

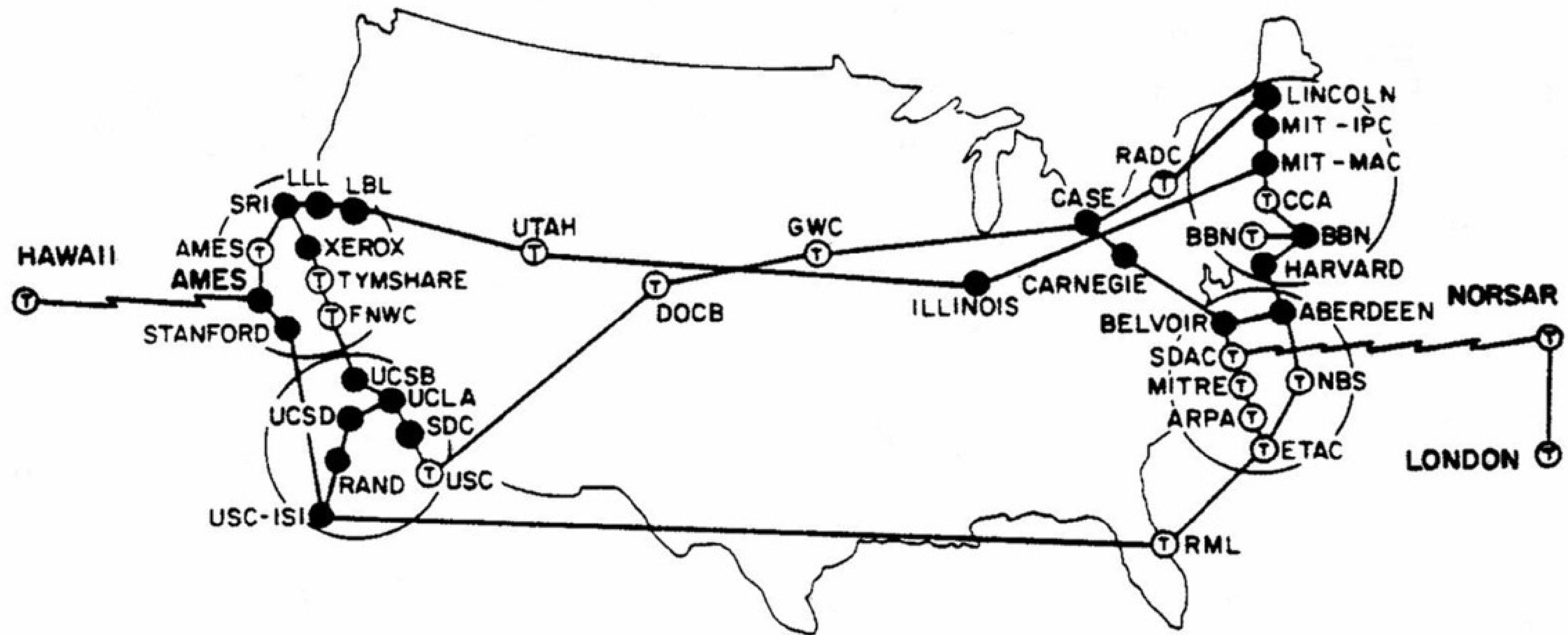
Mobile Design History

**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.

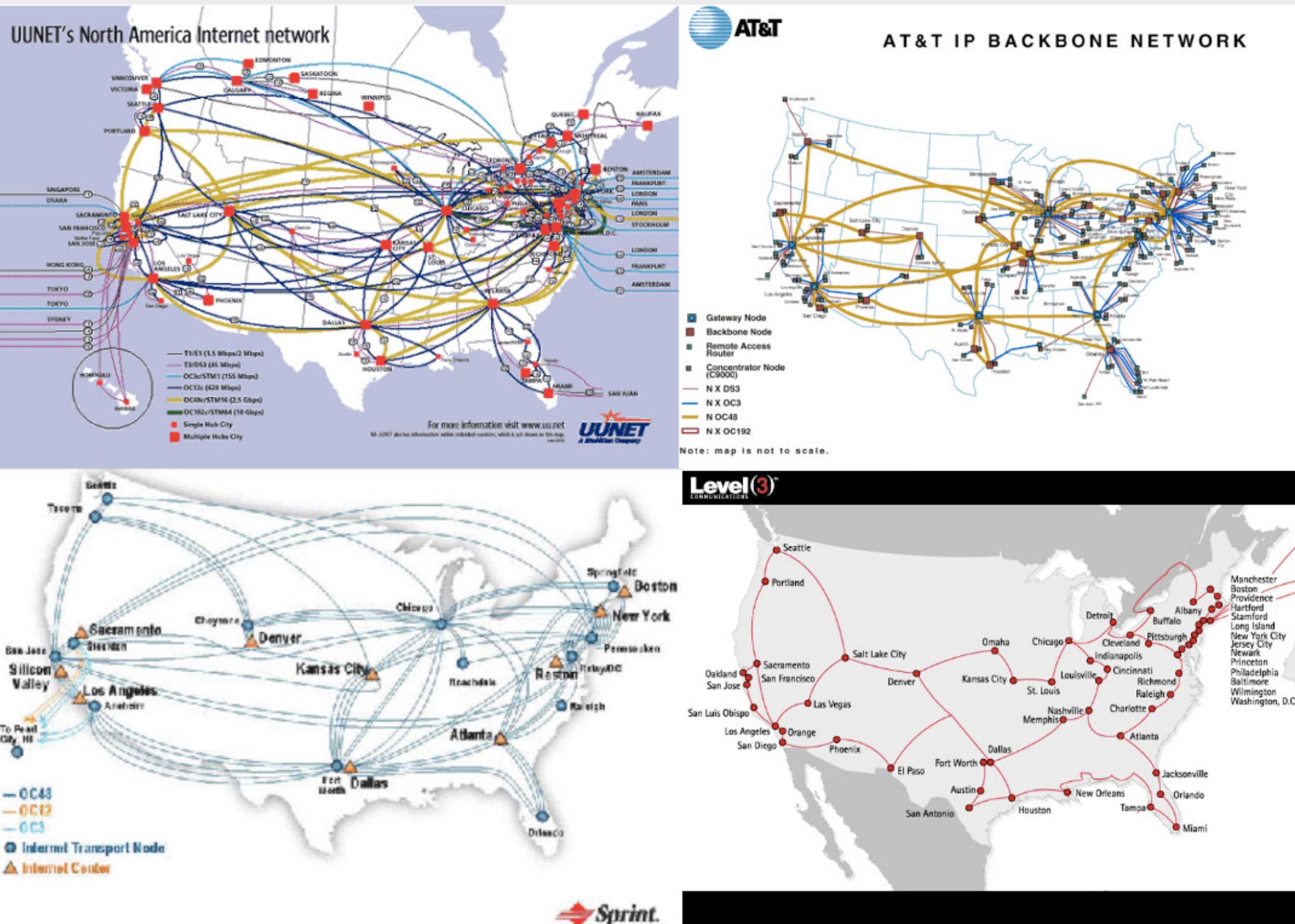


ARPANET becomes Internet (1983)

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

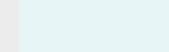
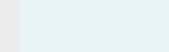
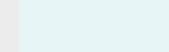
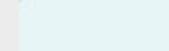
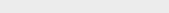
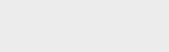
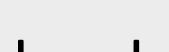
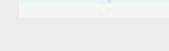
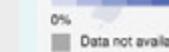
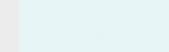
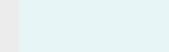
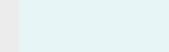
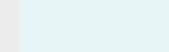
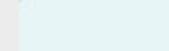
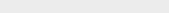
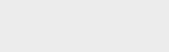
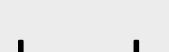
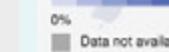
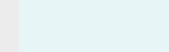
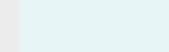
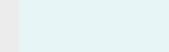
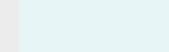
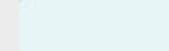
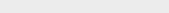
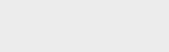
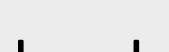
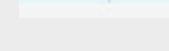
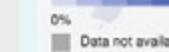
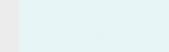
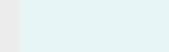
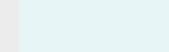
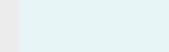
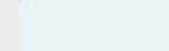
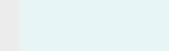
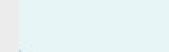


Internet had become global by 1993.
Map of information flow on Usenet shown here.



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.





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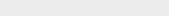
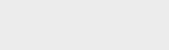
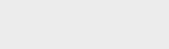
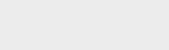
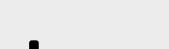
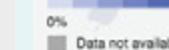
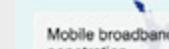
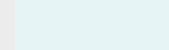
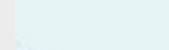
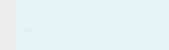
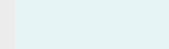
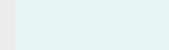
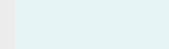
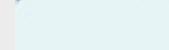
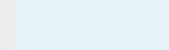
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Martin Cooper(1928-) invented the first cell phone in 1974.

