

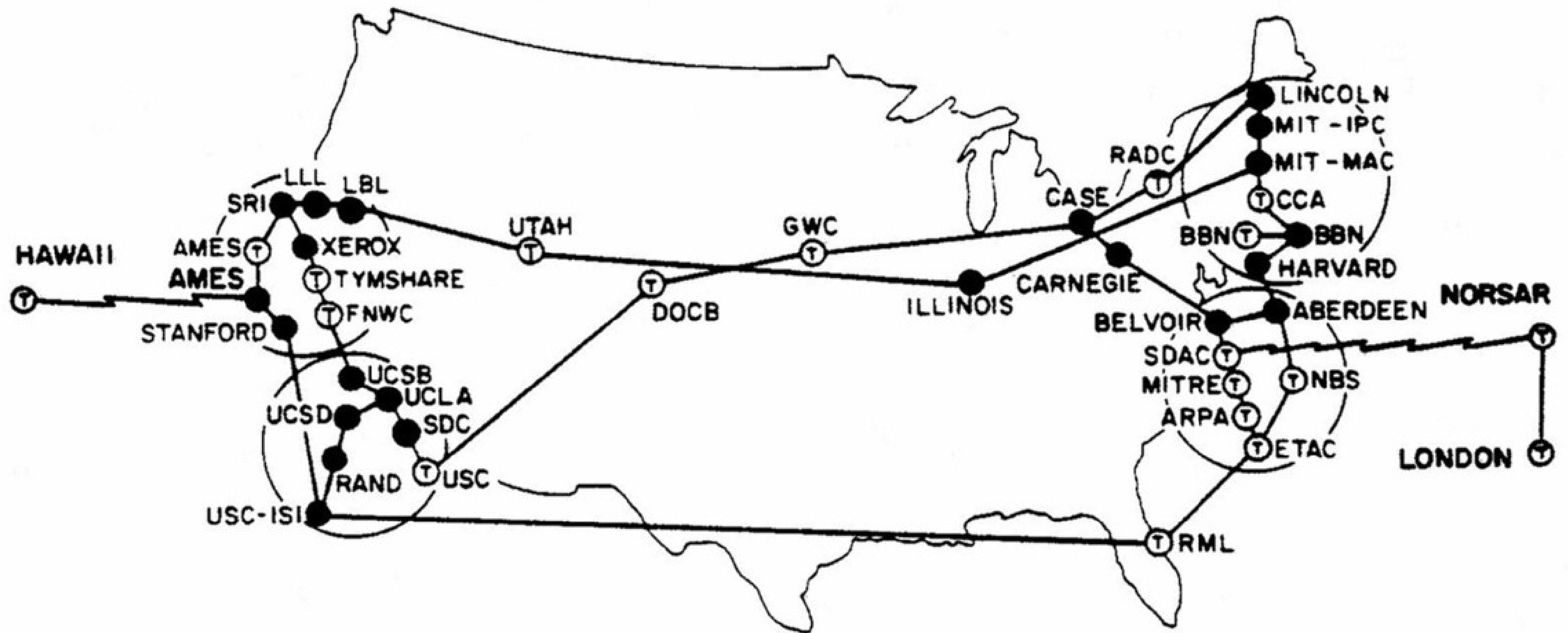
Mobile Design History

**But first, a brief
history on the internet...**



Arpanet

A precursor to the internet that was an academic research project funded by Advanced Research Projects Agency.



Arpanet expanded

By 1970 cross country, 1973 international.



Email is invented

During this time, email is invented by Roy Tomlinson (1941–2016) who also invents the use of @ symbols in email addresses.



Usenet

By 1980s, ARPANET continued to grow, fostering a social community predating Facebook and MySpace.



ARPANET becomes Internet (1983)

Engineers Robert Kahn and Vint Cerf standardize network communications known as TCP/IP. ARPANET switches to this in 1983, marking birth of modern internet.

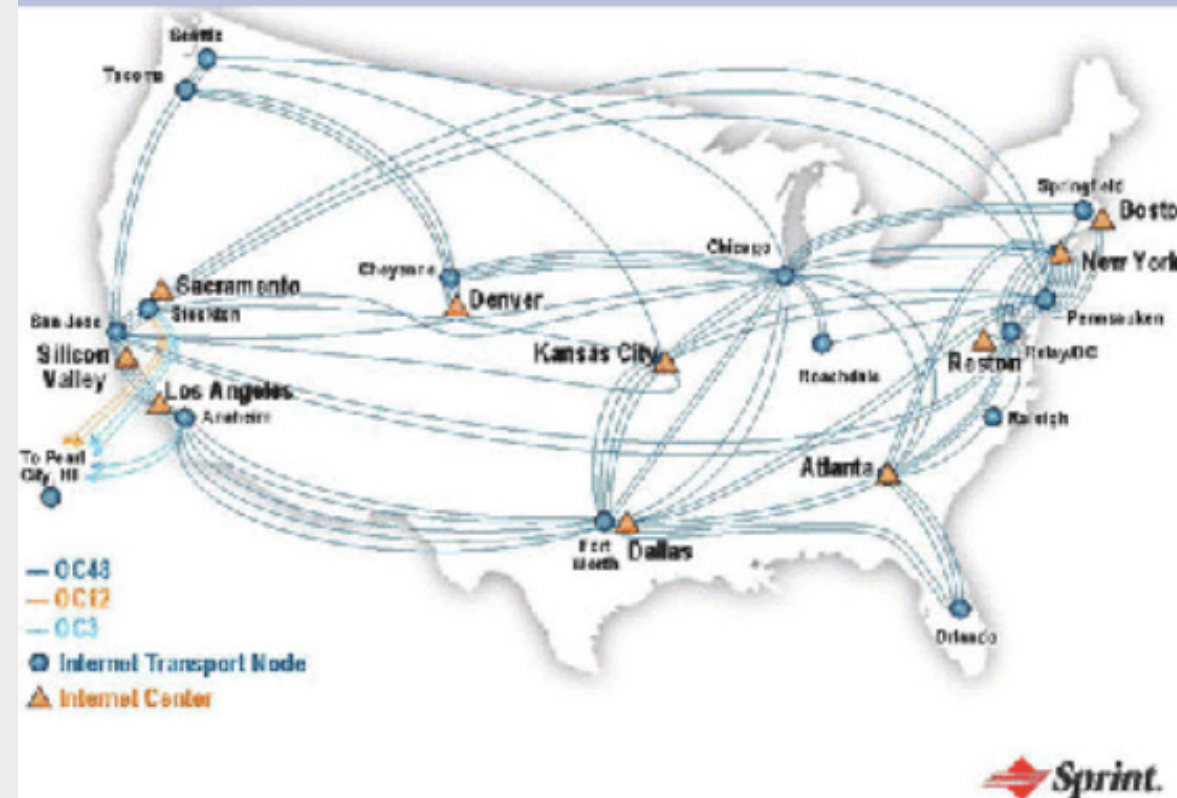
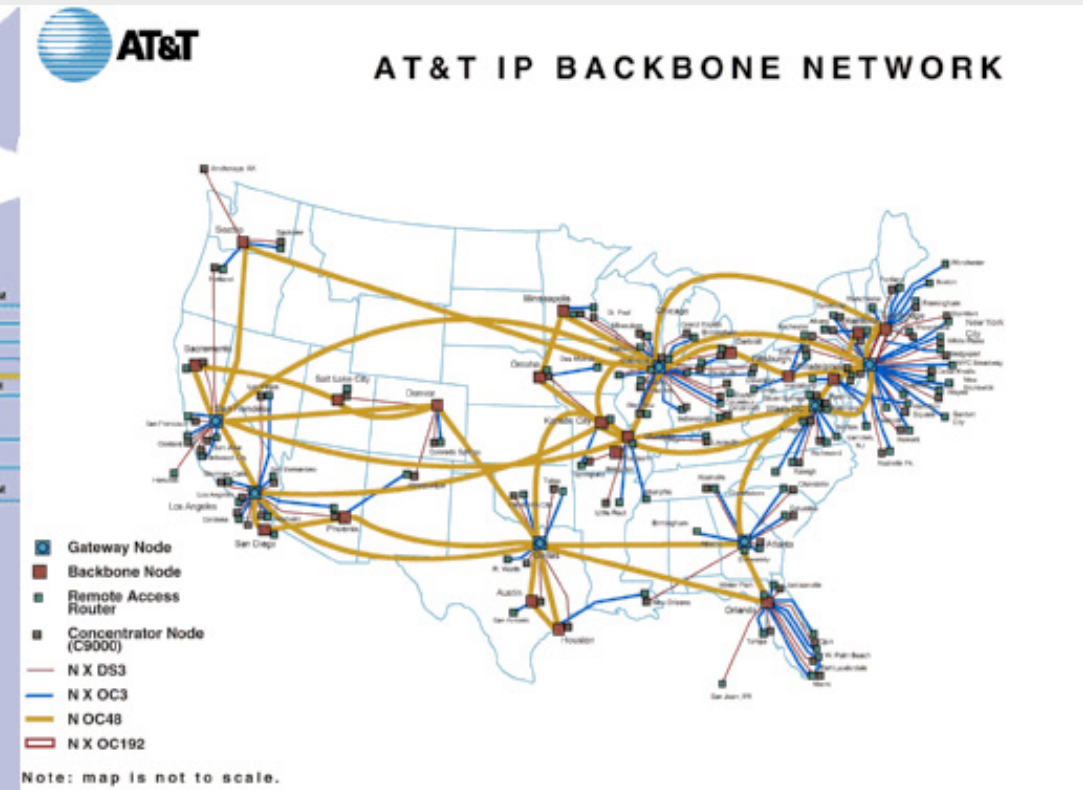
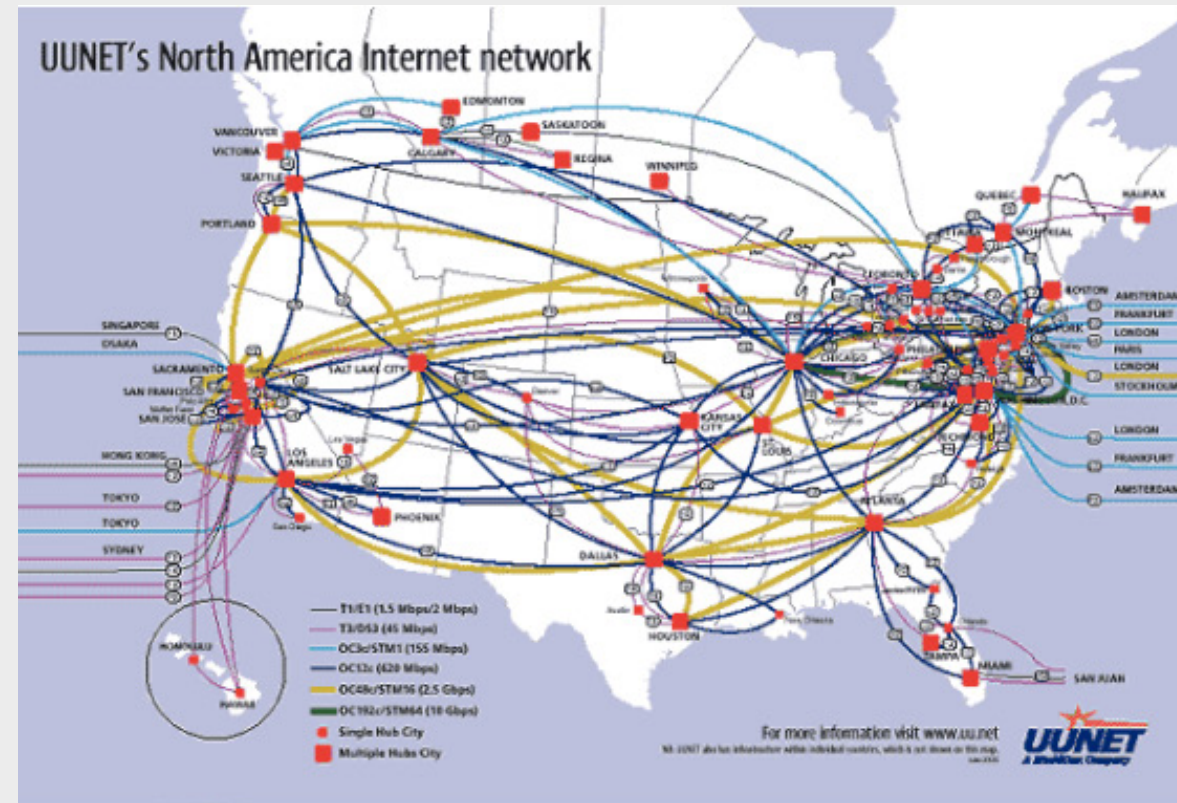


DECWRL netmap-2.1 by Brian Reid at Thu M
Gall Stereographic Projection, Map center: [1

flow, worldwide
nal effective flow volume

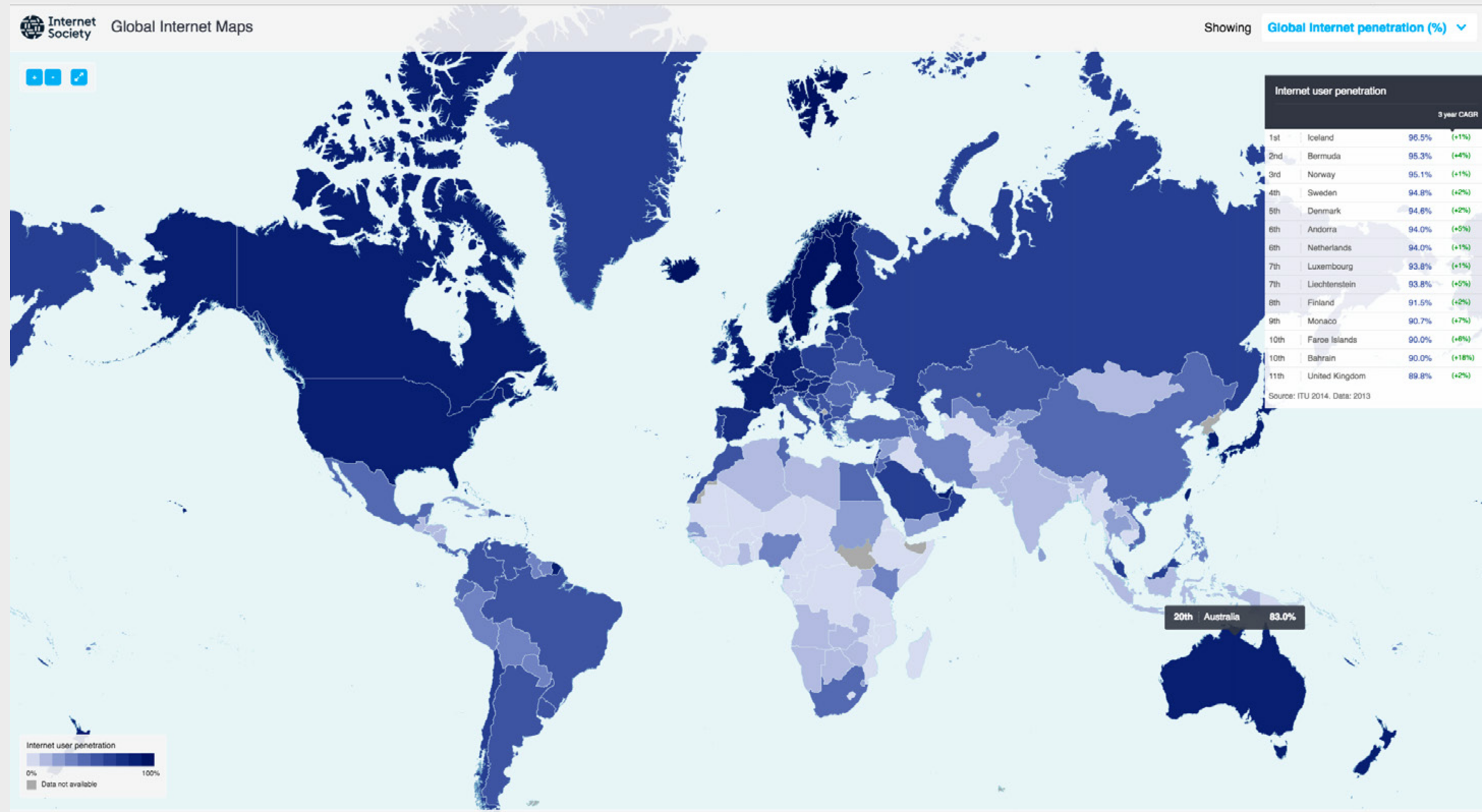
Internet had become global by 1993.

Map of information flow on Usenet shown here.



