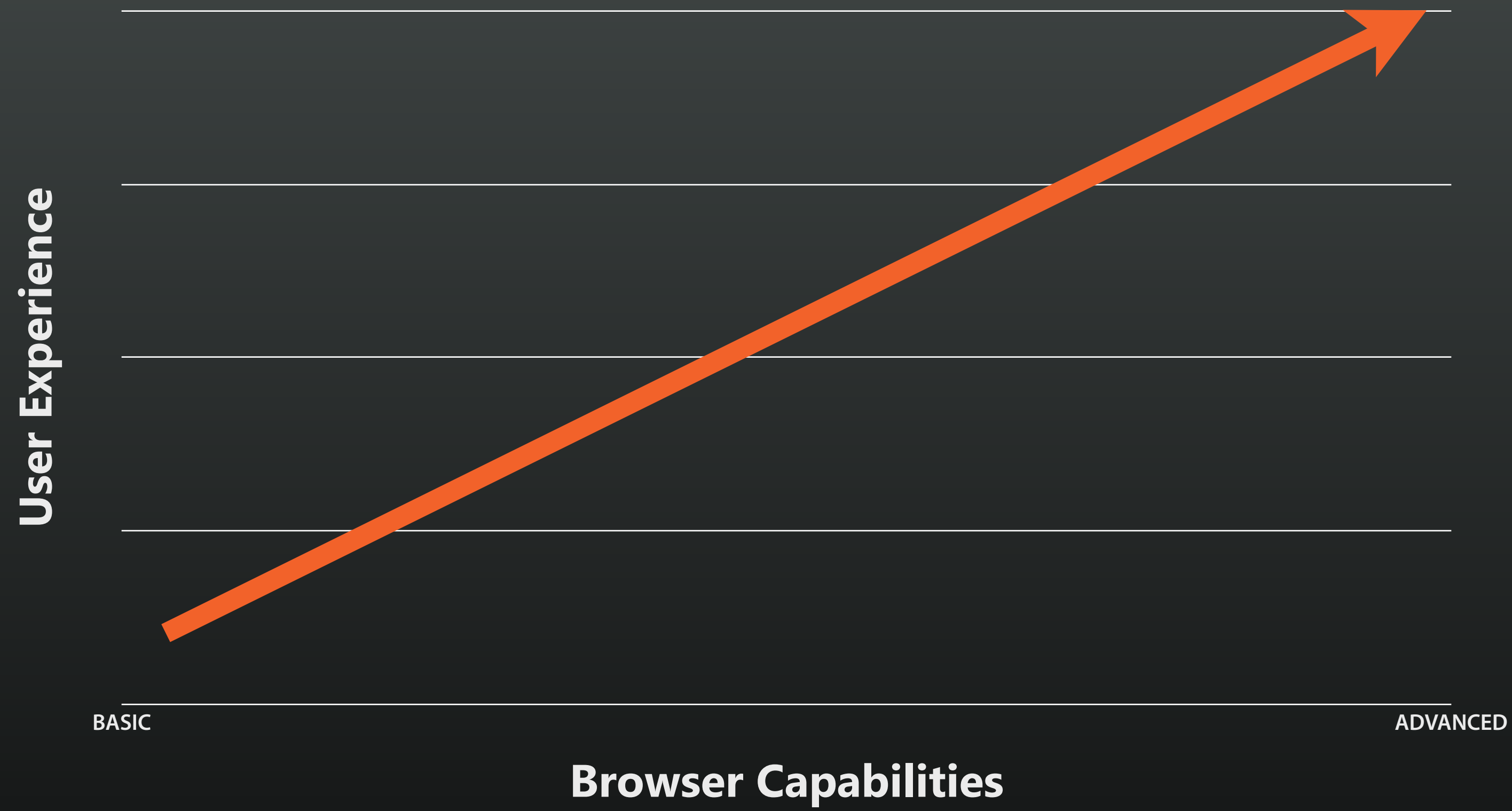
21 Million People

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

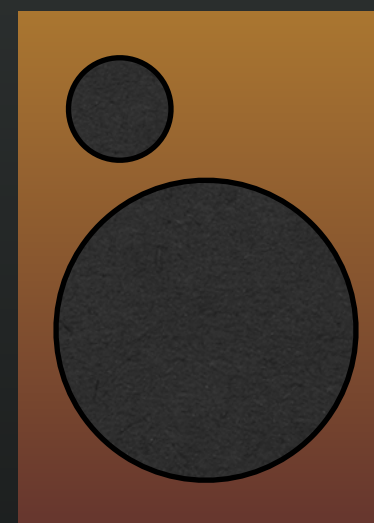
Progressive Enhancement





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

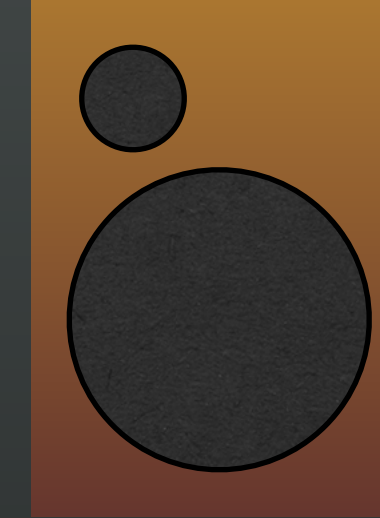
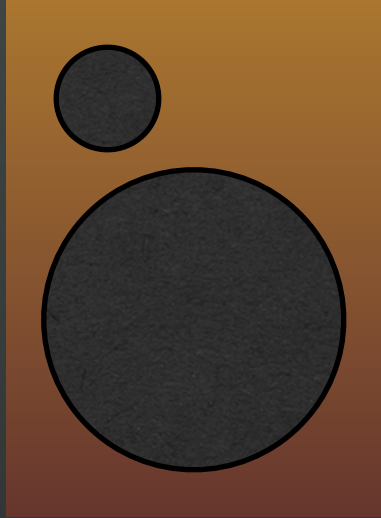
— Mitch Hedberg



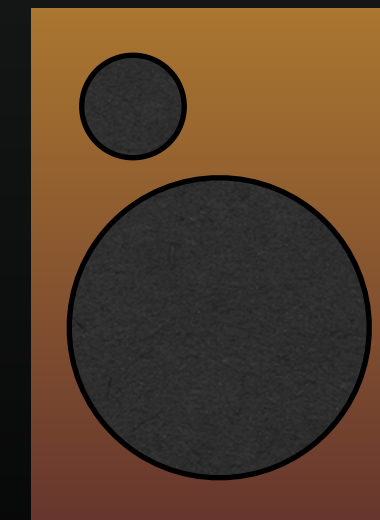
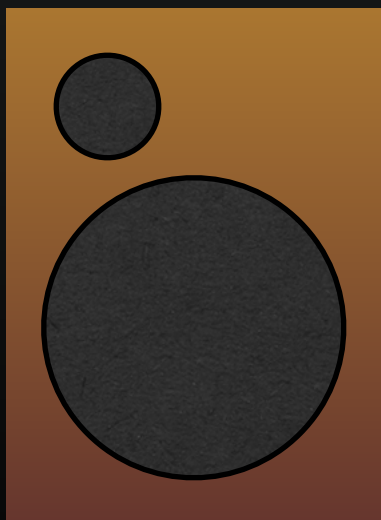
Mono