Watch
Video

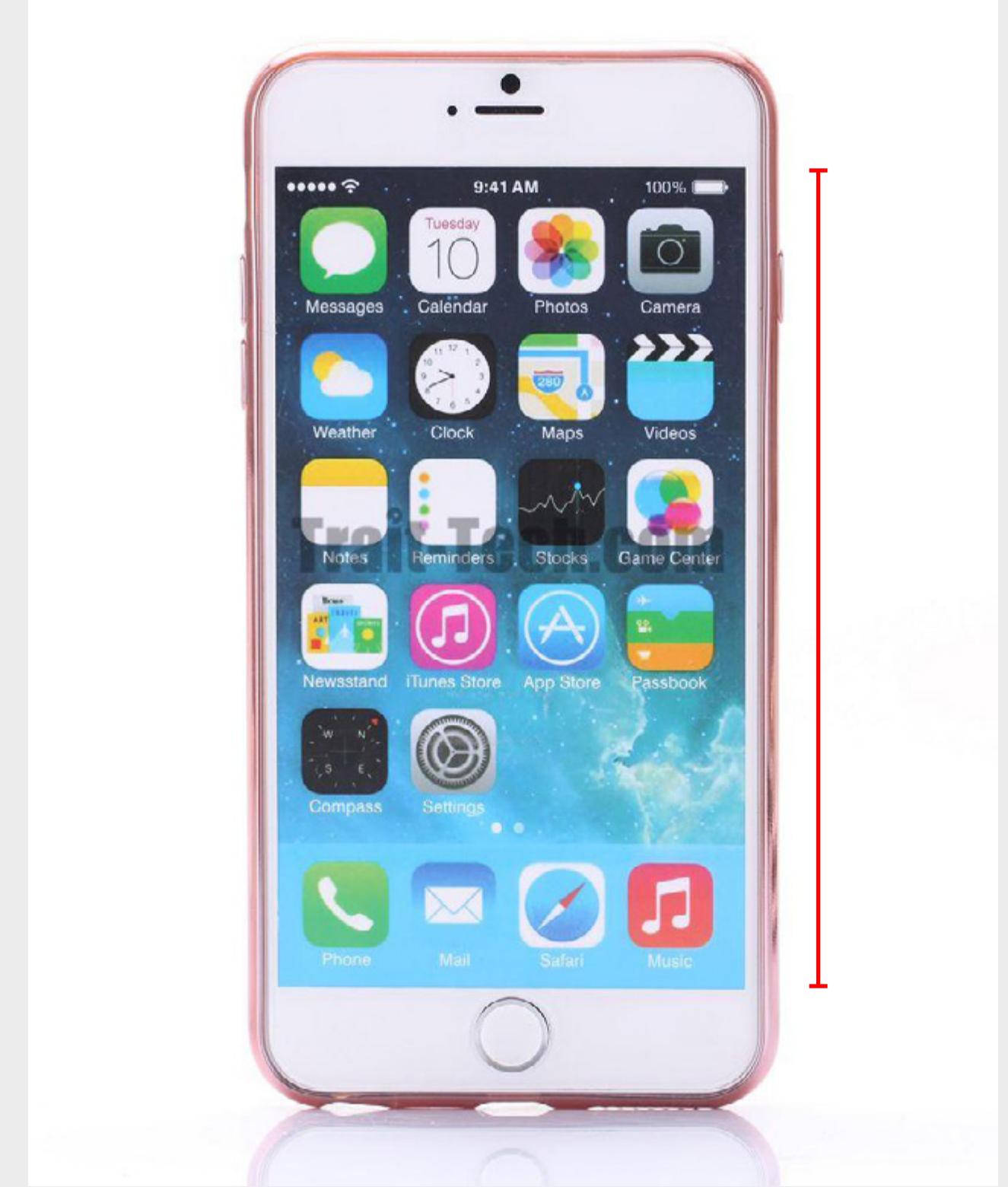


A collection of some of my old cell phones



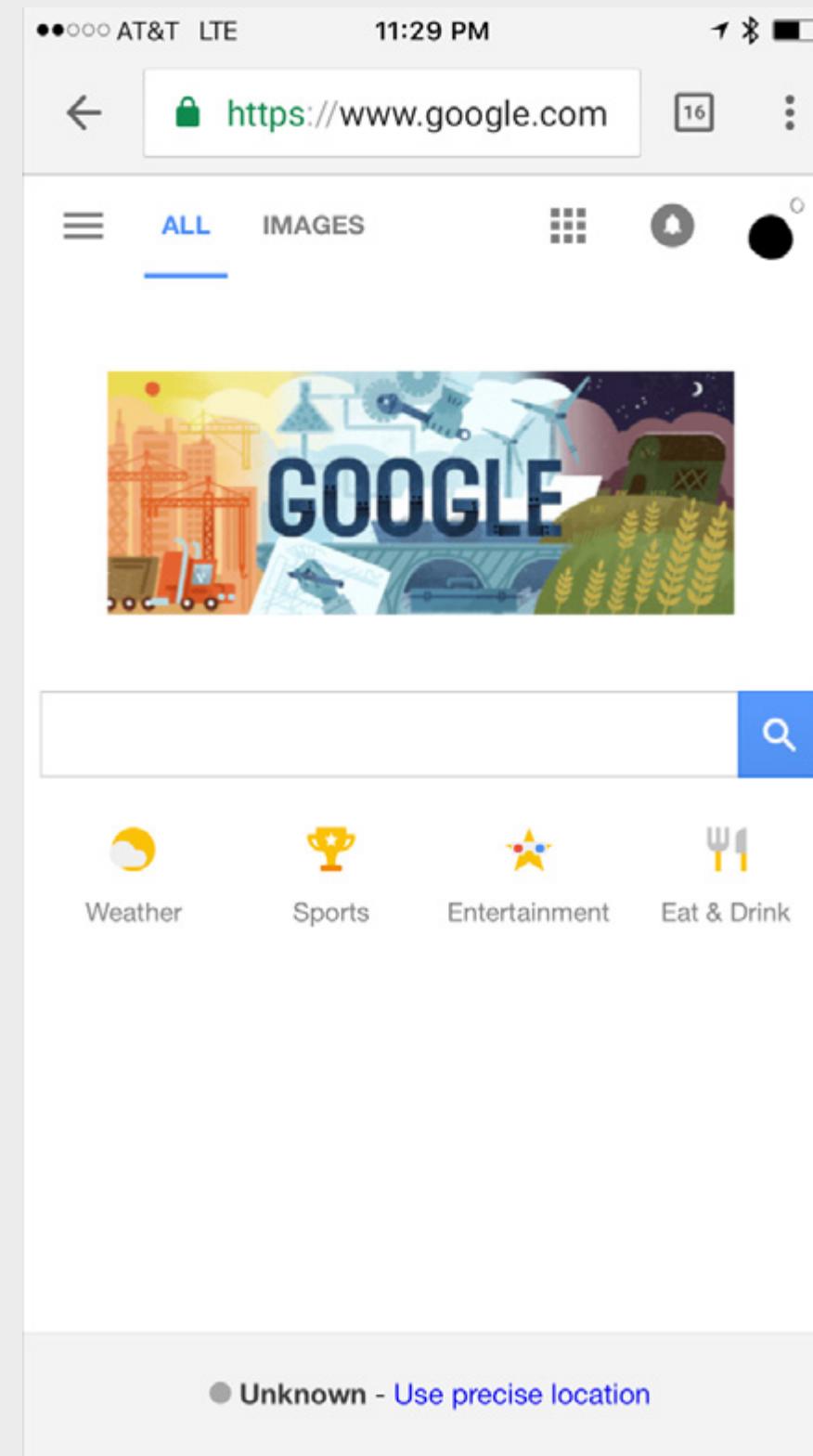