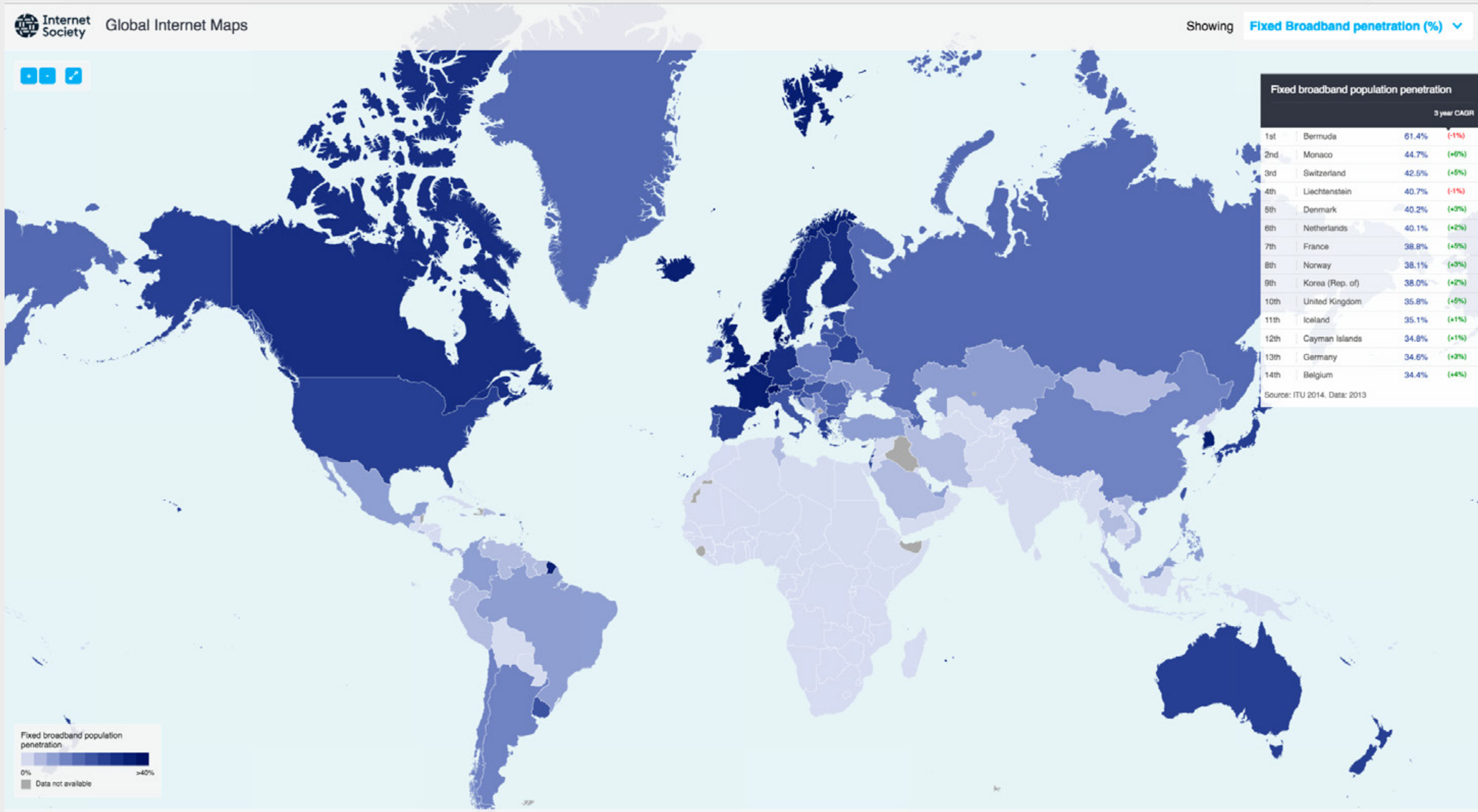
Internet becomes commercialized

By 1994, Clinton administration privatized internet backbone. Commercial firms took over long-distance traffic, allowing gov't funded NSFNET to be decommissioned.

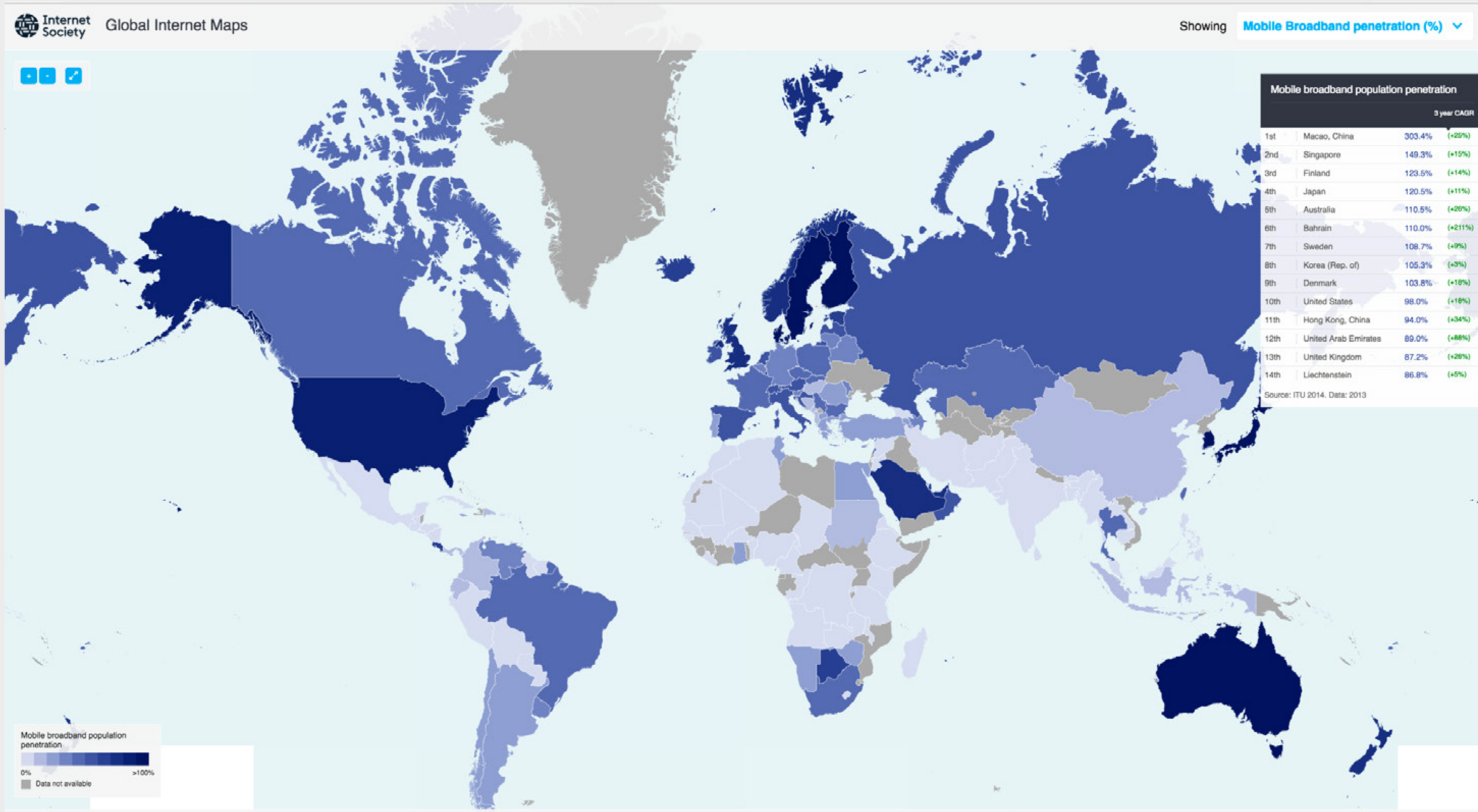


Global Internet Penetration 2017

Shows who has access to internet. 2 main ways: through broadband connection or through mobile device.



Broadband Internet Penetration 2017



Mobile Internet Penetration 2017



Martin Cooper(1928–) invented the first cell phone in 1974.

**Watch
Video**

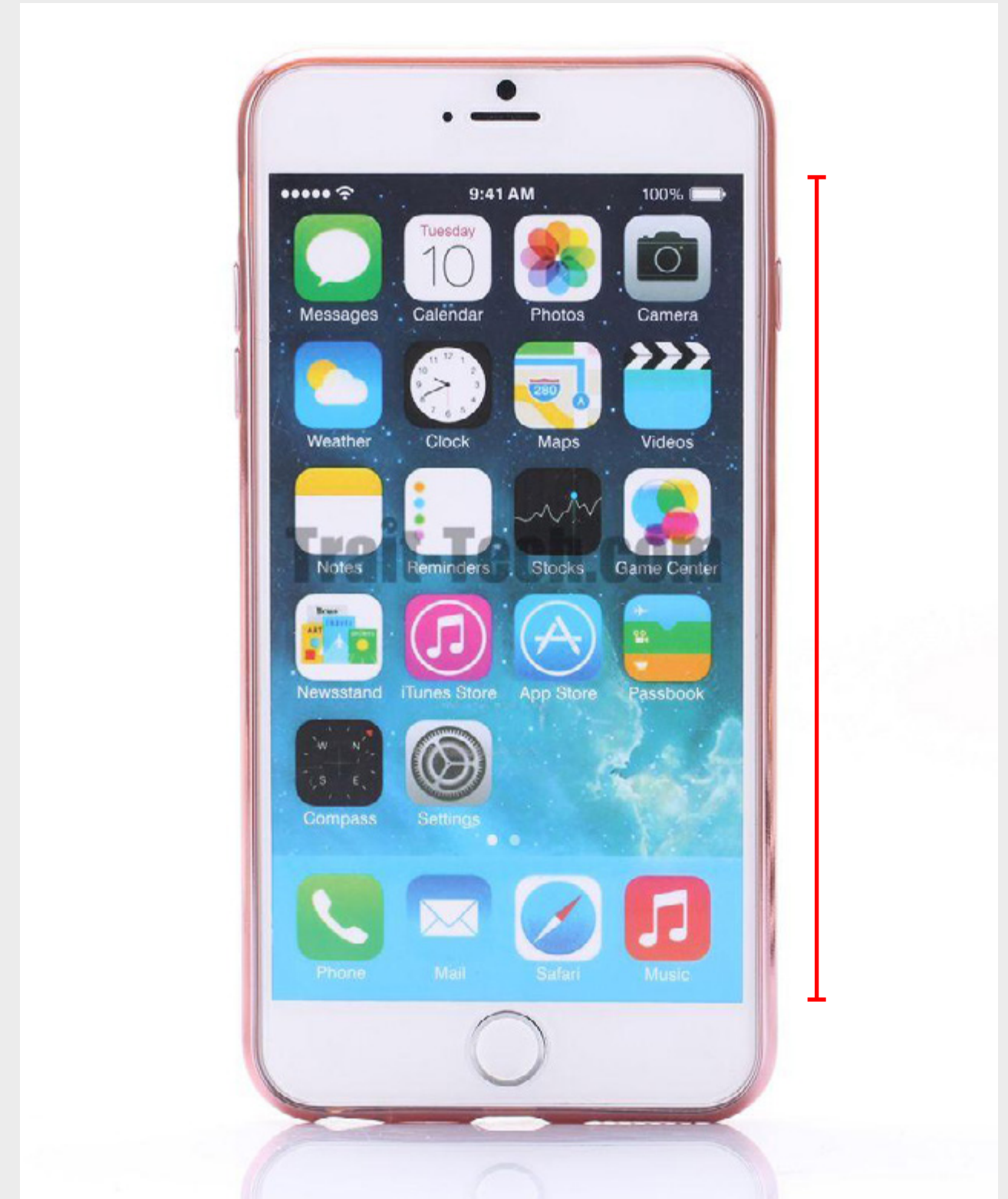


A collection of some of my old cell phones



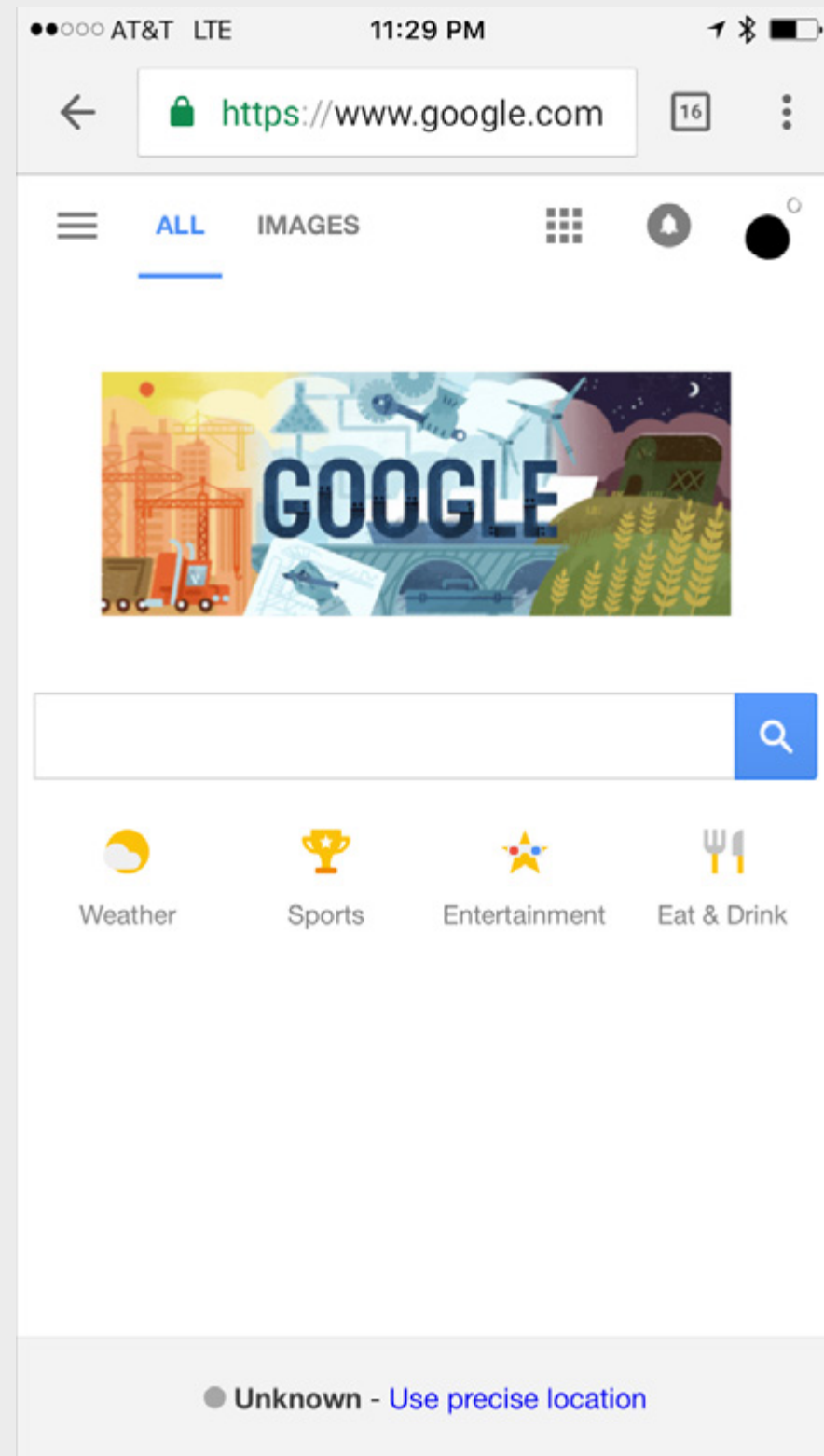


My first cell phone

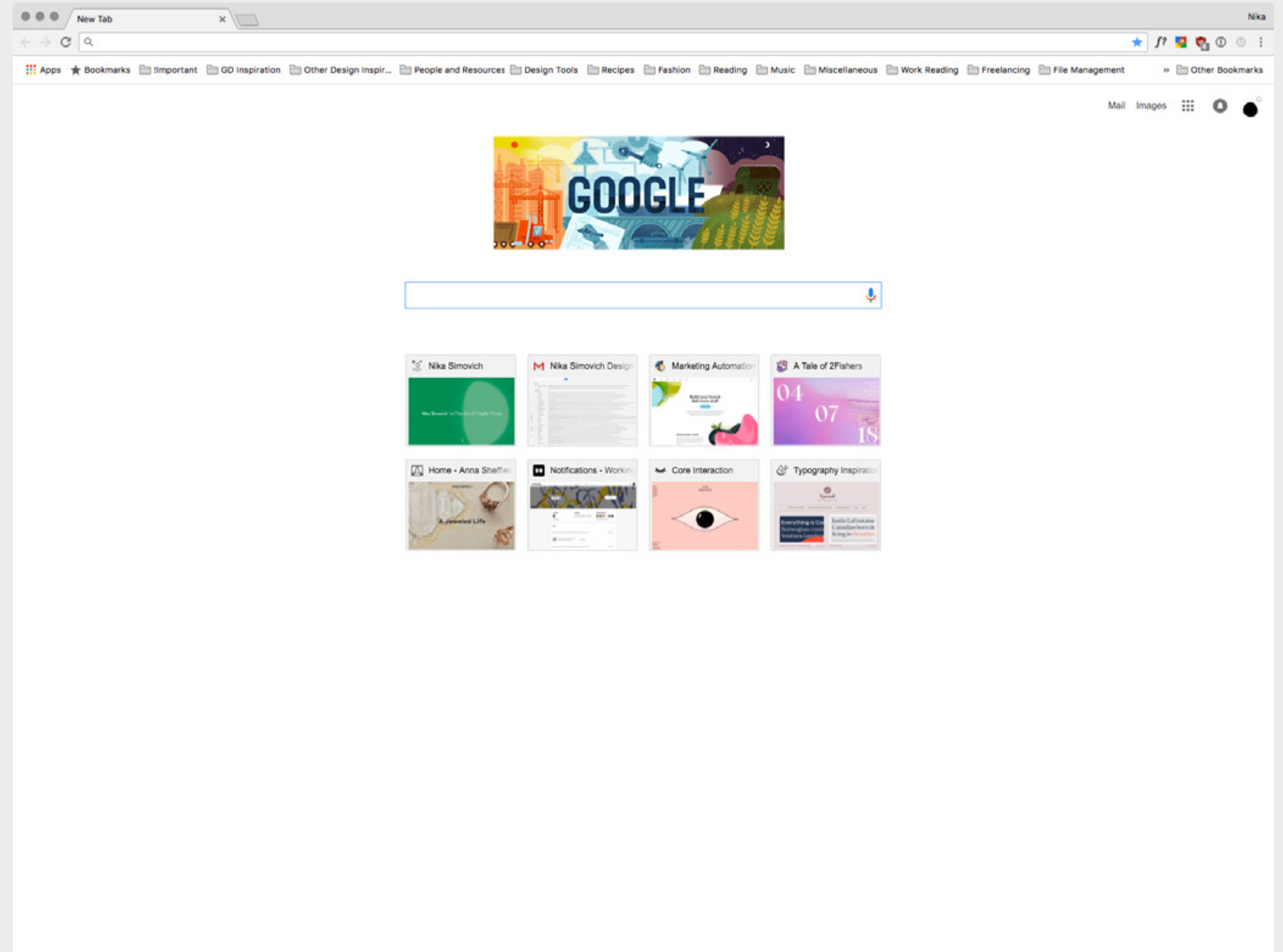


Iphone 6 plus

What is the primary use of these devices?