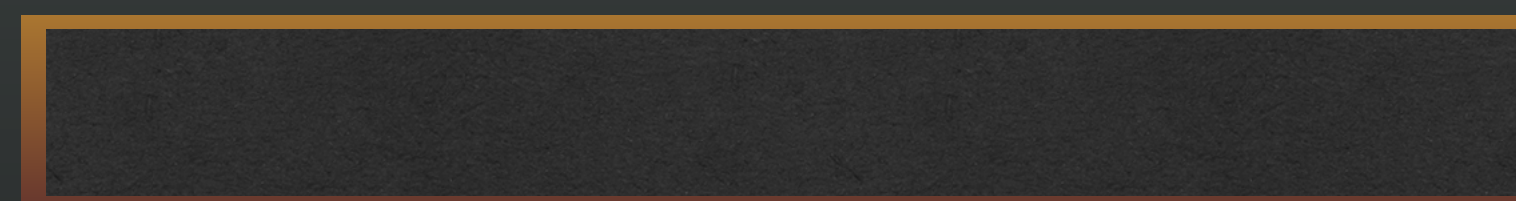
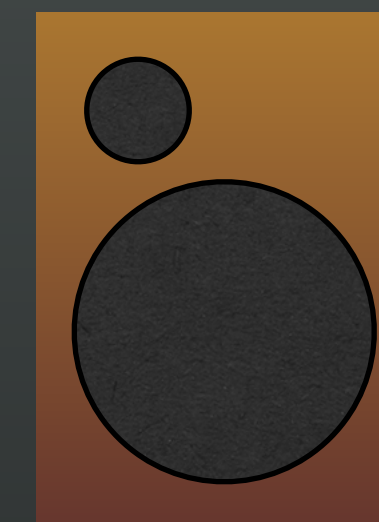
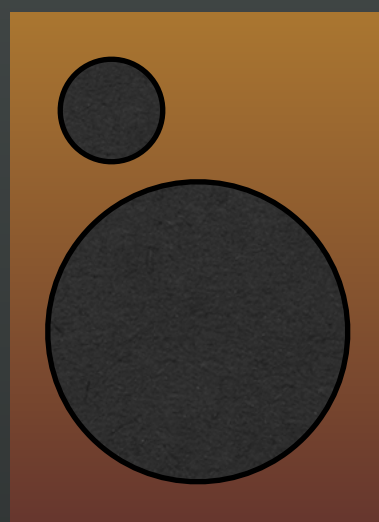


Stereo

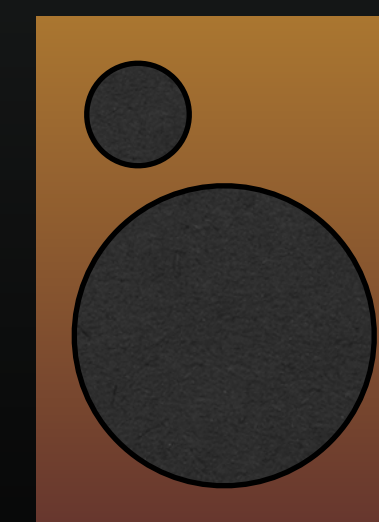
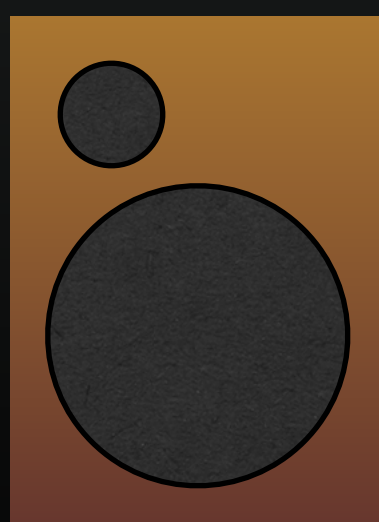


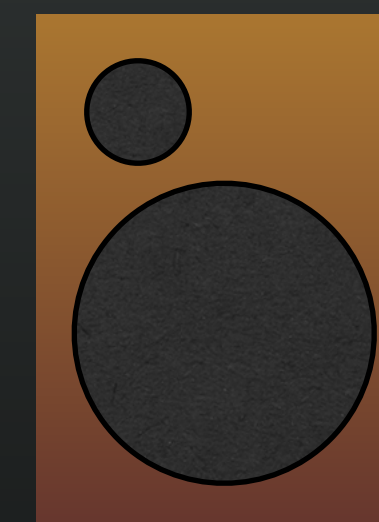
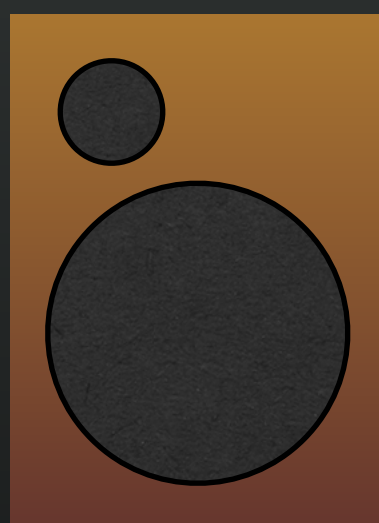
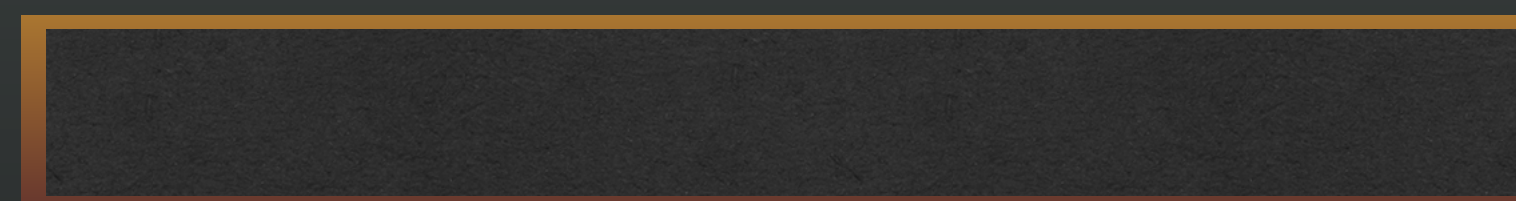
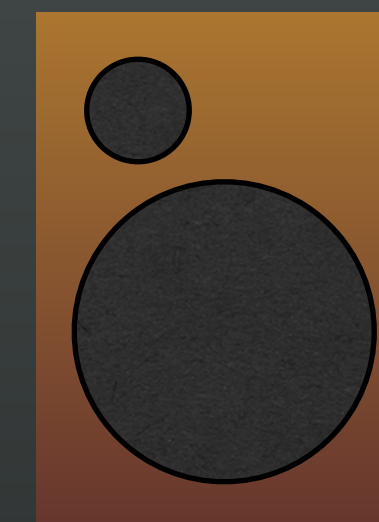
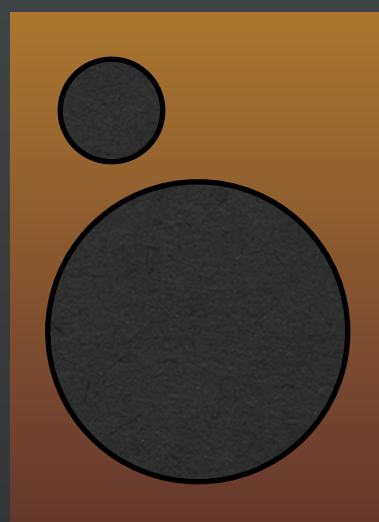
Surround Sound