My first cell phone

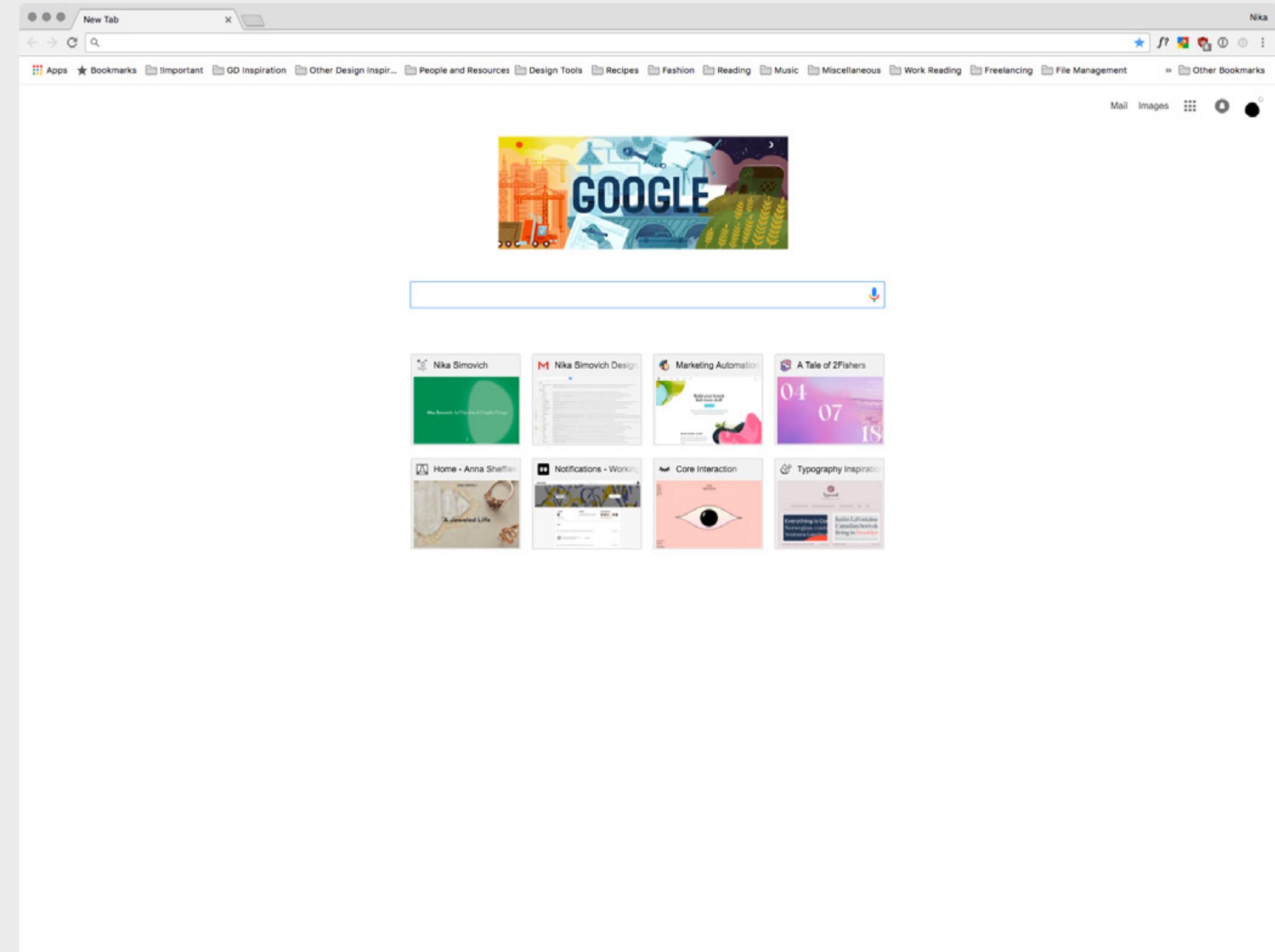


Iphone 6 plus

What is the primary use of these devices?