Google Chrome on phone



Google Chrome on desktop

Responsive web design replaced having a totally separate mobile experience.



Responsive Web Design



MIT - Massachusetts Institute of Technology

Not Secure | web.mit.edu

MIT

Education Research Innovation Admissions + Aid Campus Life News Alumni About MIT

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mit solve

Highly searched

- school of engineering
- bcs
- majors & minors
- arts at mit
- political science

Recommended today

- registration day
- new i-corps node
- lidar in puerto rico
- mooc milestone
- infinite new music

Spotlight: Sep 4, 2018

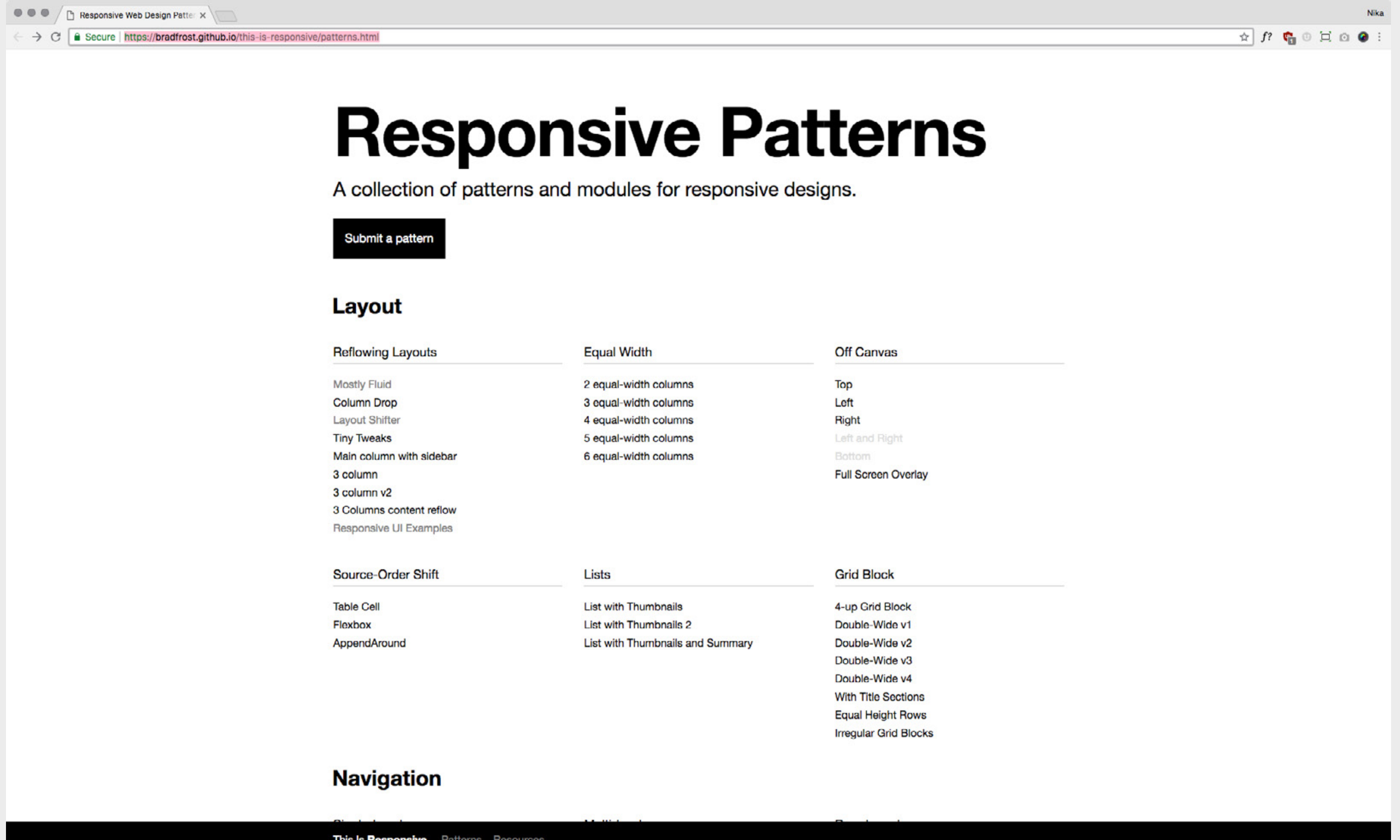
Nuclear power accounts for 5 percent of global energy output. A new **MITEI** report says that unless this number grows, it will be difficult to achieve the deep cuts in carbon emissions needed to slow **climate change**.

[Full story](#) Share: [Twitter](#) [Facebook](#)

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Join us in building a

Example of responsive layout changes web.mit.edu



Responsive Design Patterns – <https://bradfrost.github.io/this-is-responsive/patterns.html>

Responsive layout grid - Material X

Secure | <https://material.io/design/layout/responsive-layout-grid.html#columns-gutters-margins>

MATERIAL DESIGN

Design Develop Tools

Material System

- Introduction
- Material studies

Material Foundation

- Foundation overview
- Environment
- Layout
 - Understanding layout
 - Responsive layout grid
 - Columns, gutters, and margins
 - Grid customization
 - Breakpoints
 - Grid behavior
 - UI regions
 - Whiteframes
 - Spacing methods
 - Component behavior
 - Density
- Navigation
- Color
- Typography
- Iconography
- Shape

Responsive layout grid

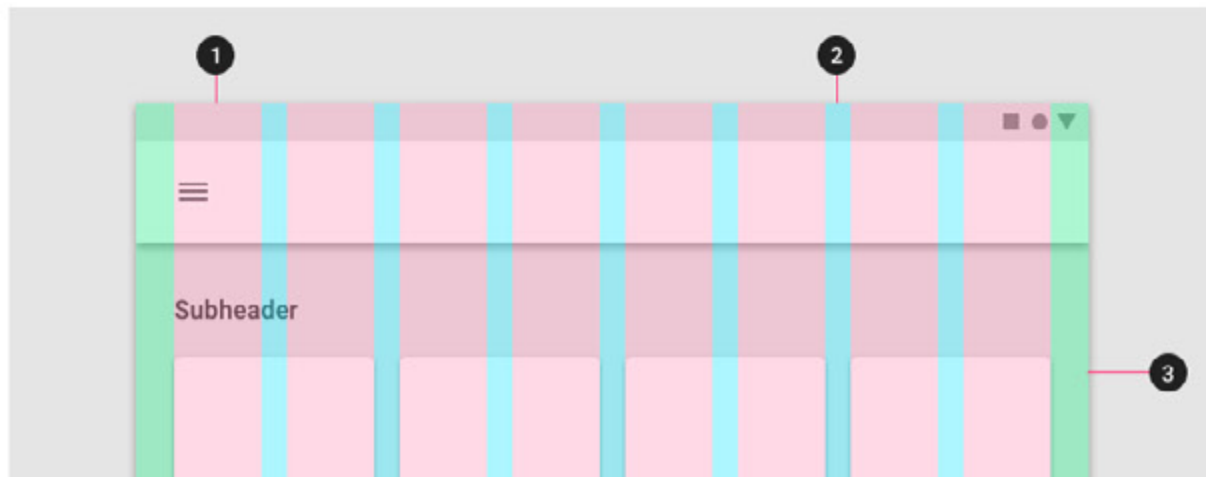
The Material Design responsive layout grid adapts to screen size and orientation, ensuring consistency across layouts.

CONTENTS

- Columns, gutters, and margins
- Grid customization
- Breakpoints
- Grid behavior
- UI regions
- Whiteframes

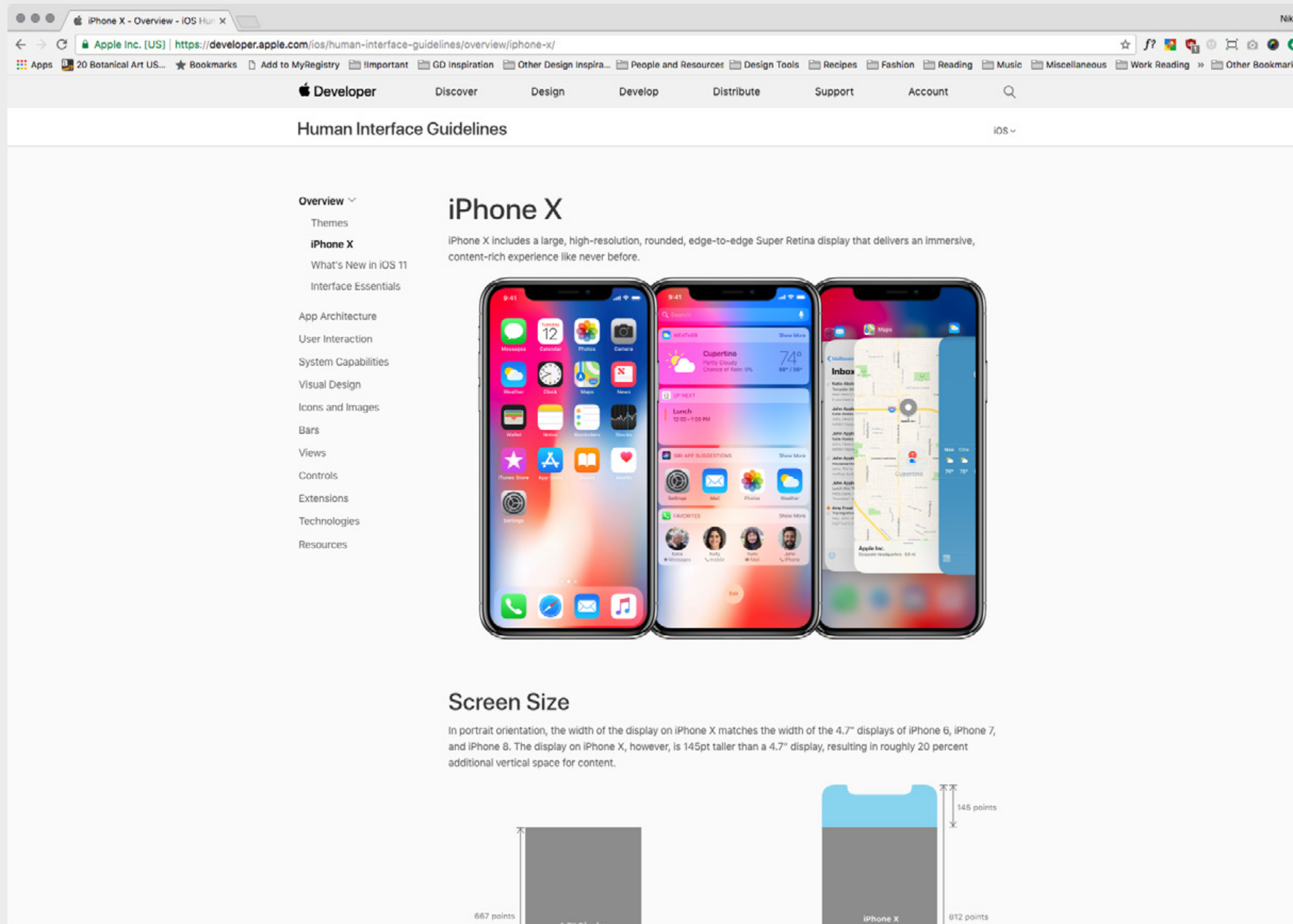
Columns, gutters, and margins

The Material Design layout grid is made up of three elements: columns, gutters, and margins.



The diagram illustrates a responsive layout grid. It features a central grid of pink squares (columns) separated by light blue vertical lines (gutters). The grid is enclosed by green vertical bars (margins). A subheader is shown within the grid. Three numbered callouts identify the components: 1 points to the left margin, 2 points to a gutter, and 3 points to the right margin.

Design patterns – Material Design is Google’s set of principles



Design patterns – Human Interaction Guidelines are Apple's version

Sketch Demo



Layout Settings

These settings apply to selected Pages or Artboards only.



Columns:

Total Width: 1440px

Offset: 80px

Center

Number of Columns: 14

☐ Gutter on outside

Gutter Width: 30px

Column Width: 75px



Rows:

Gutter Height: 12px

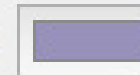
Row Height: 5 × Gutter Height

☐ Draw all horizontal lines

Visuals: ☒ Fill Grid

☐ Stroke Outline

Colors:



Dark



Light

Make Default

Cancel

OK

Example settings

Mobile Specific Designs

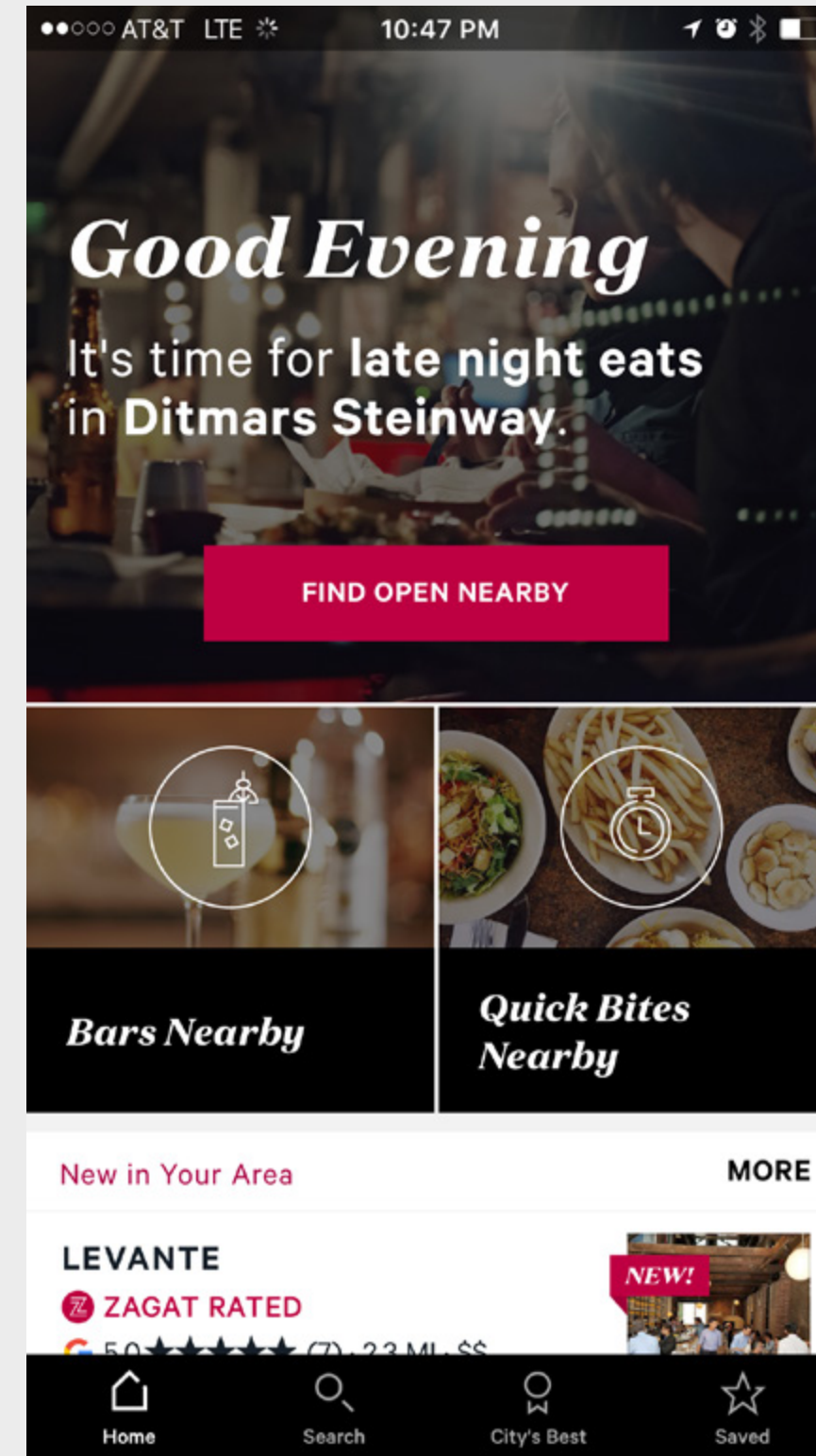
Pokemon Go



Compass



Zagat



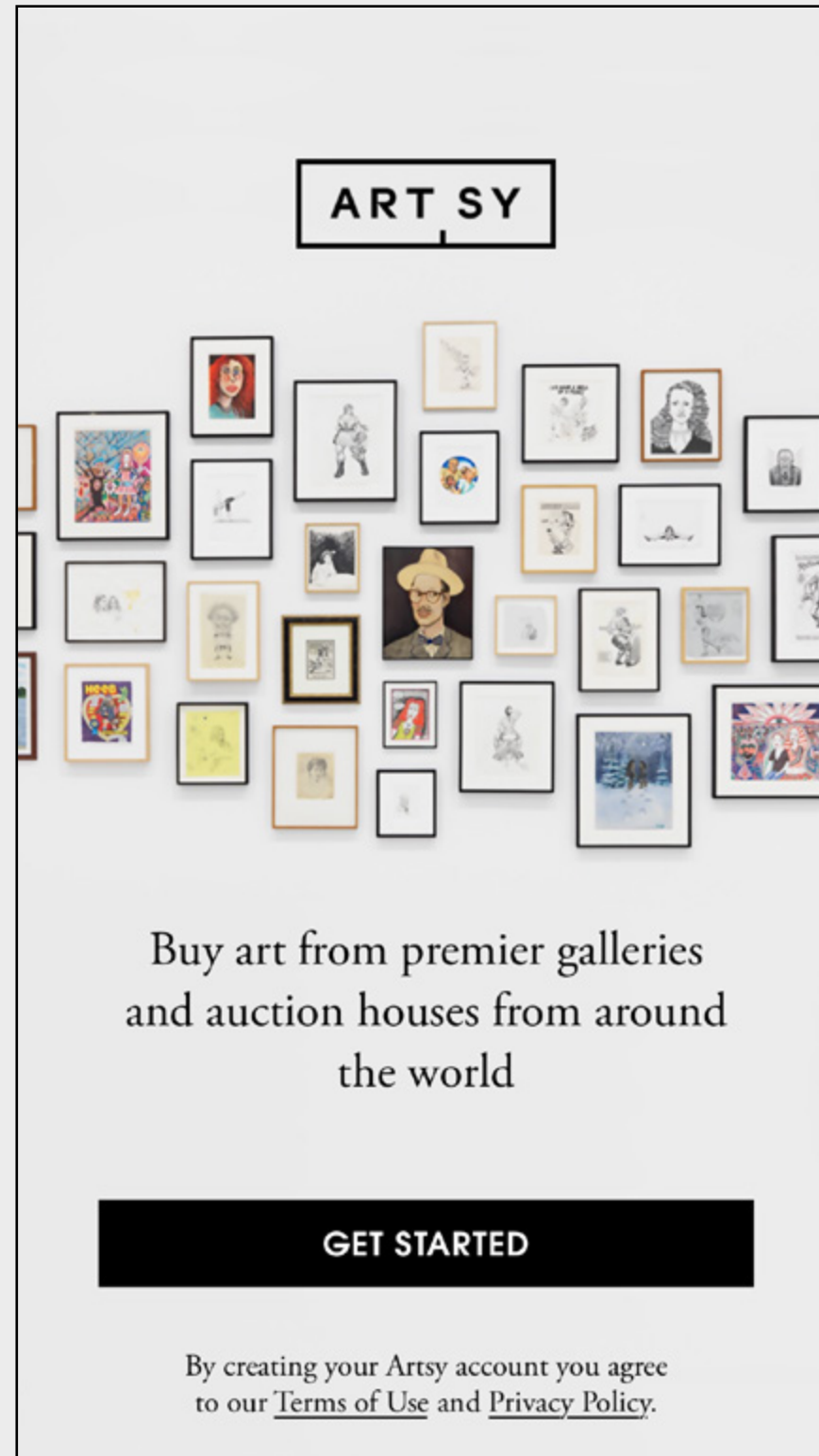
Star Walk 2



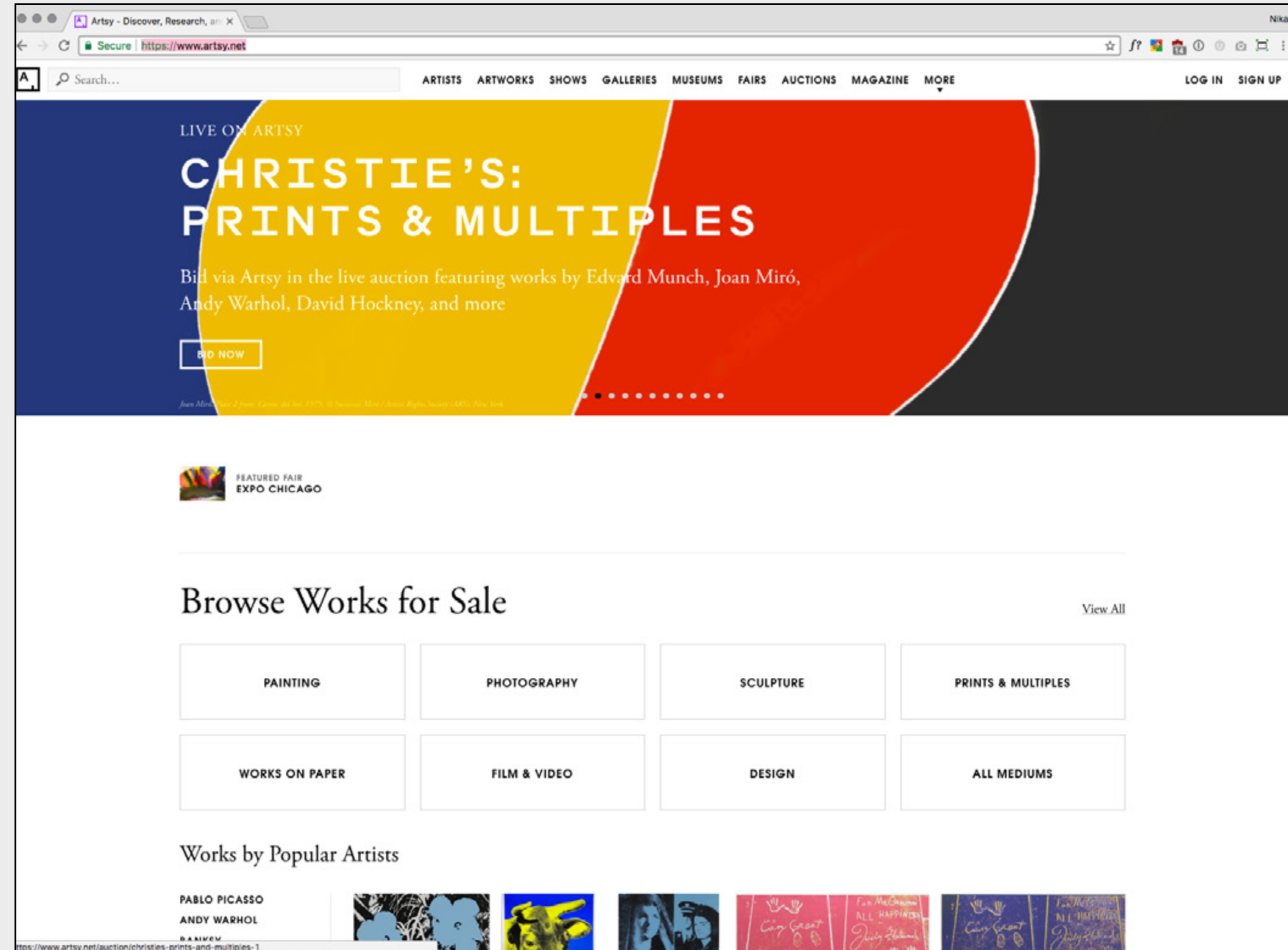
Variable Location

Mobile site/app can respond to location, because it can change and be accessed somewhere specific, while desktop is accessed from 1 spot.

Artsy App



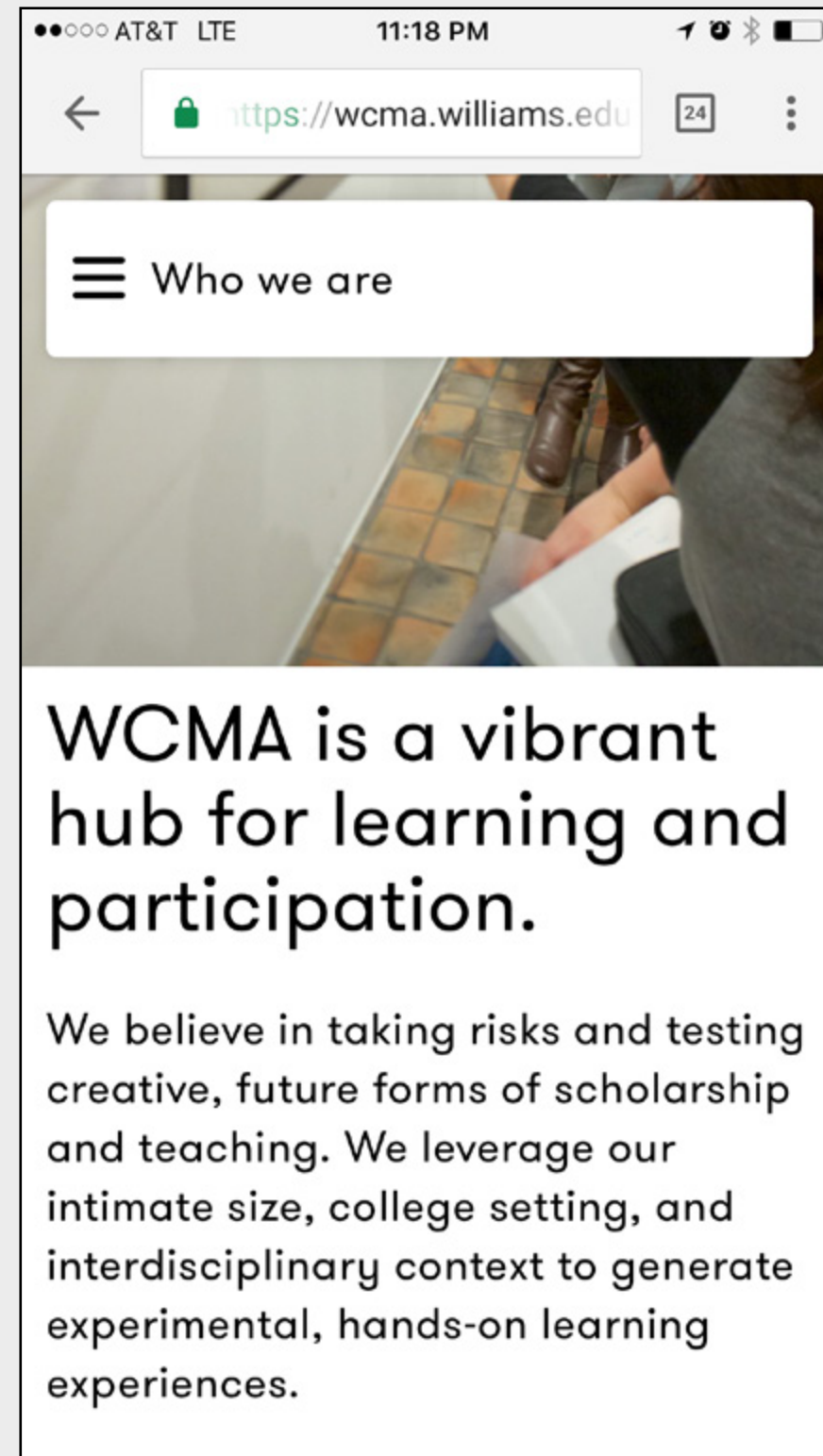
Artsy Site



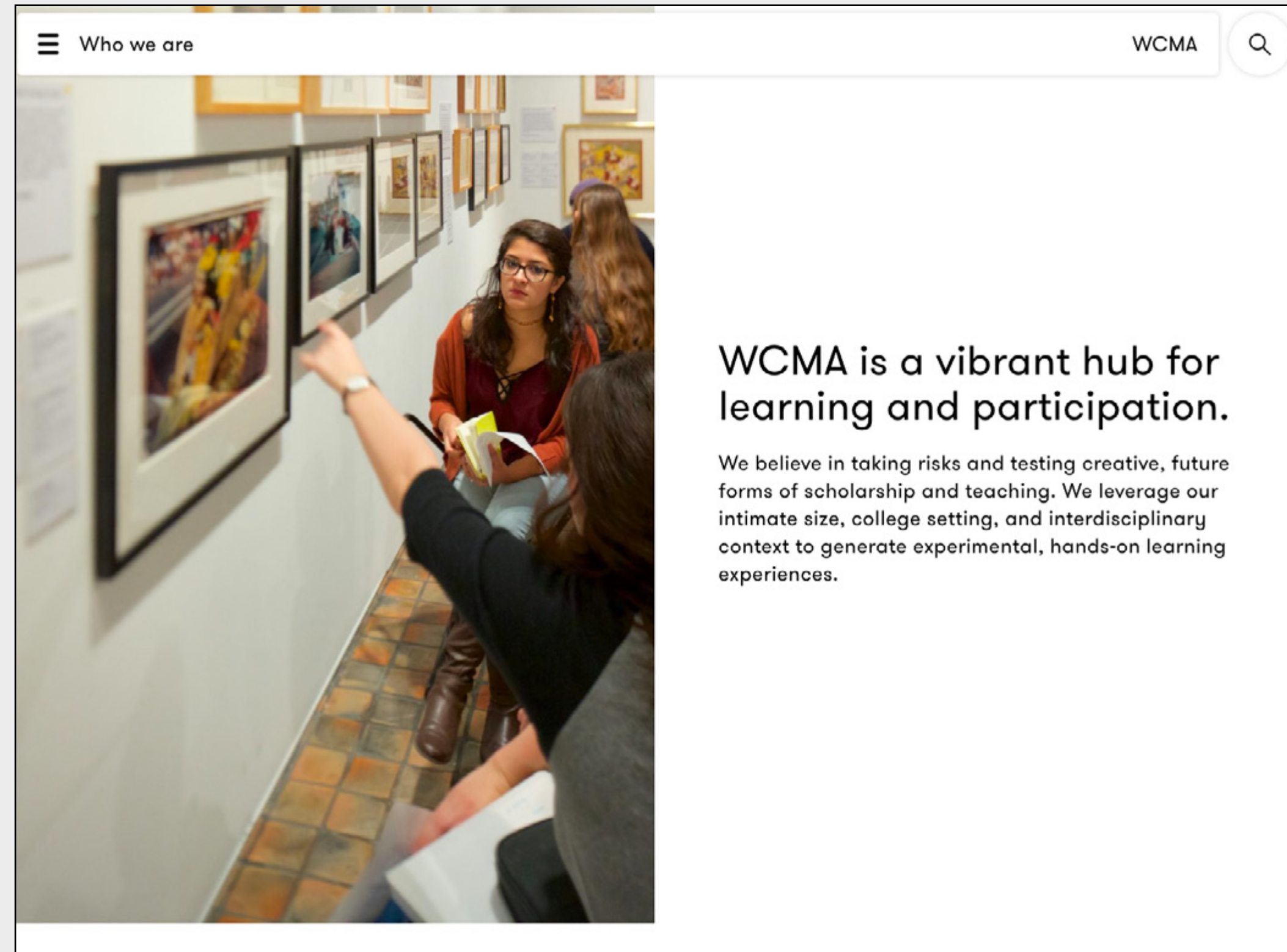
Less Real Estate

Viewport is smaller, so the experience is more streamlined allowing the user to focus on one thing at a time.