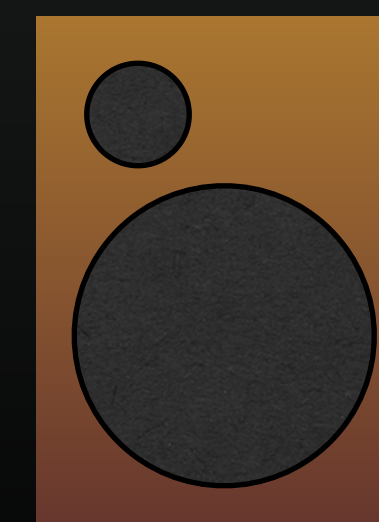
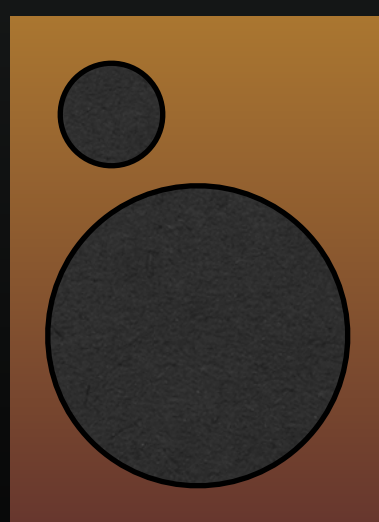