Google Chrome on phone

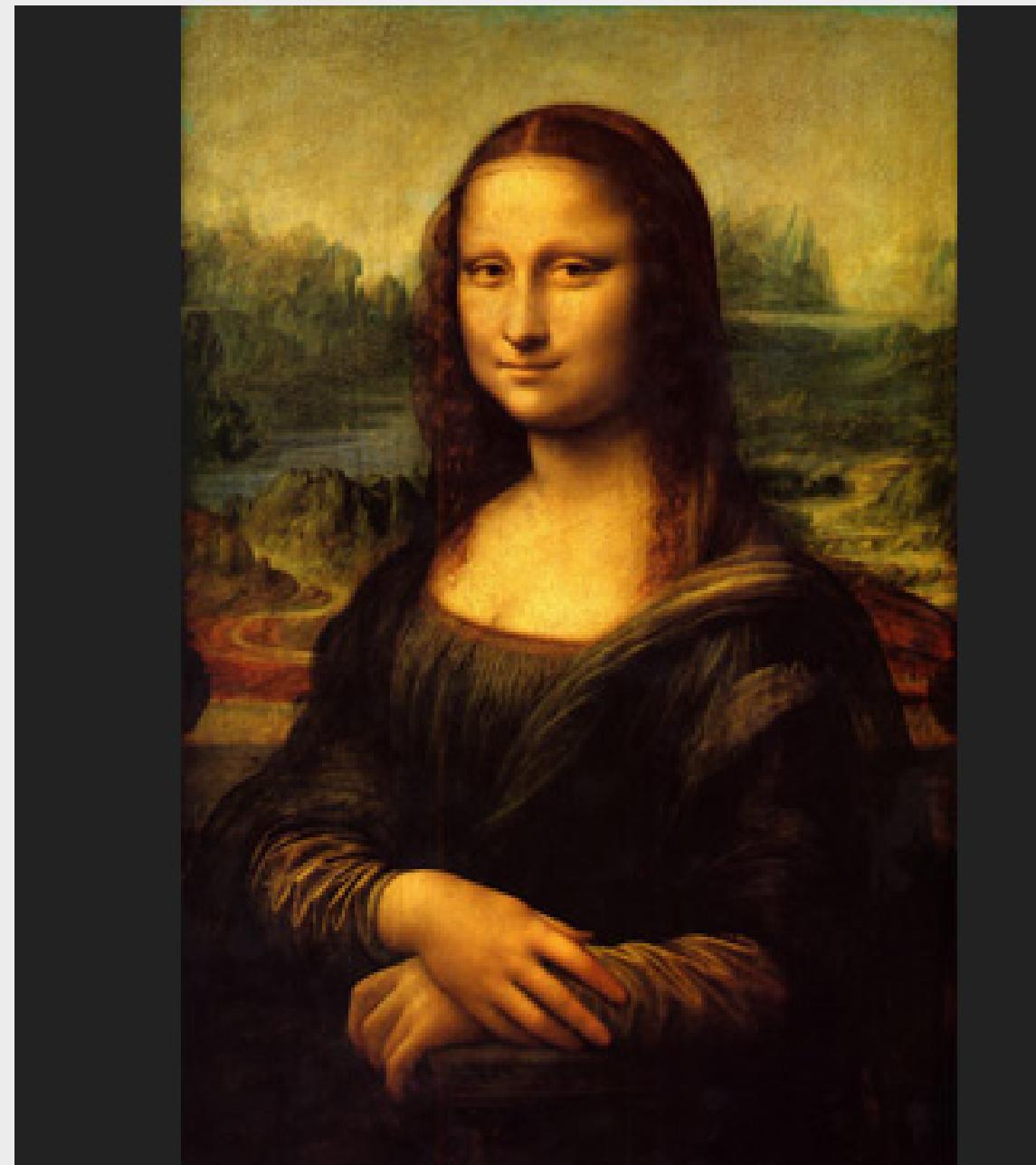


Google Chrome on desktop

Responsive web design replaced having a totally separate mobile experience.



Responsive Web Design



MIT - Massachusetts Institute of Technology

Not Secure | web.mit.edu

Nika

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Spotlight: Sep 4, 2018

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Example of responsive layout changes web.mit.edu

Responsive Web Design Patterns X Nika

Secure | <https://bradfrost.github.io/this-is-responsive/patterns.html>

Responsive Patterns

A collection of patterns and modules for responsive designs.

[Submit a pattern](#)

Layout

Reflowing Layouts	Equal Width	Off Canvas
Mostly Fluid	2 equal-width columns	Top
Column Drop	3 equal-width columns	Left
Layout Shifter	4 equal-width columns	Right