WCMA Mobile



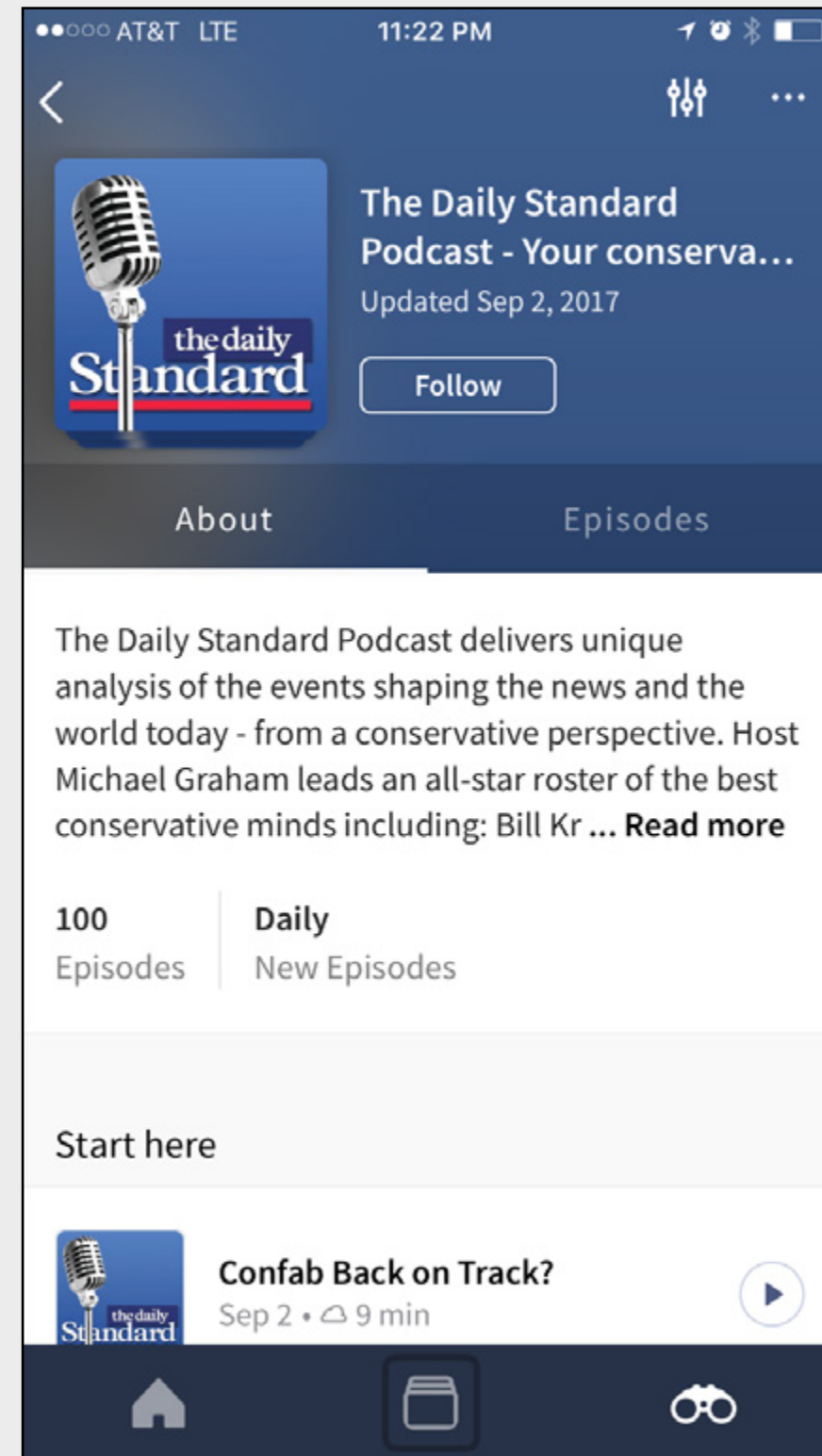
WCMA Desktop



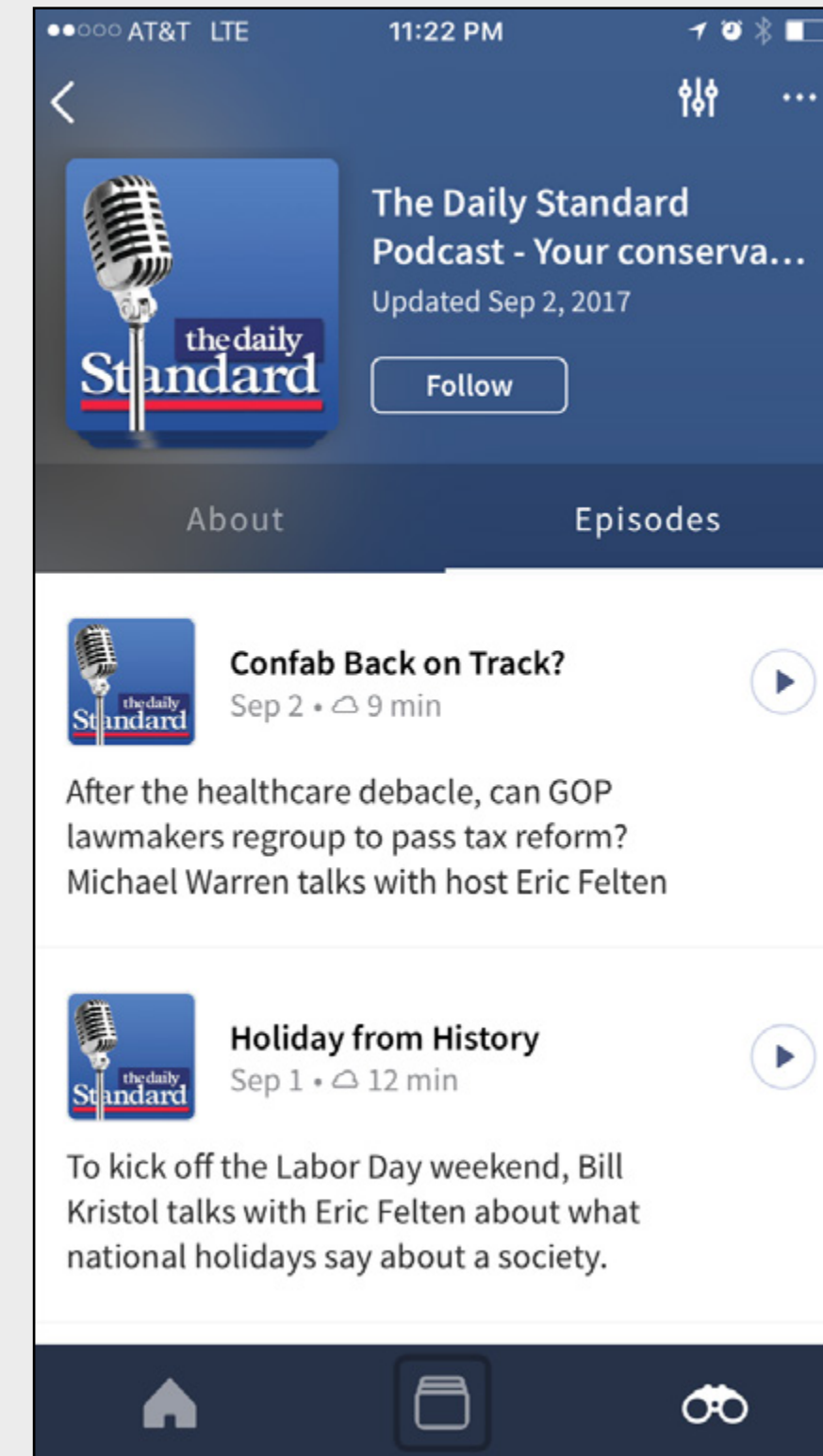
Legibility Key

Due to the smaller screen size, legibility is key. Type sizes are generally larger, but use your best judgement.

Radio Public



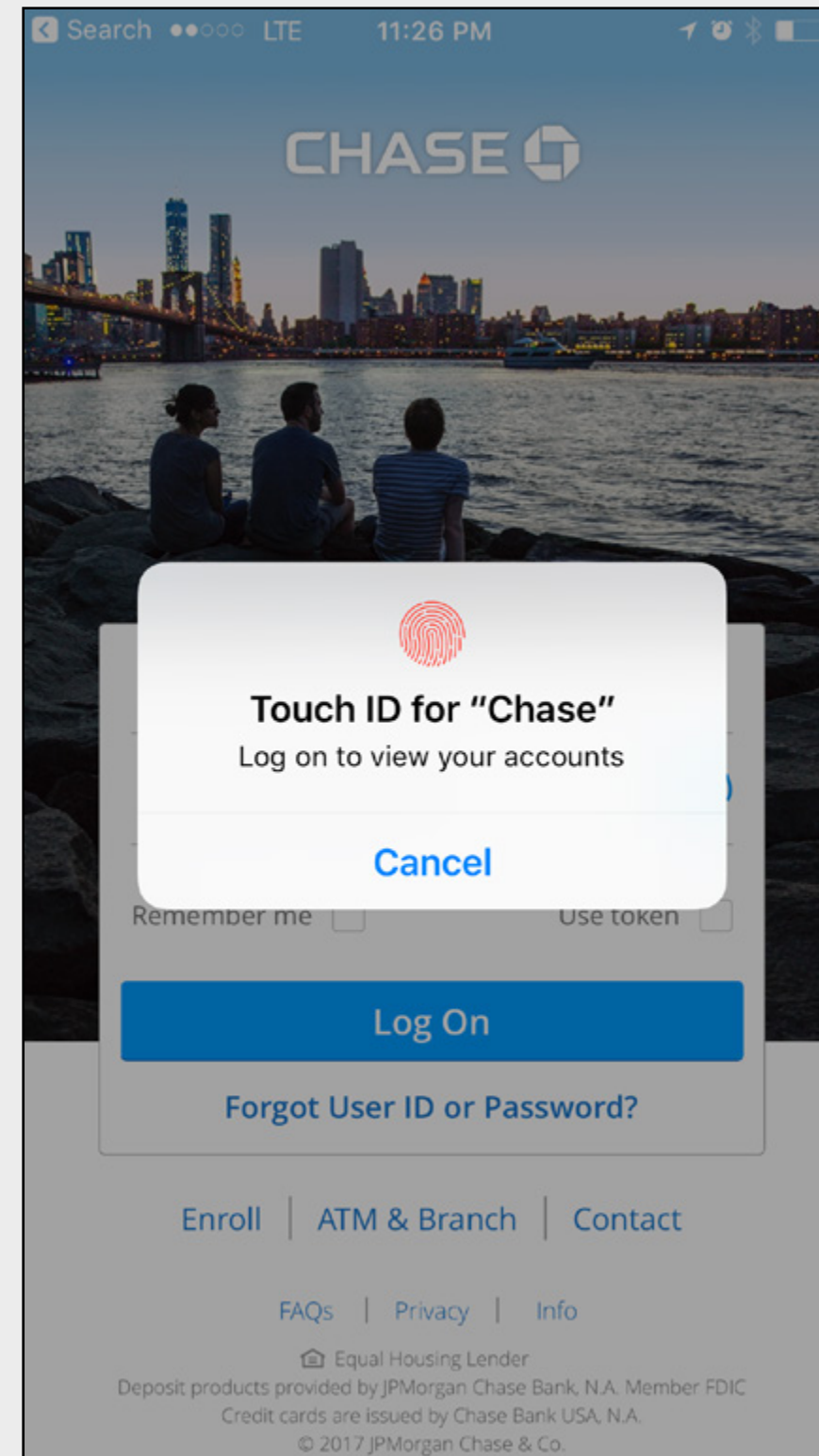
Radio Public



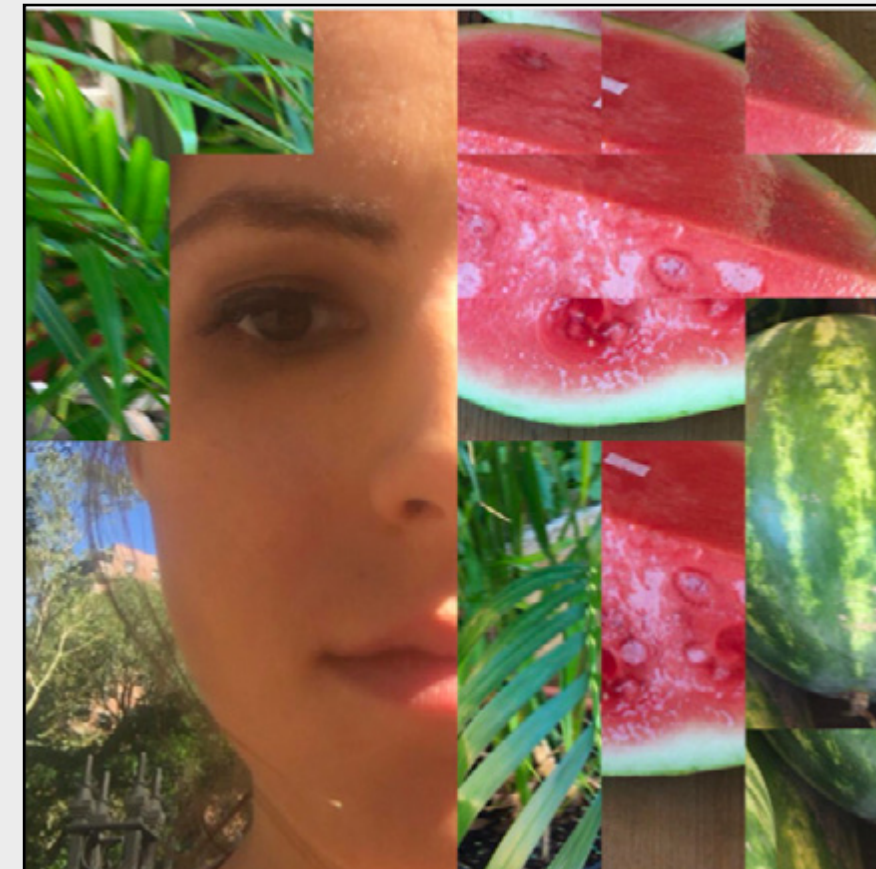
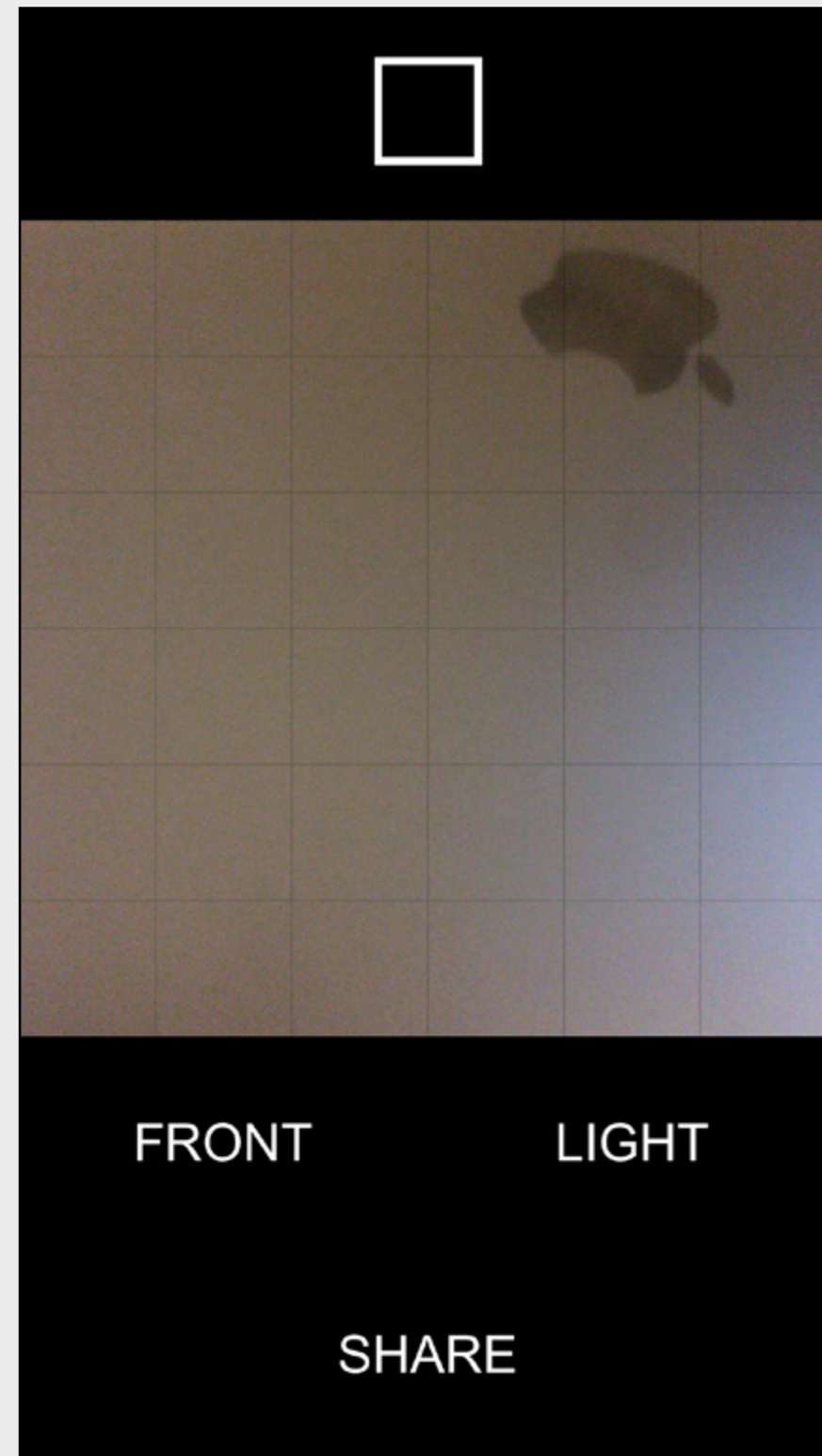
No Mouses. Simpler interactions.