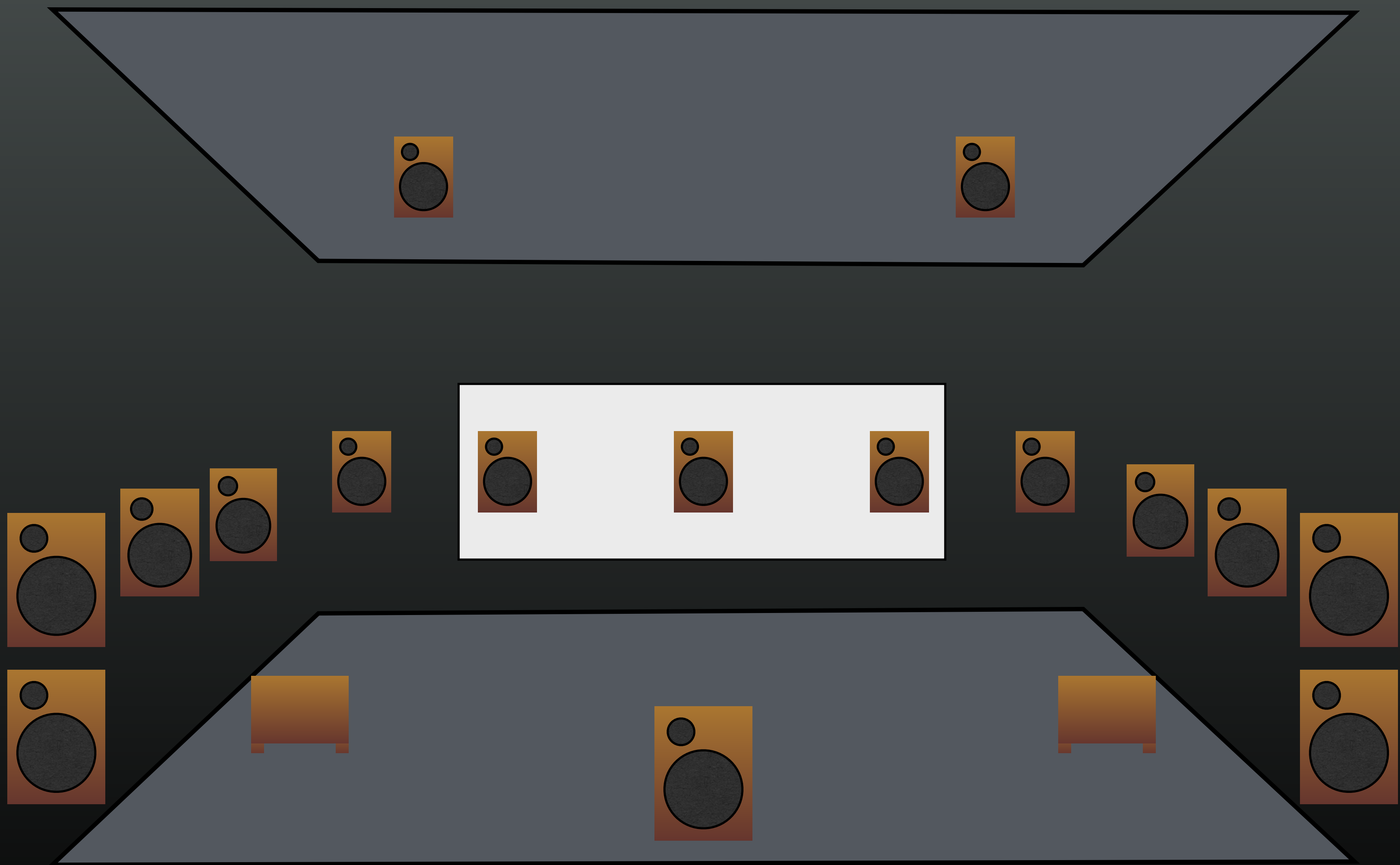
5.1 Channel Surround



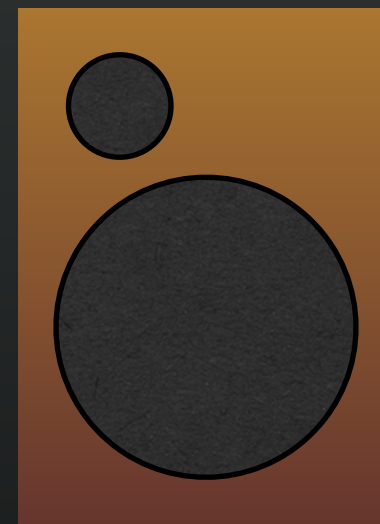


7.1 Channel Surround





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

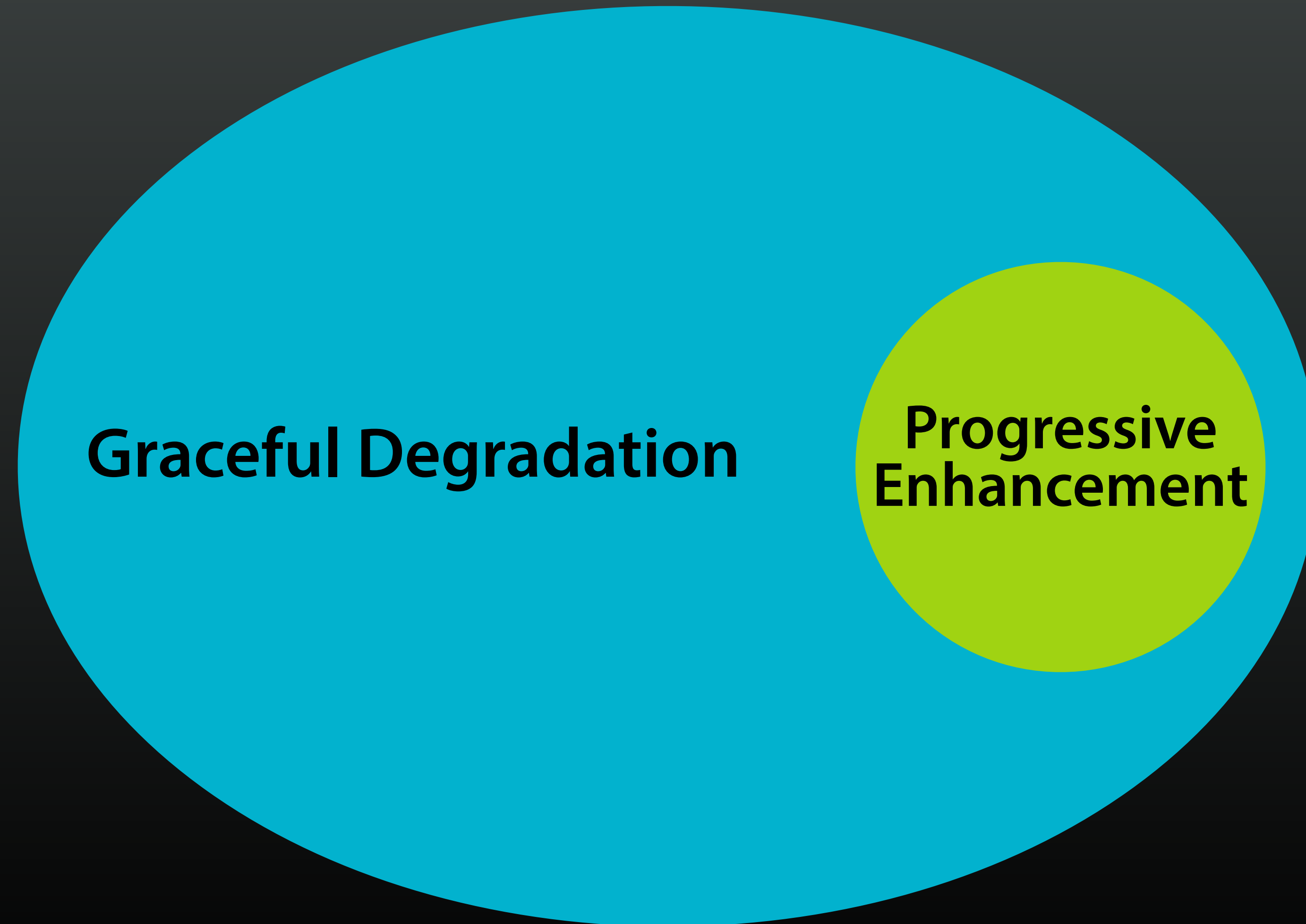


**I'm sorry,
you need
more channels**

YOU MUST BE THIS TALL
TO RIDE WITH AN ADULT



They're actually related



**Technological
restrictions**



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

[Follow @alexhern](#)

[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 PM/Alamy

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[Share](#) 8

[Email](#)



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



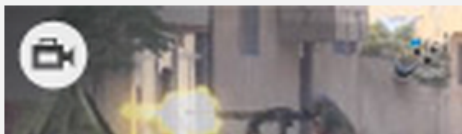
Ukrainian Darth Vader makes election run

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

The Switch

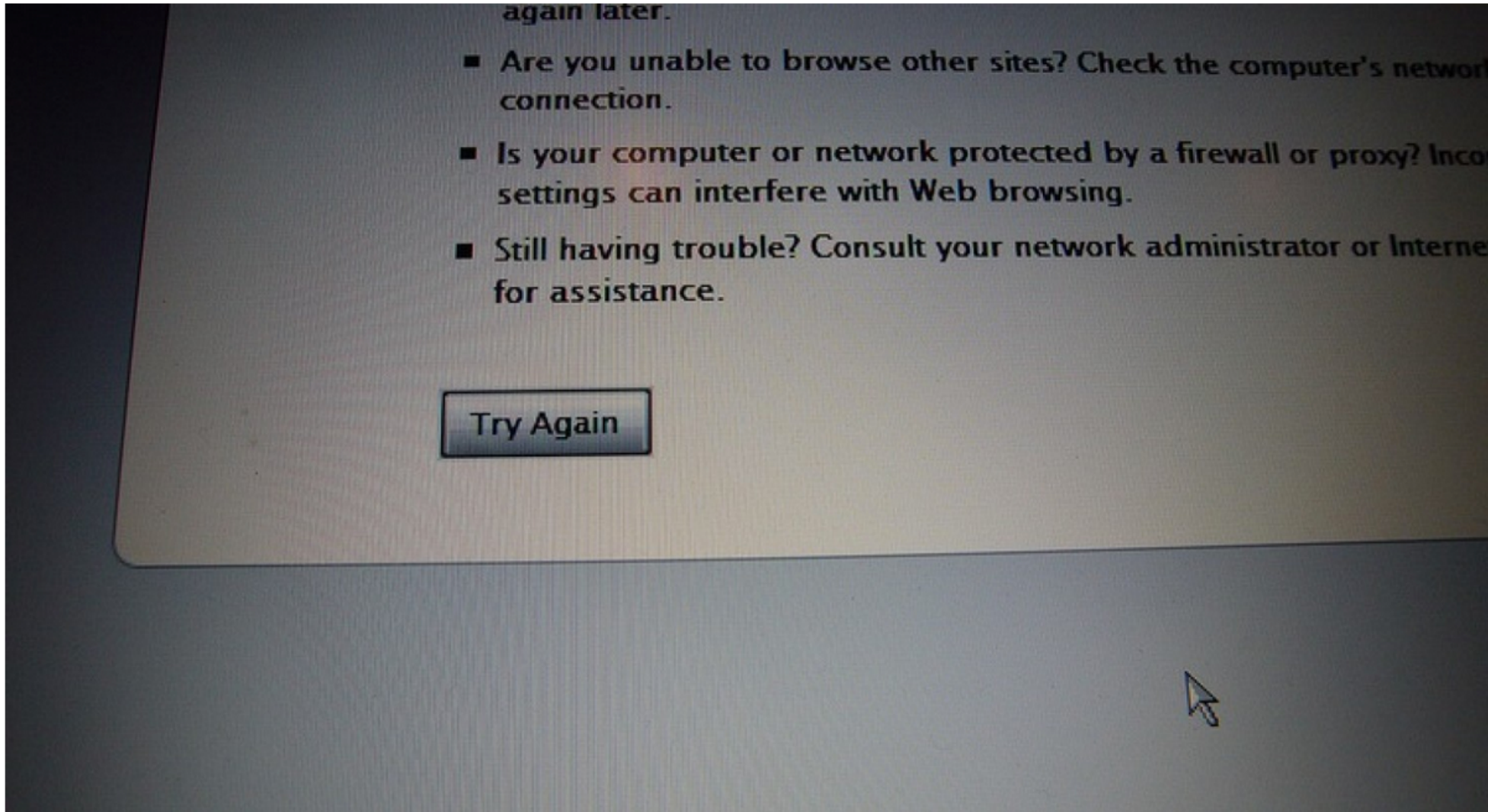
FCC to Marriott: No, you can't force your customers onto terrible hotel WiFi