Tiny Tweaks	5 equal-width columns	Left and Right
Main column with sidebar	6 equal-width columns	Bottom
3 column		Full Screen Overlay
3 column v2		
3 Columns content reflow		
Responsive UI Examples		

Source-Order Shift	Lists	Grid Block
Table Cell	List with Thumbnails	4-up Grid Block
Flexbox	List with Thumbnails 2	Double-Wide v1
AppendAround	List with Thumbnails and Summary	Double-Wide v2
		Double-Wide v3
		Double-Wide v4
		With Title Sections
		Equal Height Rows
		Irregular Grid Blocks

Navigation

This Is Responsive | Patterns | Resources

Responsive layout grid - Mater X Nika

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

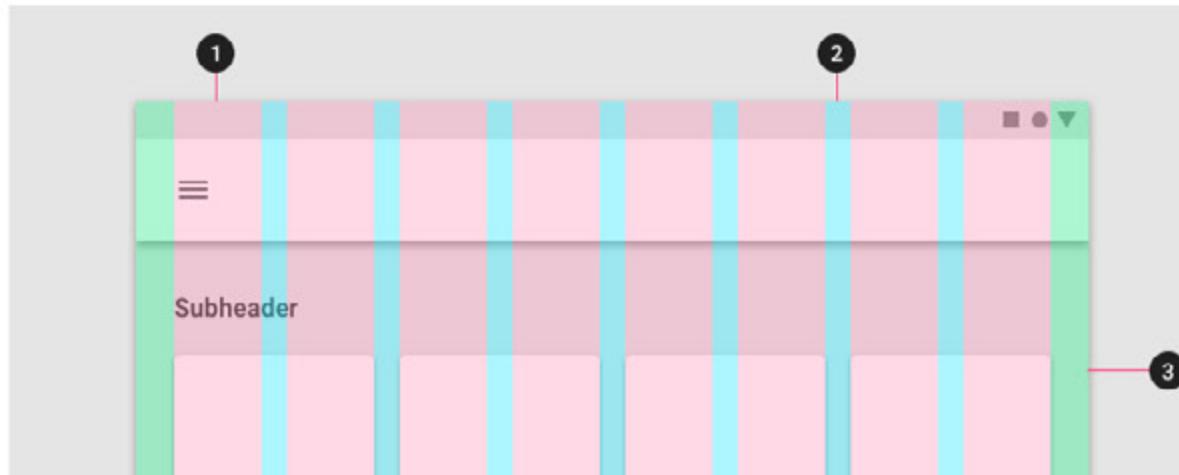
The Material Design responsive layout grid adapts to screen size and orientation, ensuring consistency across layouts.