Touching, not clicking. Buttons to be touchable. Certain parts of design hidden behind buttons and interactions.

Chase



Mobile phones generally carry more personal info
Payments, contacts, logins, exact location. etc.



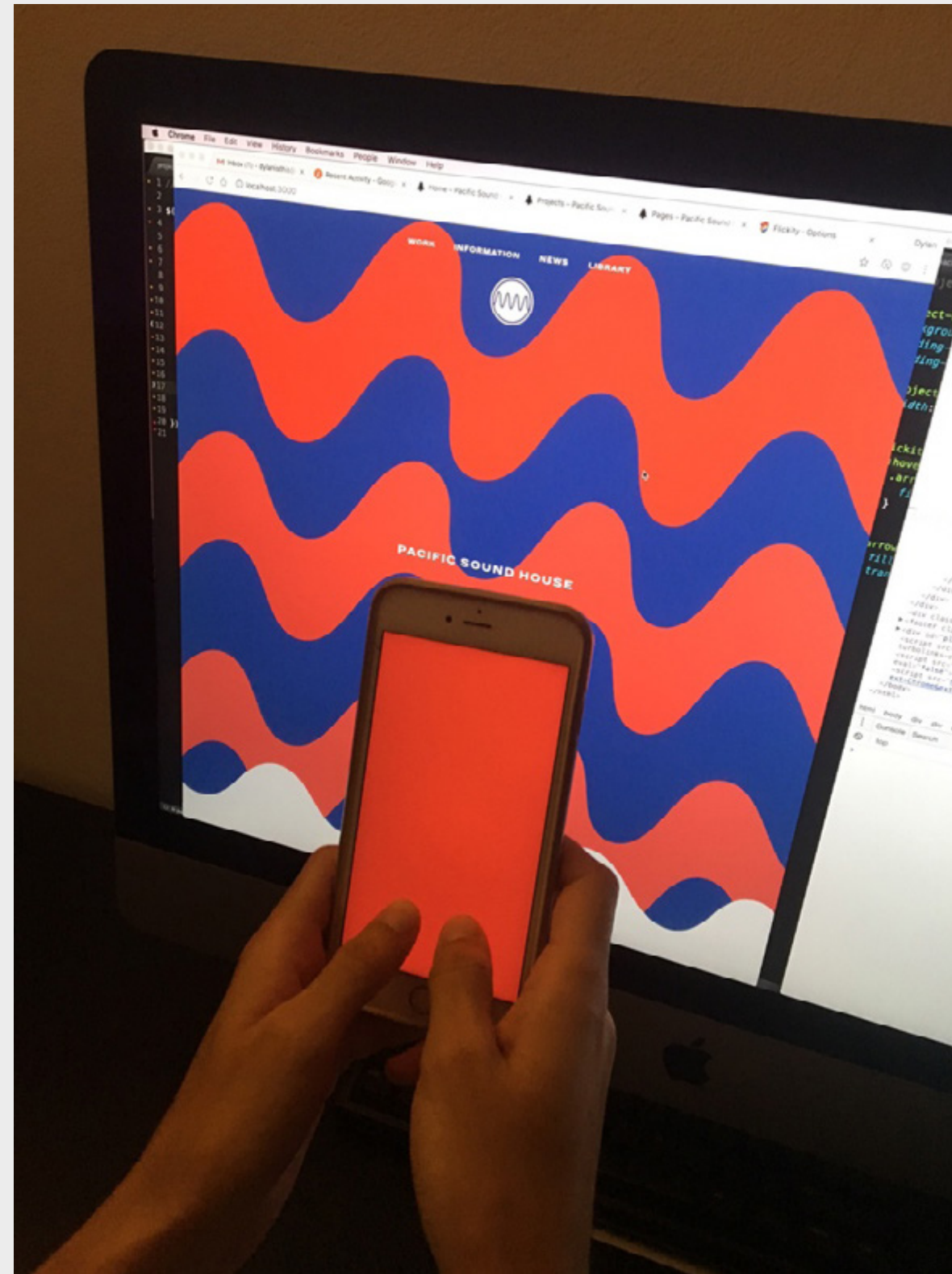
Phones have access to other senses: Sight & Touch

Finger Quilt by Jeffrey Scudder uses both sight and touch



Phones have access to other senses: Sight & Touch

Photobooth by Konst & Teknik & Martin Storm (Uses both cameras at once)



Phones have access to other senses: Sight & Hearing
Bugg by Linked by Air

Phones have access to other senses: Smell
Scentee add on w/ Nose Roast app



Watch
Video

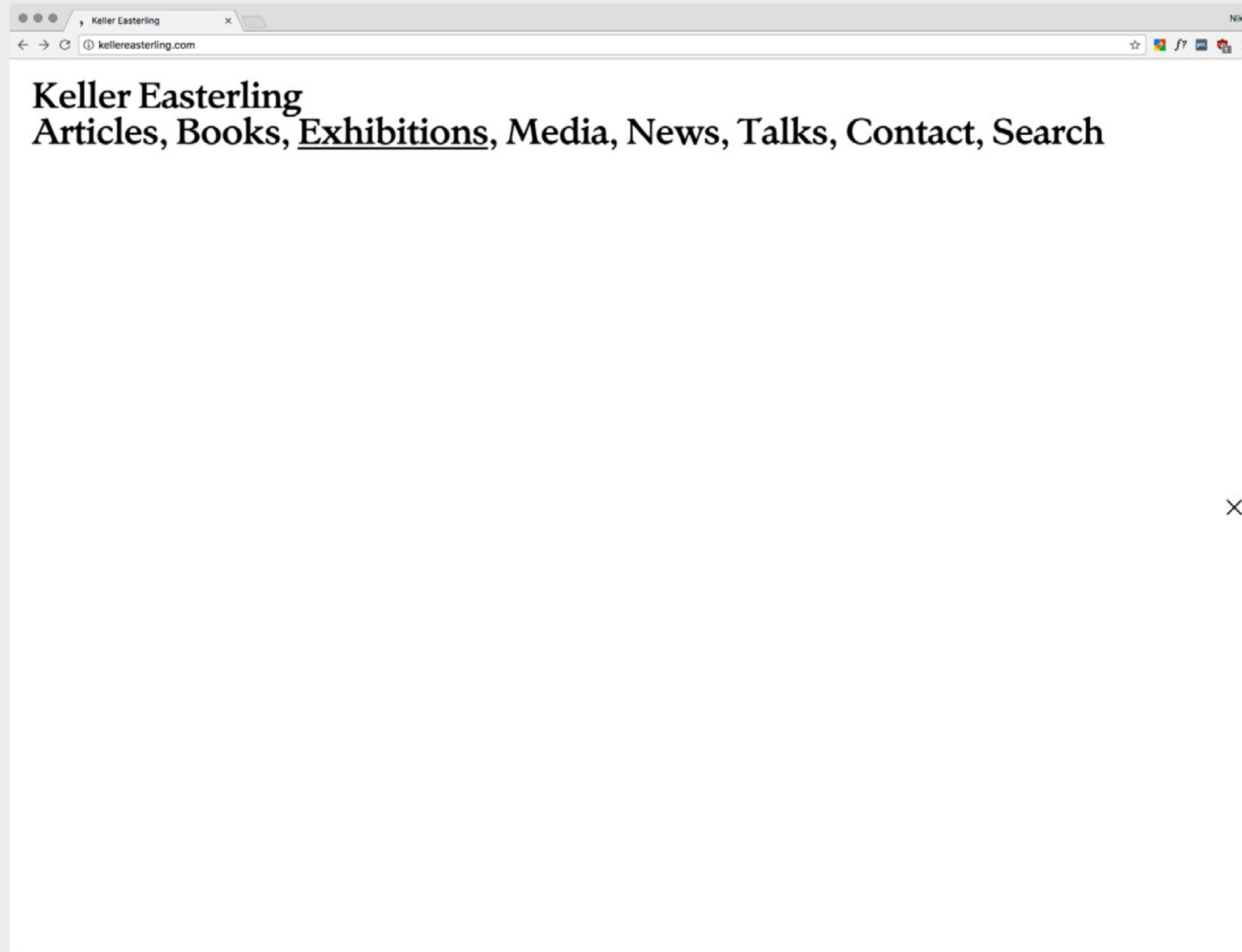
Navigation and Layout

For your homework, you might consider breaking up your text into different sections that you can navigate through. While the emphasis on the assignment is to create a responsive layout, let's think about how your design choices can support your text.

1

Navigation as navigation

Keller Easterling



This American Life, Studio Rodrigo

Home

Secure | <https://www.thisamericanlife.org>

Nika

This American Life

Archive Recommended How to Listen About

Search

Facebook Twitter

Donate

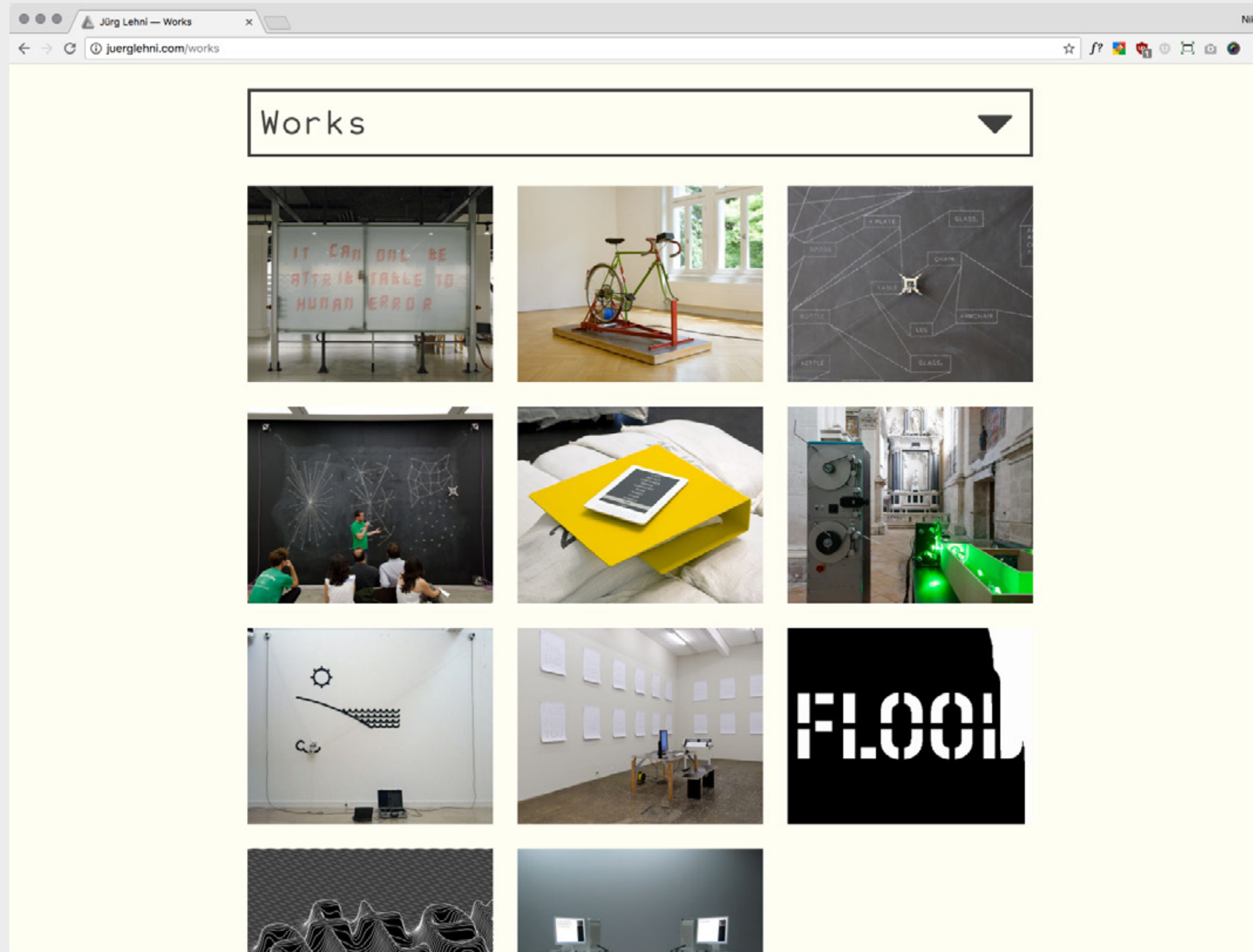
This Week: 637 February 2, 2018

Words You Can't Say

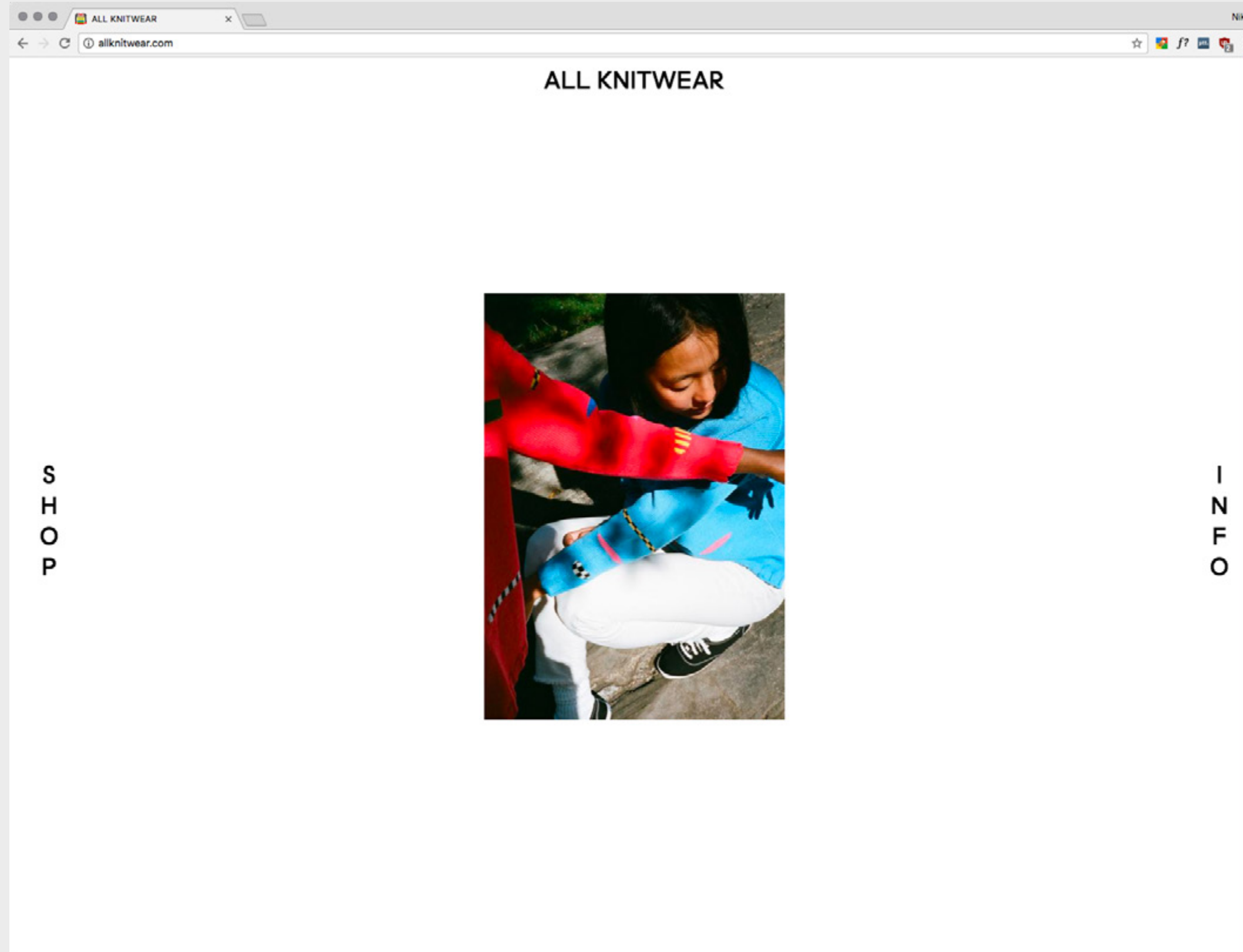
Jennifer Heuer

In this politically charged climate, it feels like you have to be super careful with your language, no matter who you are or what side you're on. Stories about people who say the "wrong" thing and suffer the consequences, including a very conservative Republican from Louisiana who's lambasted for being too liberal. [View episode details](#)