By **Brian Fung** October 3



Follow @b_fung



Advertisement

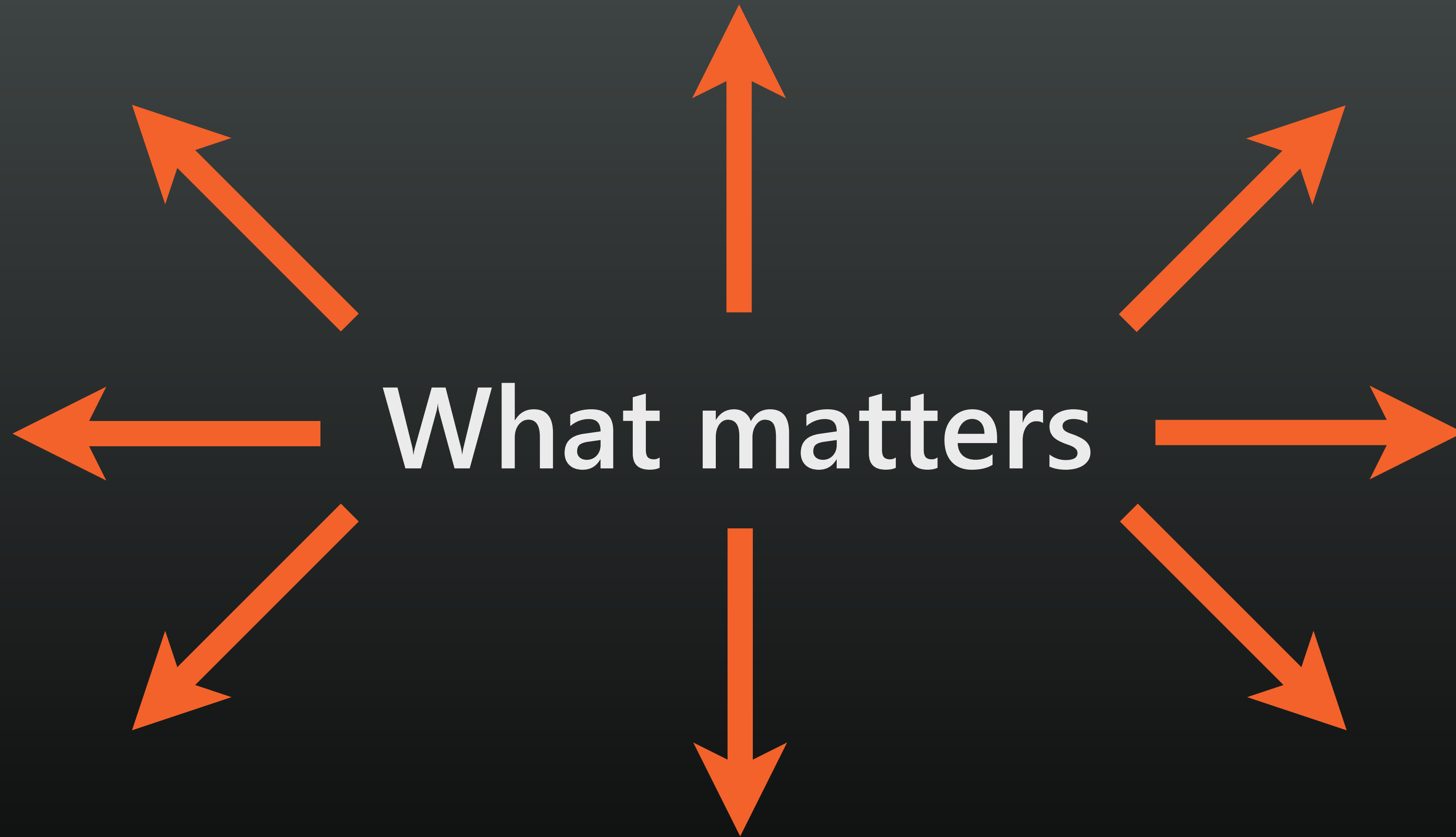


Aw, Snap!

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

[Learn more](#)

[Send feedback](#)



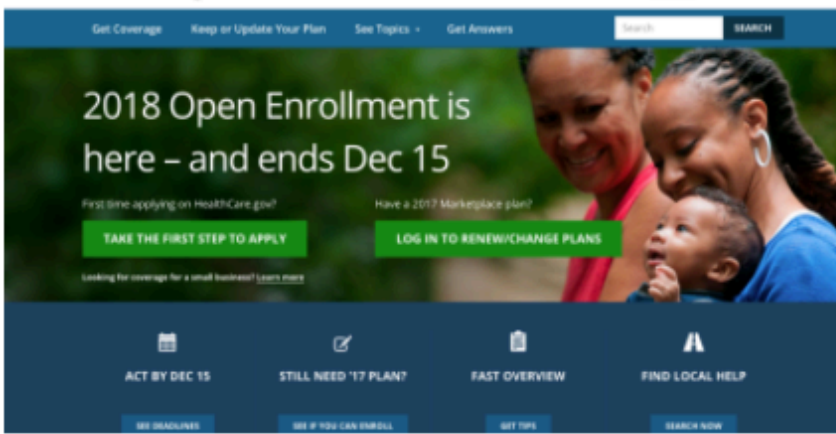
“Mobile first”

It's all about **process**

Step by step

1. Focus on what matters.

The essential nugget



HealthCare.gov

2018 Open Enrollment is here – and ends Dec 15

First-time applying on HealthCare.gov? [TAKE THE FIRST STEP TO APPLY](#)

Have a 2017 Marketplace plan? [LOG IN TO RENEW/CHANGE PLANS](#)

Looking for coverage for a small business? [Learn more](#)

ACT BY DEC 15 | STILL NEED '17 PLAN? | FAST OVERVIEW | FIND LOCAL HELP

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

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.

The screenshot shows a news article on the HealthCare.gov website. The article is titled "Obamacare sign-ups begin; cost-sharing reduction still available" and is written by Chloé Morrison. The article is categorized under "GOVERNMENT". The article text is: "Obamacare sign-ups begin; cost-sharing reduction still available". The article is accompanied by a thumbnail image of a family. Handwritten orange annotations are present: "img" with an arrow pointing to the thumbnail image, "paragraph" with an arrow pointing to the article title, "a" with an arrow pointing to the article title, and "heading" with an arrow pointing to the article title.

HealthCare.gov

2018 Open Enrollment is here – and ends Dec 15

GOVERNMENT

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

By CHLOÉ MORRISON

img

paragraph

a

heading

a

Step by step

3. Look for semantics that support 1 & 2.

.h-entry (feed)

a (also rel-tag)

*heading (also .p-name)
a (also .u-url)*



img (also .u-photo)