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.

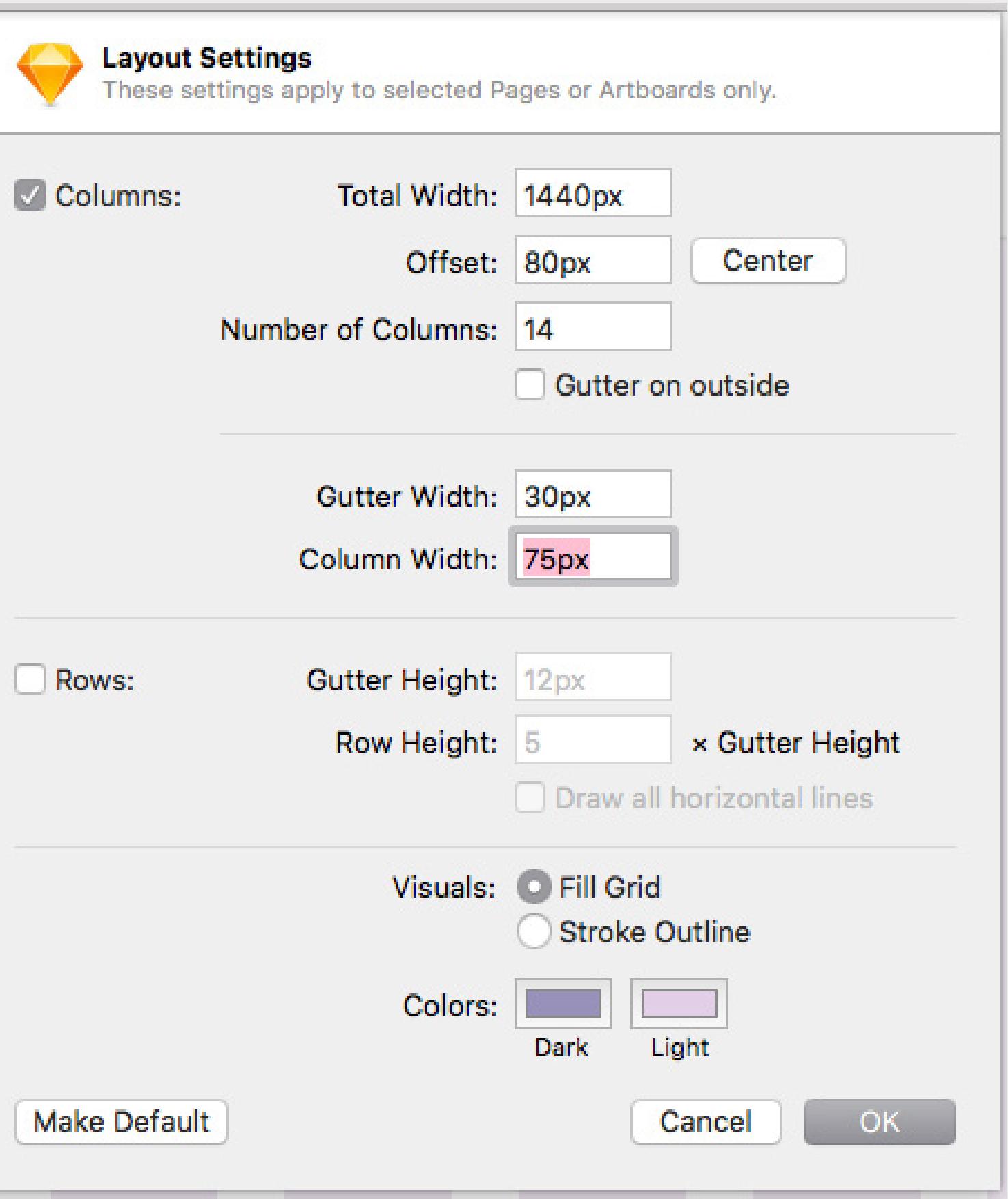


Design patterns – Material Design is Google's set of principles

The screenshot shows the 'iPhone X - Overview' page on the Apple Developer website. The main content area features three iPhone X devices displaying different screens: the home screen with various app icons, a weather card showing Cupertino with a temperature of 74°, and a map view of Cupertino with traffic information. To the left of the devices is a sidebar with navigation links for 'Overview', 'Themes', 'iPhone X', 'What's New in iOS 11', 'Interface Essentials', 'App Architecture', 'User Interaction', 'System Capabilities', 'Visual Design', 'Icons and Images', 'Bars', 'Views', 'Controls', 'Extensions', 'Technologies', and 'Resources'. The top of the page includes the Apple Developer header with links for Discover, Design, Develop, Distribute, Support, Account, and a search bar. The URL in the address bar is <https://developer.apple.com/ios/human-interface-guidelines/overview/iphone-x/>.