Jürg Lehni, Jürg Lehni



All Knitwear, Other Means



Julia Kim Smith, Linked by Air



Julia Kim Smith

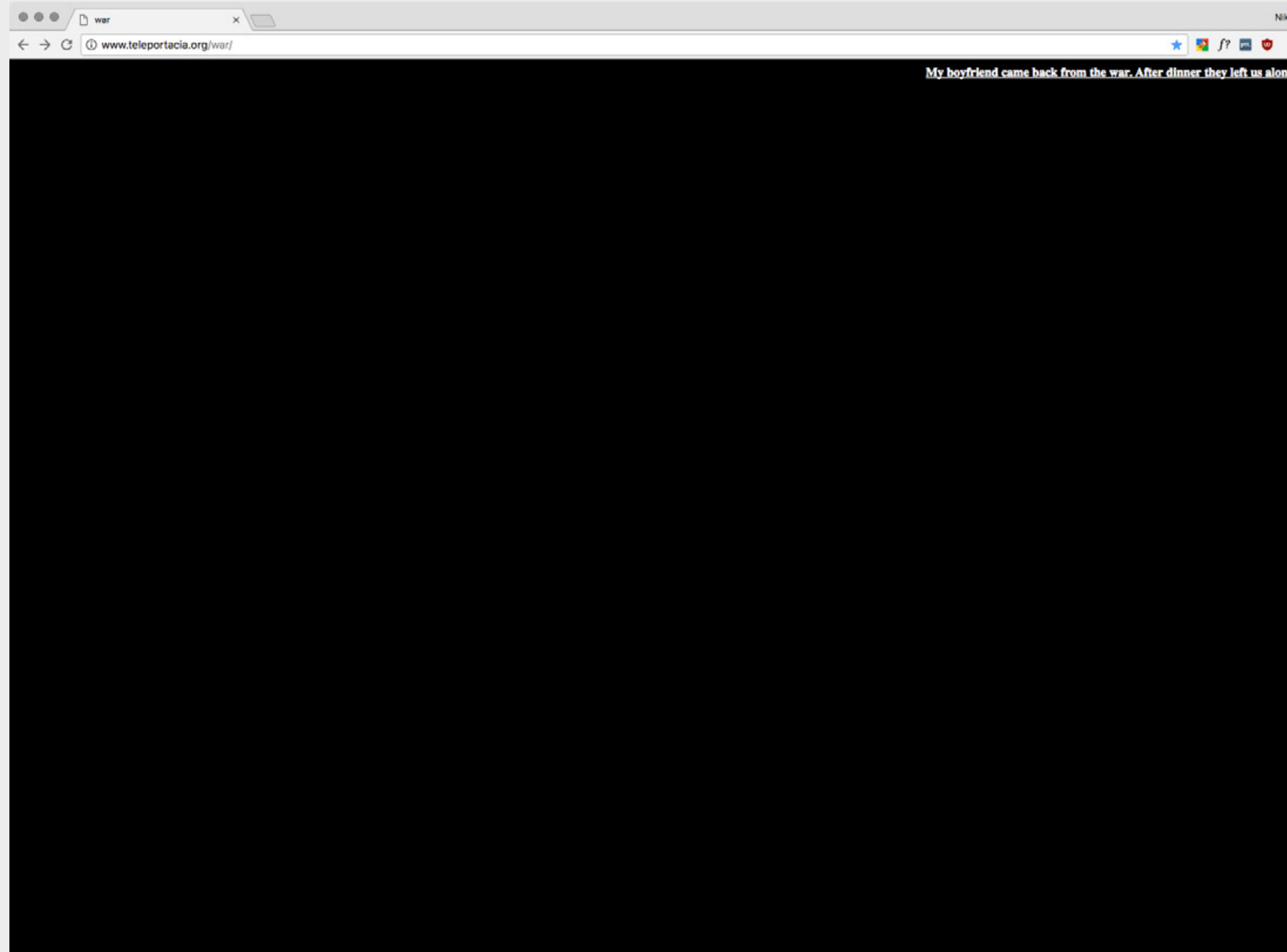
Work About Press Contact

AdWords	anonymous rage	are you the parent of a tagger?	auction item	baltimore actually	cast an asian
charlie chan: racebender	cylburn park	D&G by LC	DIY juche	domesticated beauty	ever after 9/11
google maps pyongyang	grand teton	groupon pyongyang	ivanka, resist	leaderland!	let us join kim jong-un and hello kitty and build a fairyland for the people on mount paektu with glorious rainbows and flowers!
maximum wage	miss dmz	newtown	night reconnaissance	north korea in emoji	north korea staycation
obey tm	one baltimore	own it.	pyongyang style	shop	study of perspective

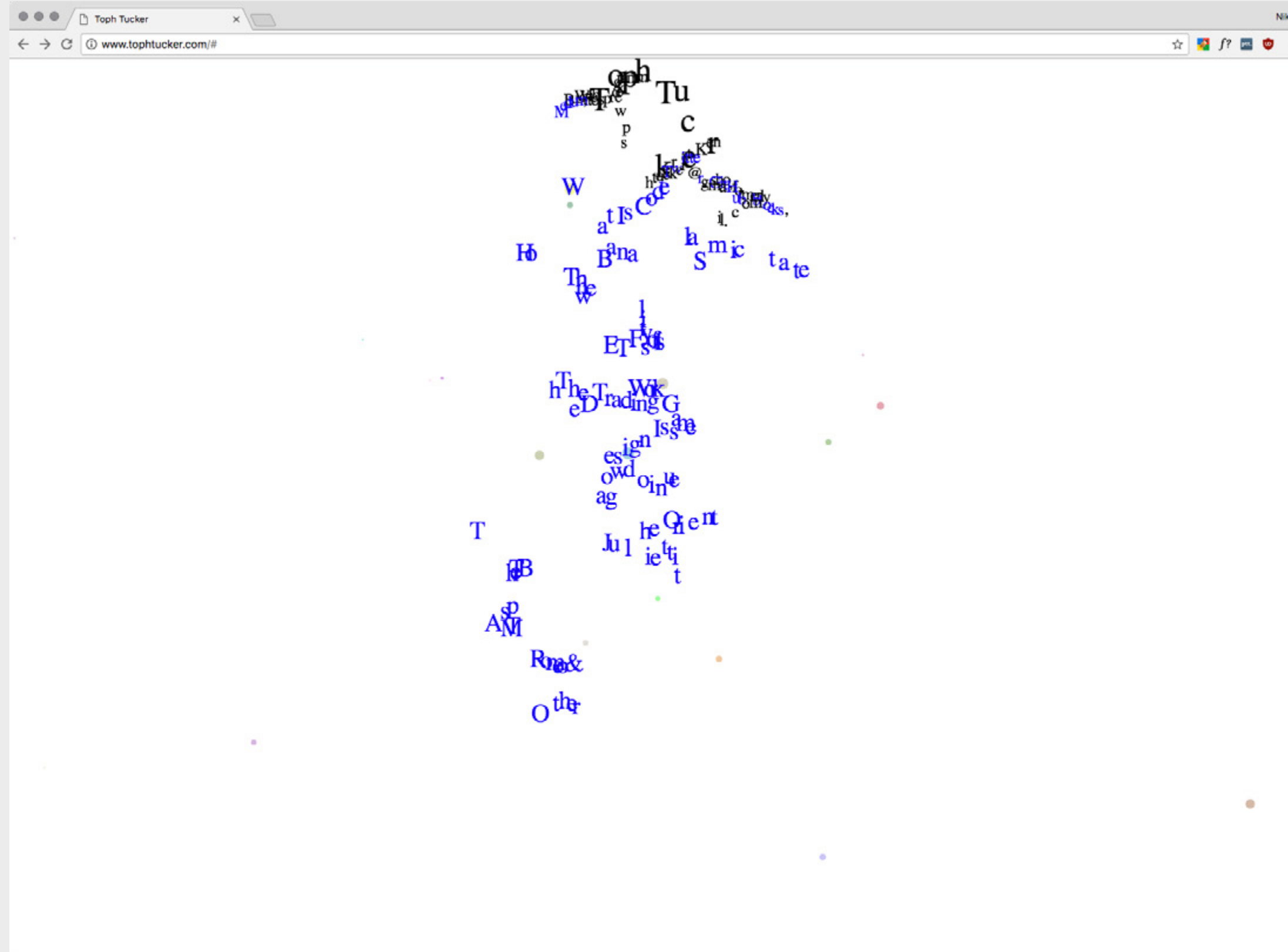
2

Navigation
as narrative

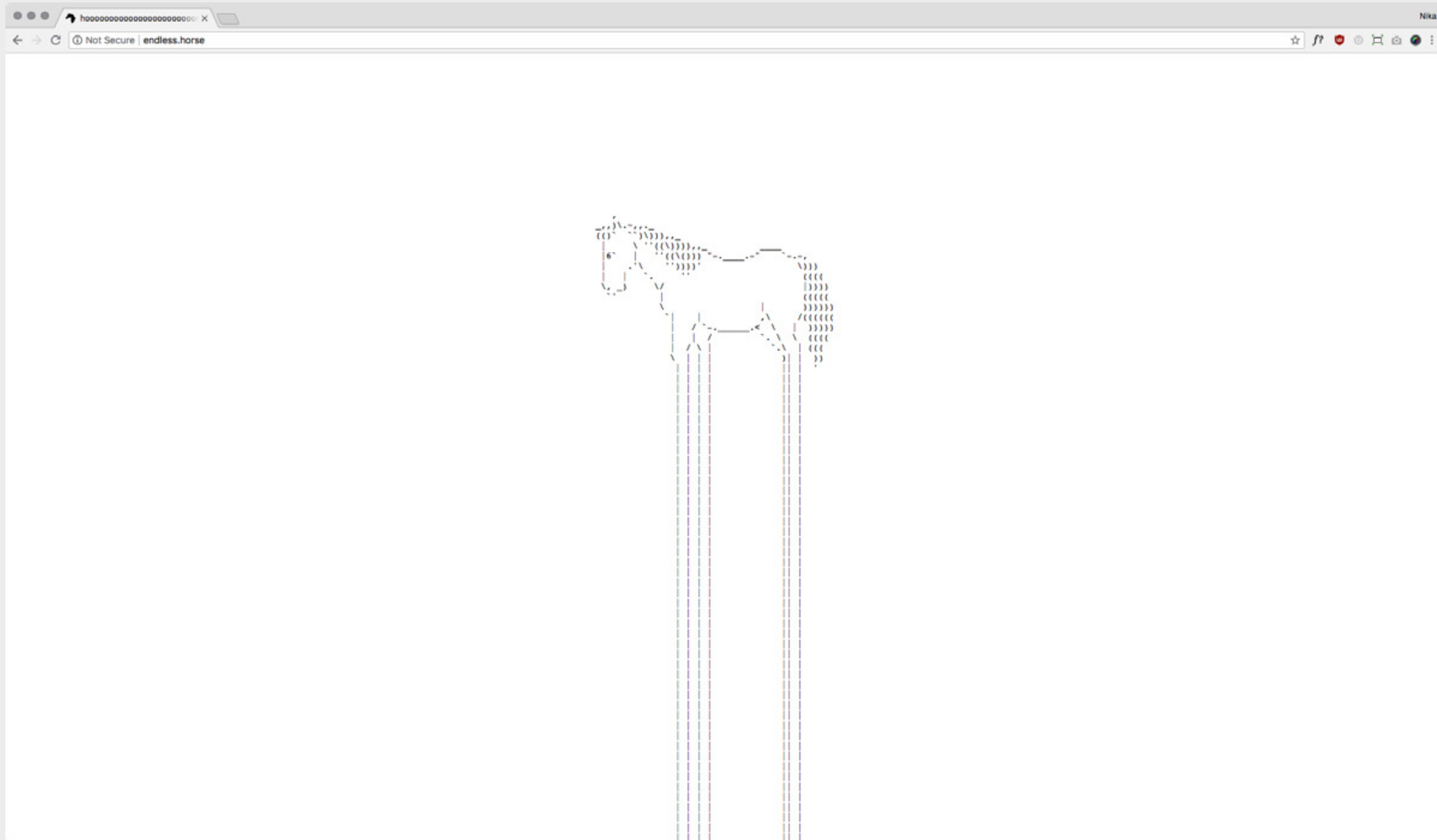
My Boyfriend Came Back from the War, Olia Lialina