*paragraph
a
(also .p-author
& .h-card)*

Step by step

4. Think about how design can improve comprehension.

Less important & distinct from content

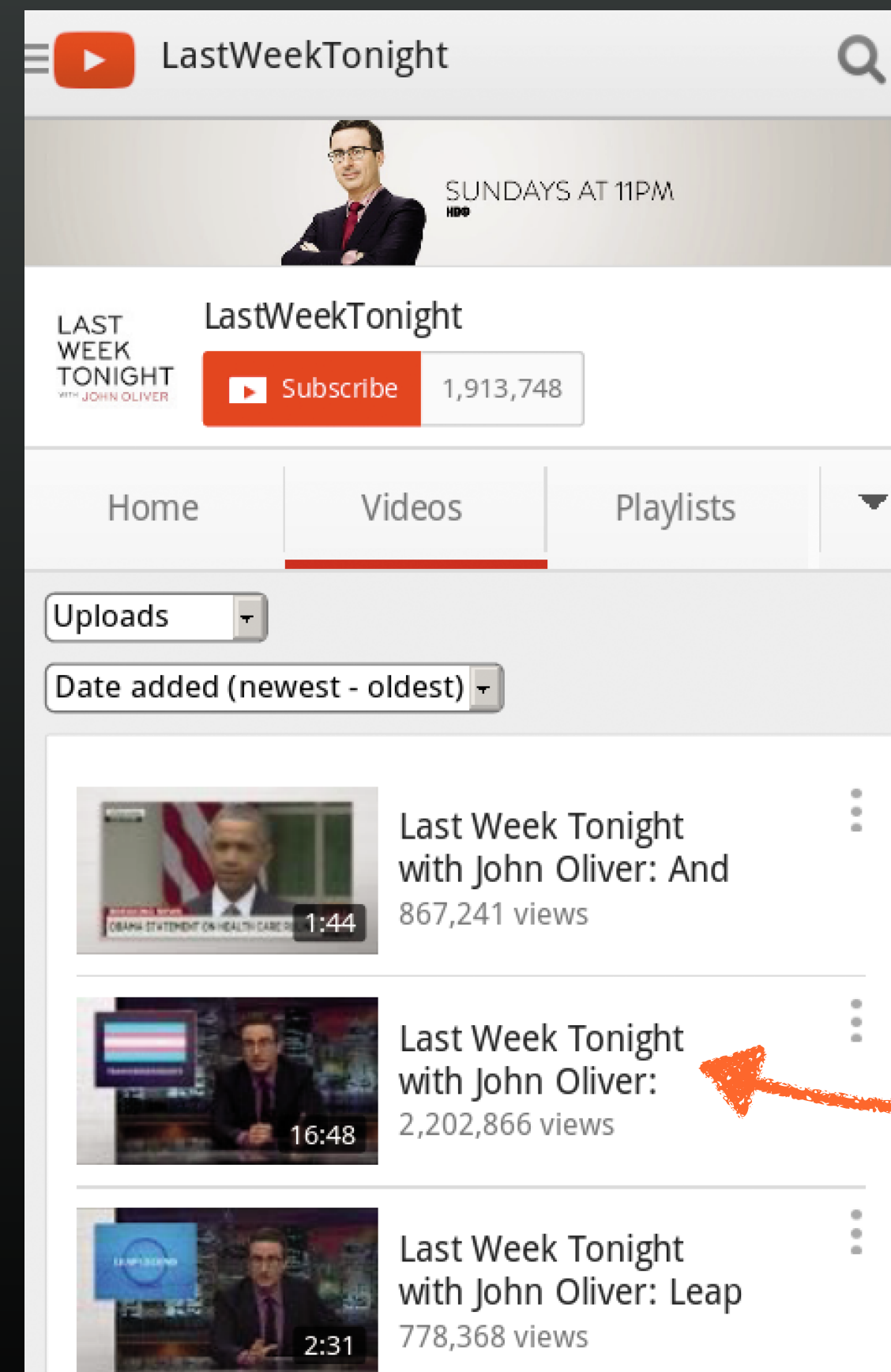
visually the most important text



distinct from the content & diminished in importance

Step by step

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

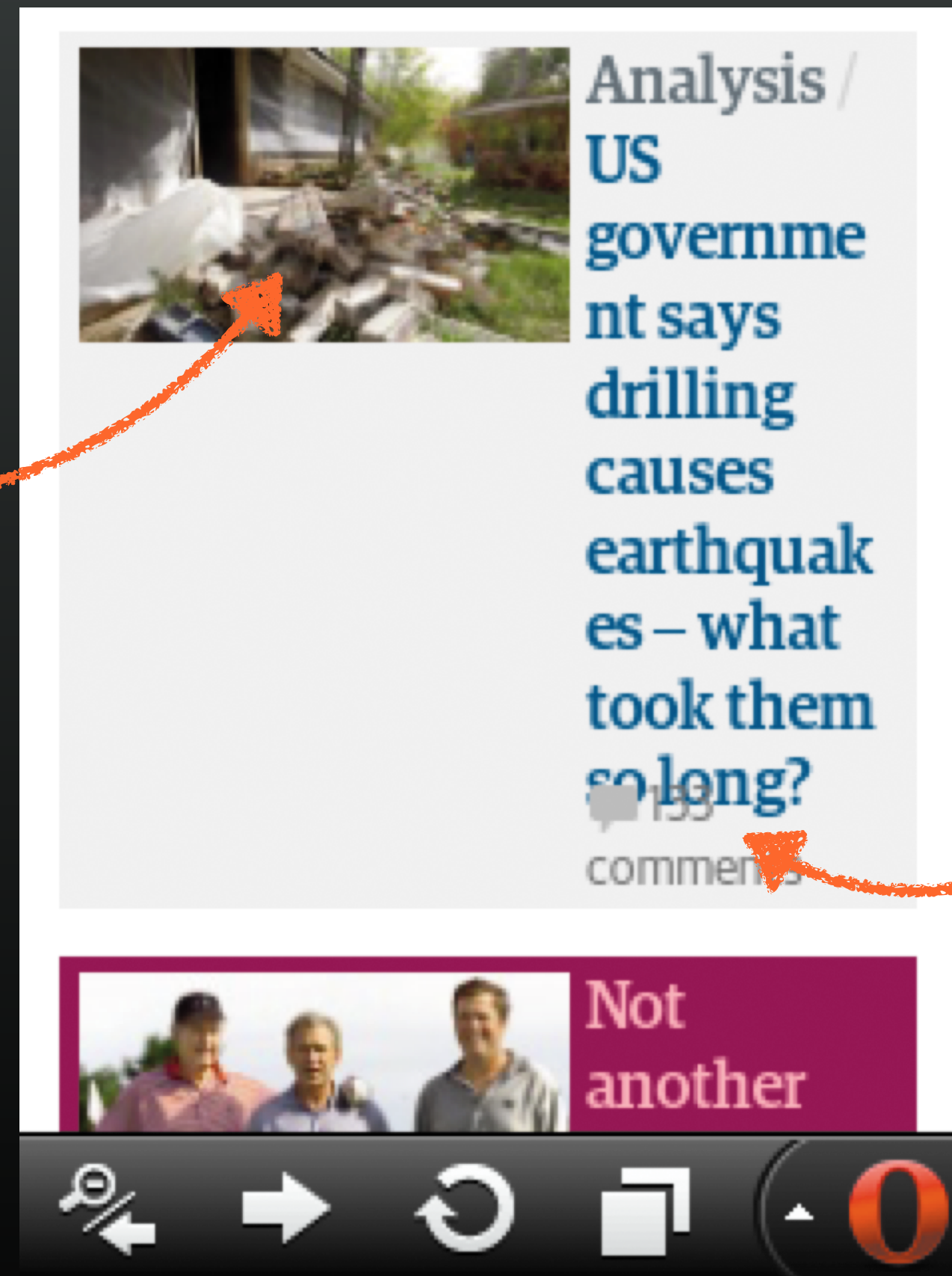


Can't tell what the episode is called

Step by step

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

Floated images crush the text on small screens



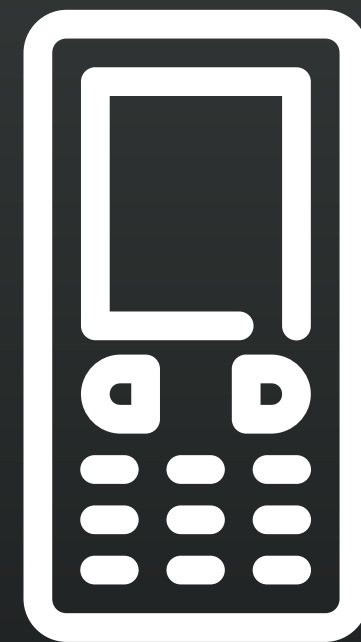
Ouch

Step by step

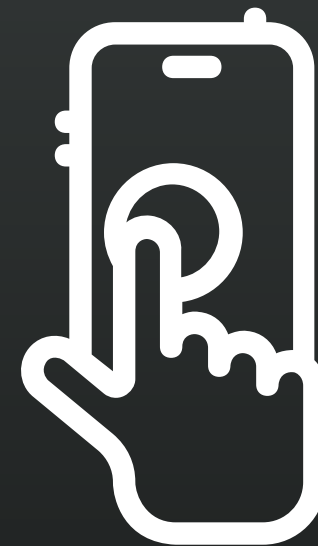
6. Think about the many different ways folks might interact.