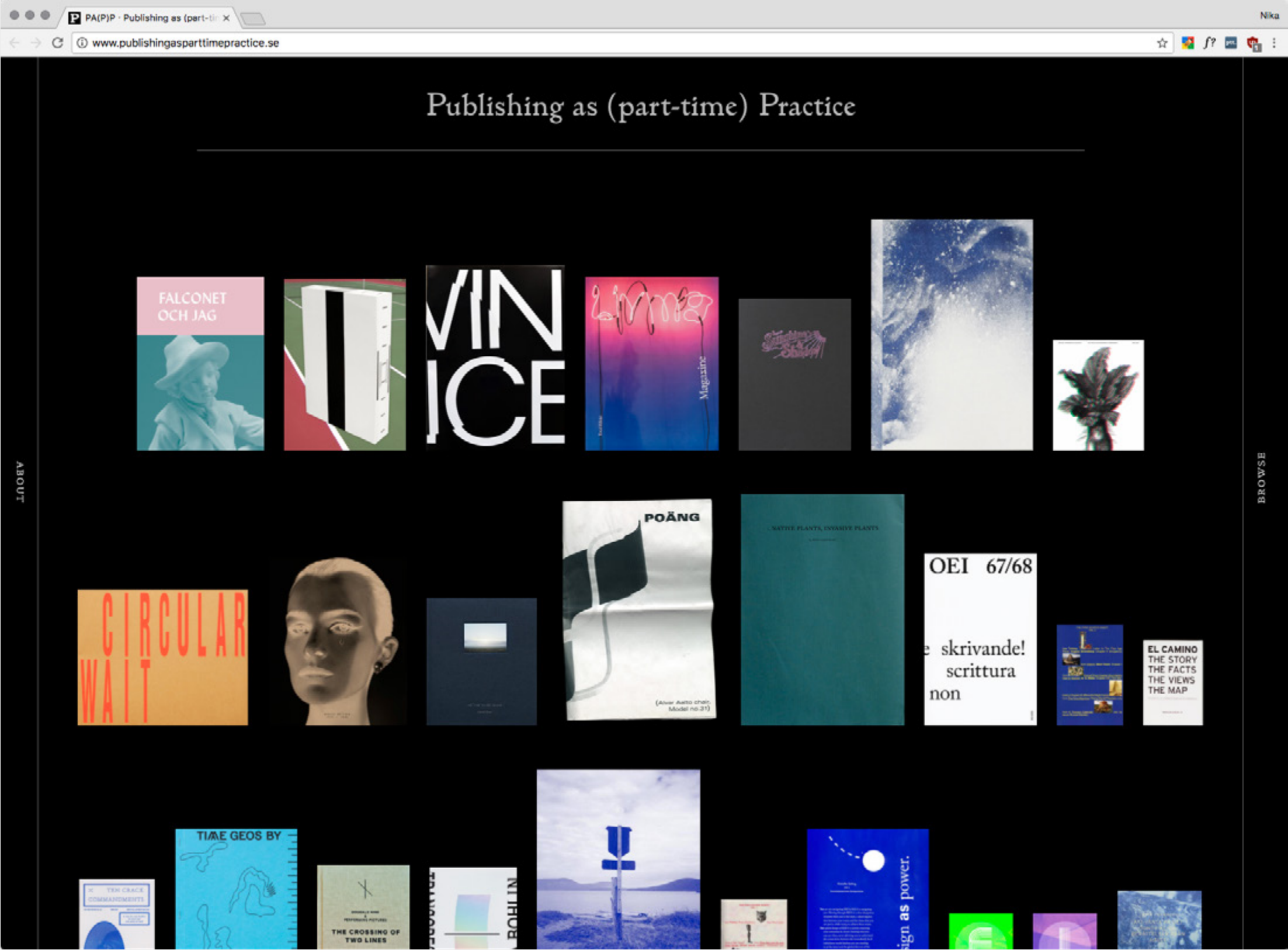
Toph Tucker



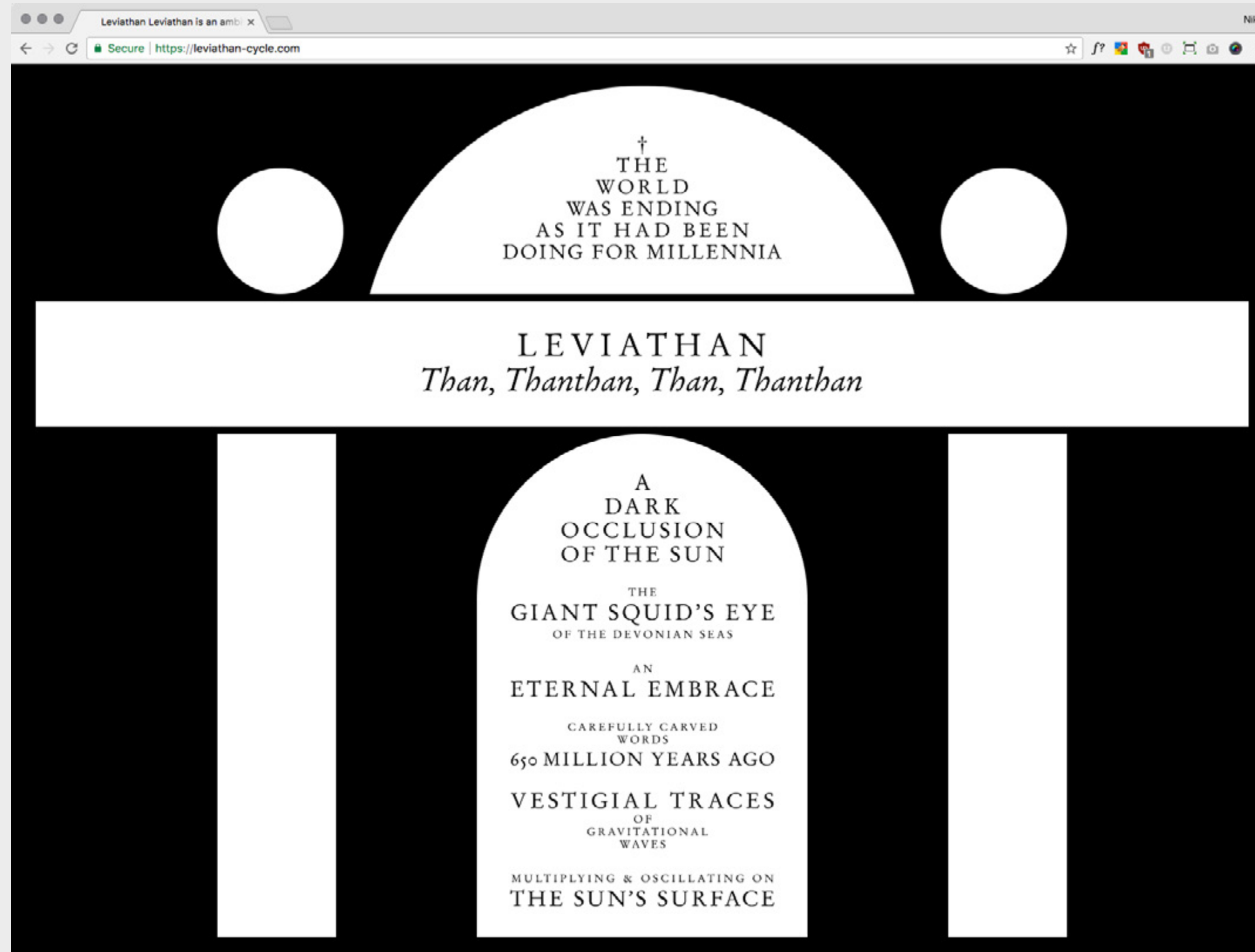
Endless Horse



Publishing as Practice, Konst & Teknik



Leviathan, Shezad Dawood. Site by OK-RM



4

Navigation
as content

Future Expansion, Linked by Air

FE Future Expansion Architects: 1 x

future-expansion.com/#txt

19th February 2017 11:35:57

TXT IMG

FE

Future Expansion was founded on the belief that the future provides us with the opportunity to constantly improve on the past, that previous solutions should not preclude new inventions, and that architecture and urban design are meaningful cultural tools in this endeavor. [More](#)

☒ News ☒ Essays ☒ In-Progress ☒ Proposals ☒ Finished Projects ☐ Residential ☐ Office ☐ Public

FE Included In CLOG : MIAMI

Lecture in Newark

5x5 Opens

Phase One Of The Loop Complete

FE035. Counter Cafe

Landmark Envy

FE026. One Park Lobby

FE033. Drape Wall

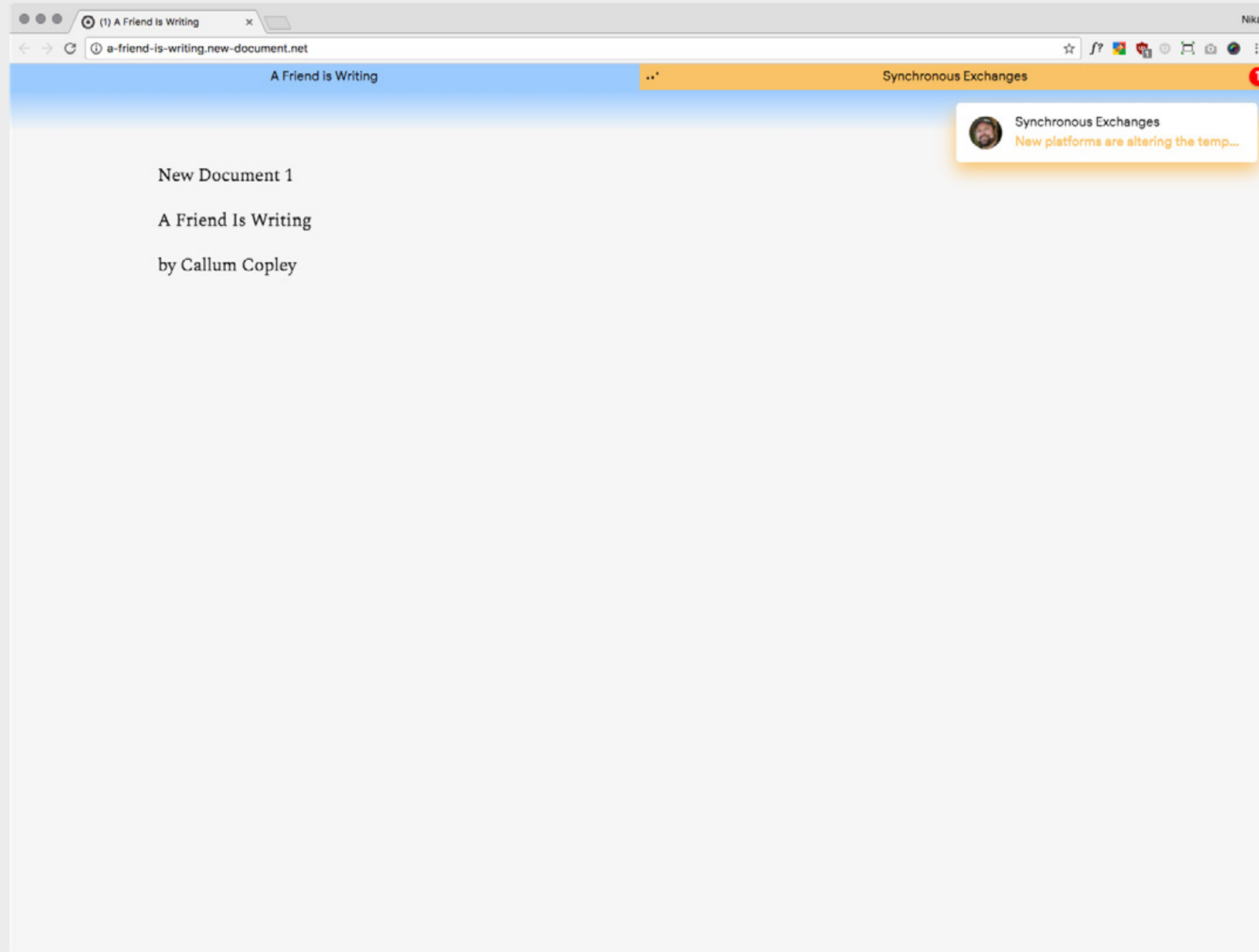
FE032. The Loop

FE024. BBP Stepped Housing

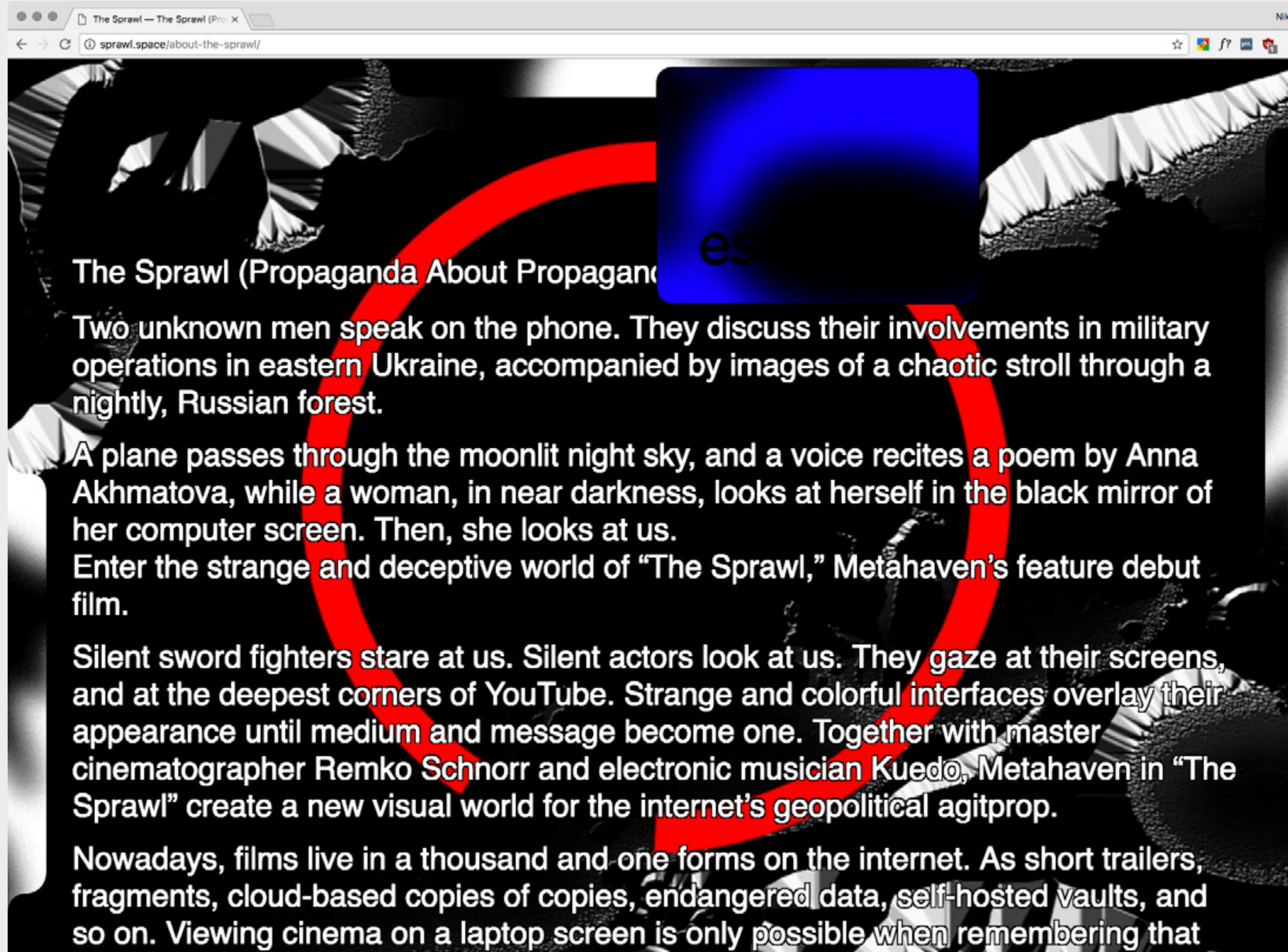
FE021. Crestwood Extension

FE027. 38th Street Office Building

A Friend is Writing, Callum Copley



The Sprawl, Metahaven



The Sprawl (Propaganda About Propaganda)

Two unknown men speak on the phone. They discuss their involvements in military operations in eastern Ukraine, accompanied by images of a chaotic stroll through a nightly, Russian forest.

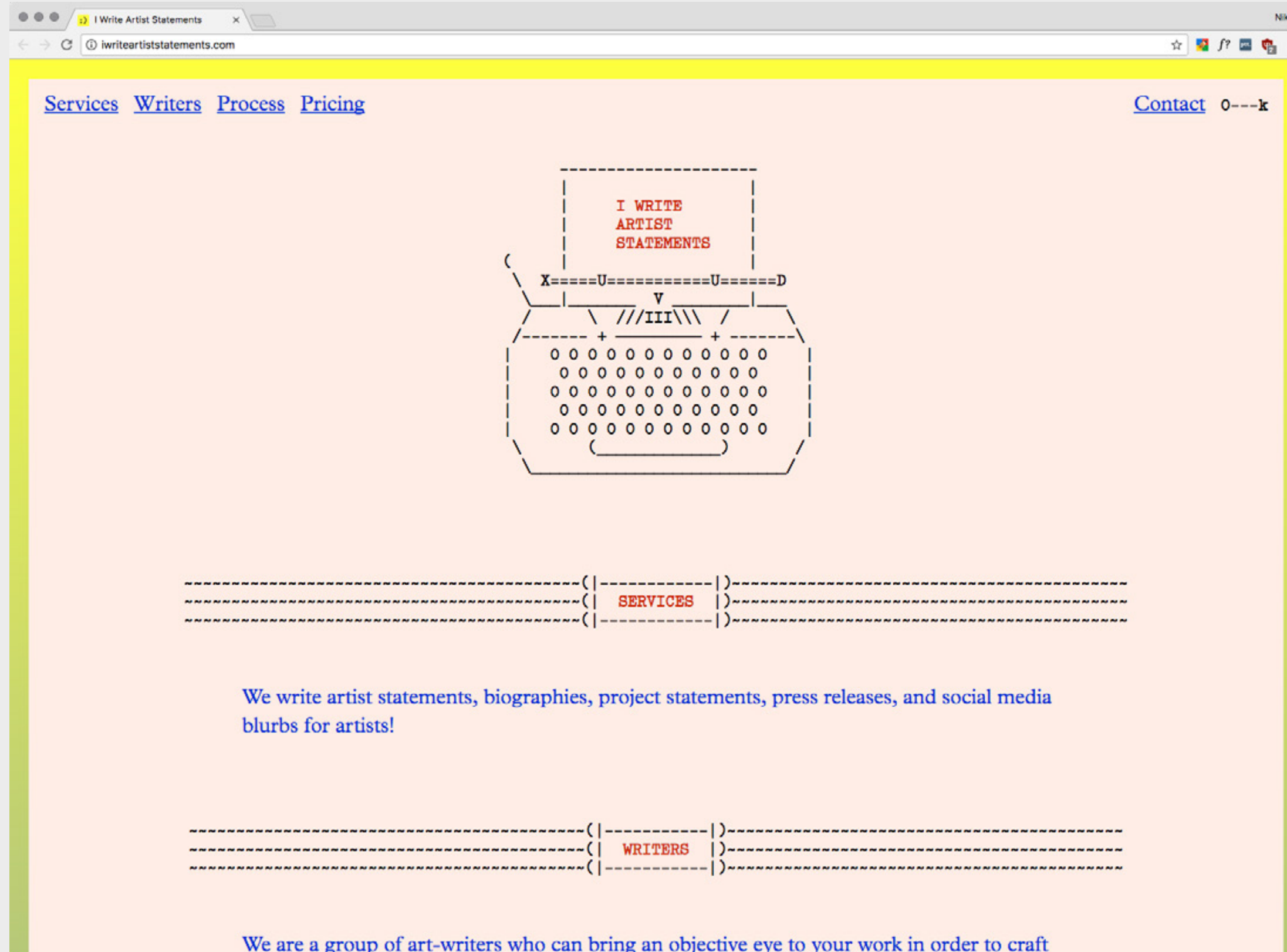
A plane passes through the moonlit night sky, and a voice recites a poem by Anna Akhmatova, while a woman, in near darkness, looks at herself in the black mirror of her computer screen. Then, she looks at us.

Enter the strange and deceptive world of "The Sprawl," Metahaven's feature debut film.

Silent sword fighters stare at us. Silent actors look at us. They gaze at their screens, and at the deepest corners of YouTube. Strange and colorful interfaces overlay their appearance until medium and message become one. Together with master cinematographer Remko Schnorr and electronic musician Kuedo, Metahaven in "The Sprawl" create a new visual world for the internet's geopolitical agitprop.

Nowadays, films live in a thousand and one forms on the internet. As short trailers, fragments, cloud-based copies of copies, endangered data, self-hosted vaults, and so on. Viewing cinema on a laptop screen is only possible when remembering that

I Write Artist Statements, Elana Schlenker



InVision Tutorial