eye tracking



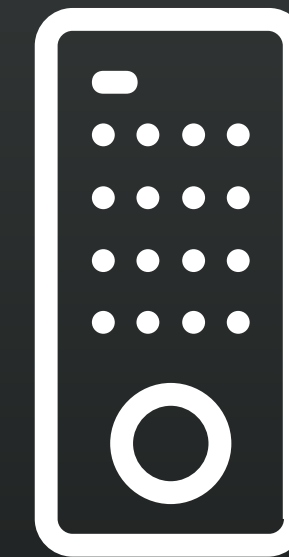
T9



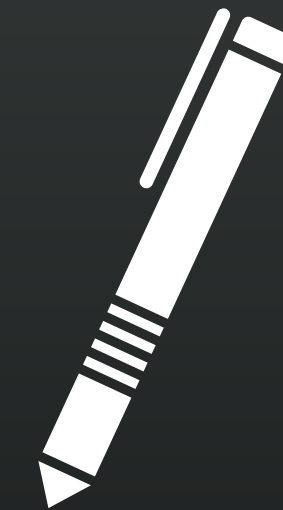
touch



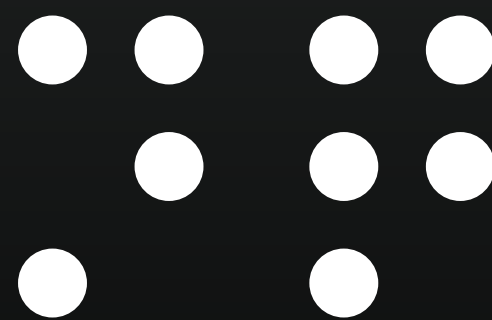
mouse



remote



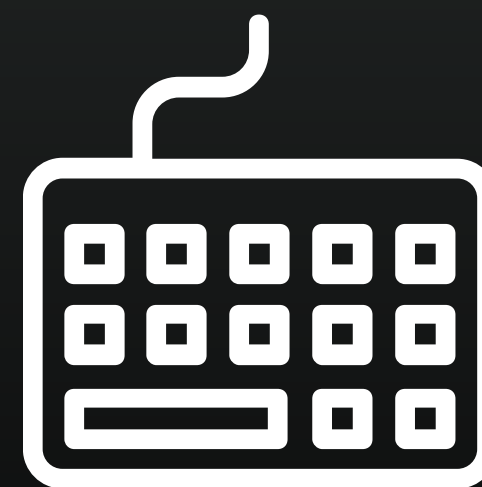
pen



Created by
from the
braille



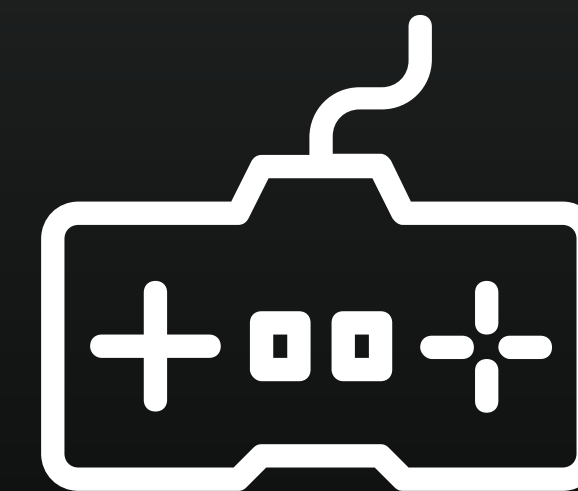
print



keyboard



audio



gamepad

Step by step

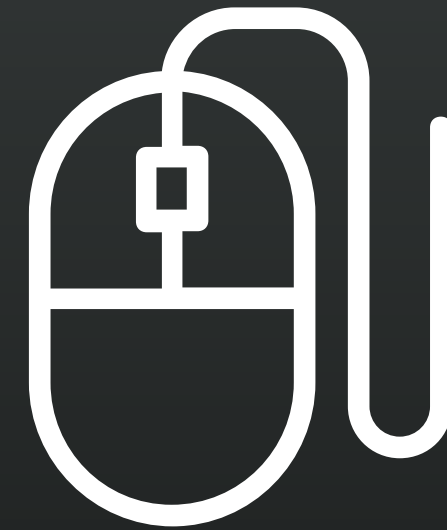
6. Think about the many different ways folks might interact.



eye tracking



touch



mouse

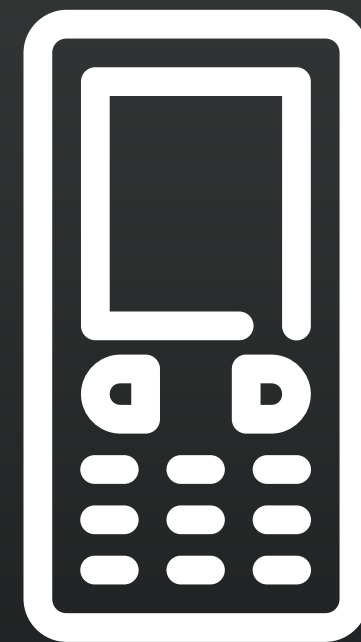
Hover?

Step by step

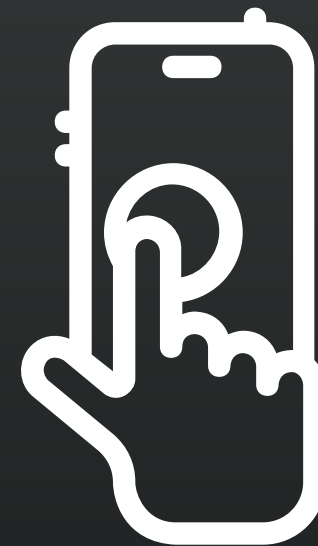
6. Think about the many different ways folks might interact.



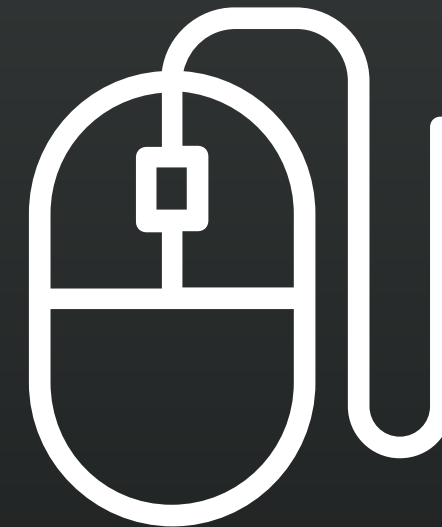
eye tracking



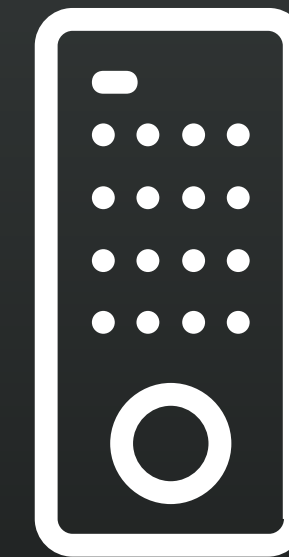
T9



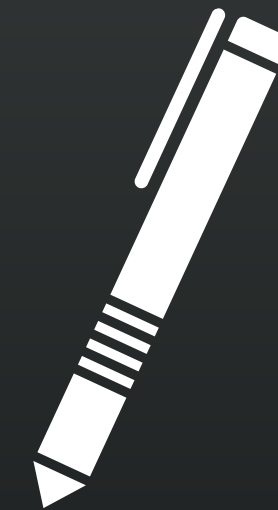
touch



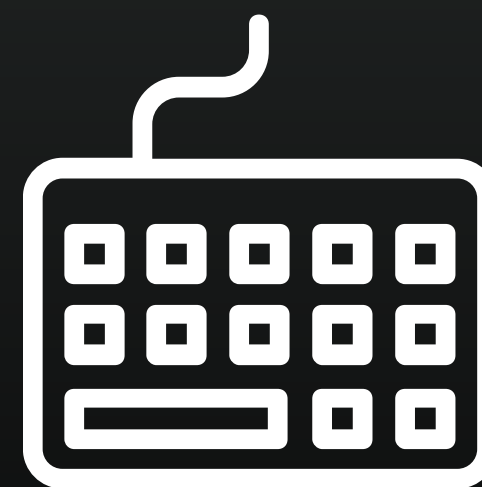
mouse



remote



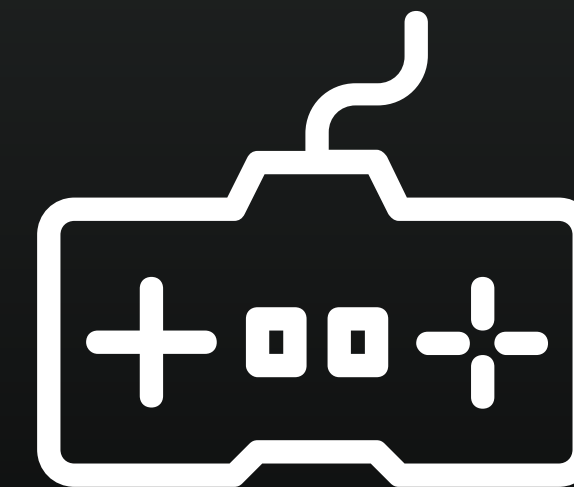
pen



keyboard



audio



gamepad

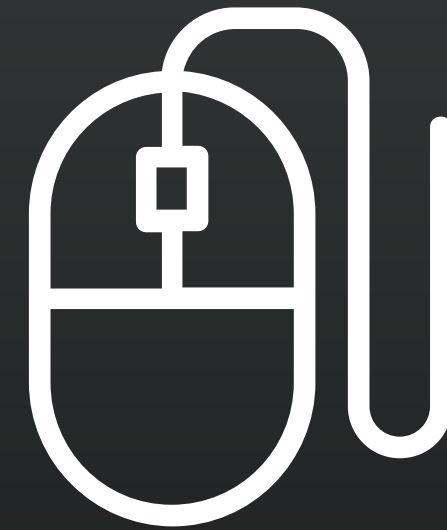
Focus & target?

Step by step

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



touch



mouse

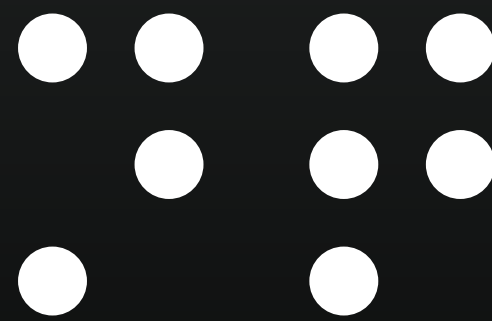


pen

Gestures?

Step by step

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



Created by
from the N
braille



print

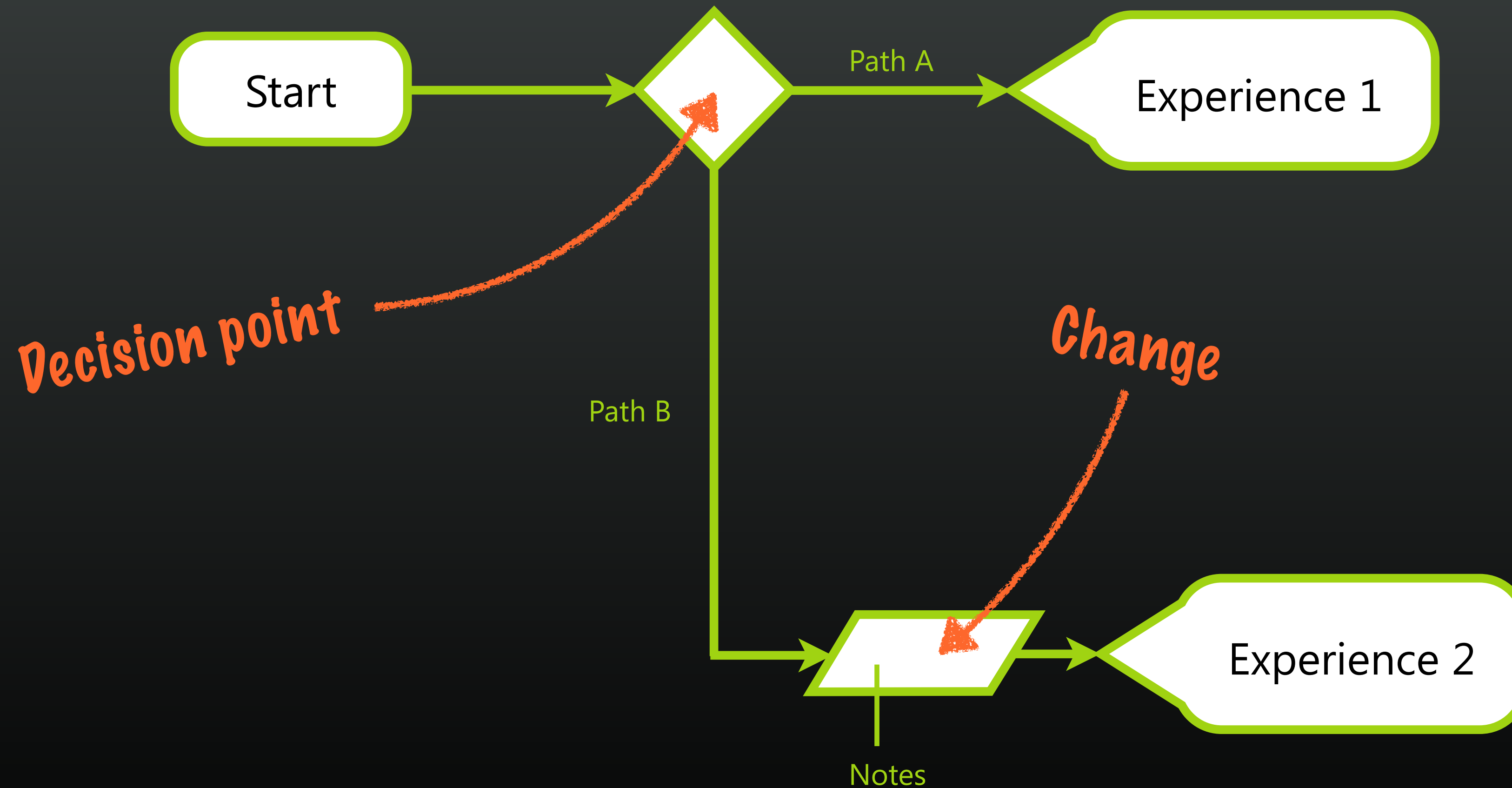


audio

Text expansions?

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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noti.st/AaronGustafson