Design patterns – Human Interaction Guidelines are Apple's version

Sketch Demo



Example settings

Mobile Specific Designs

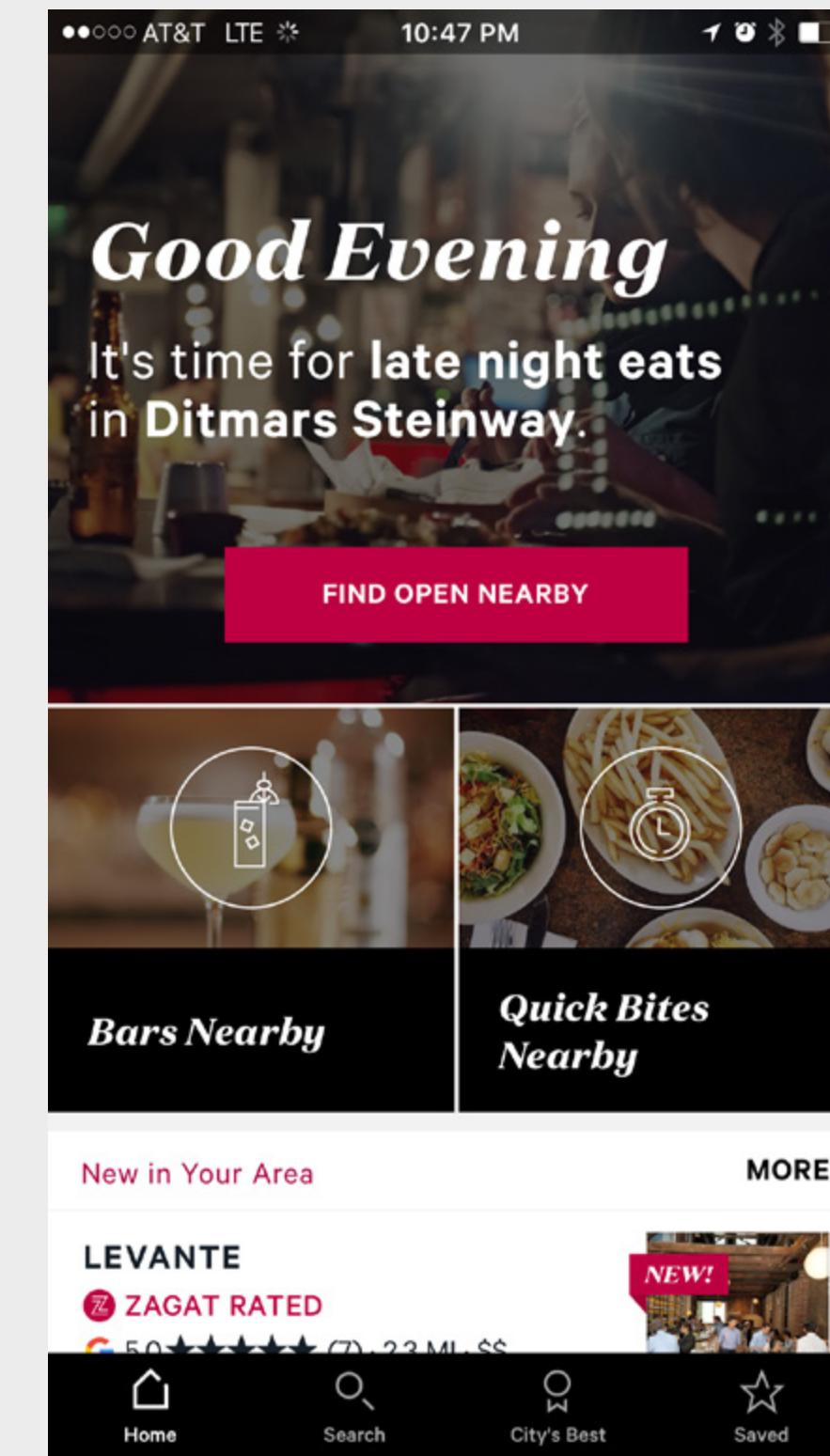
Pokemon Go



Compass



Zagat



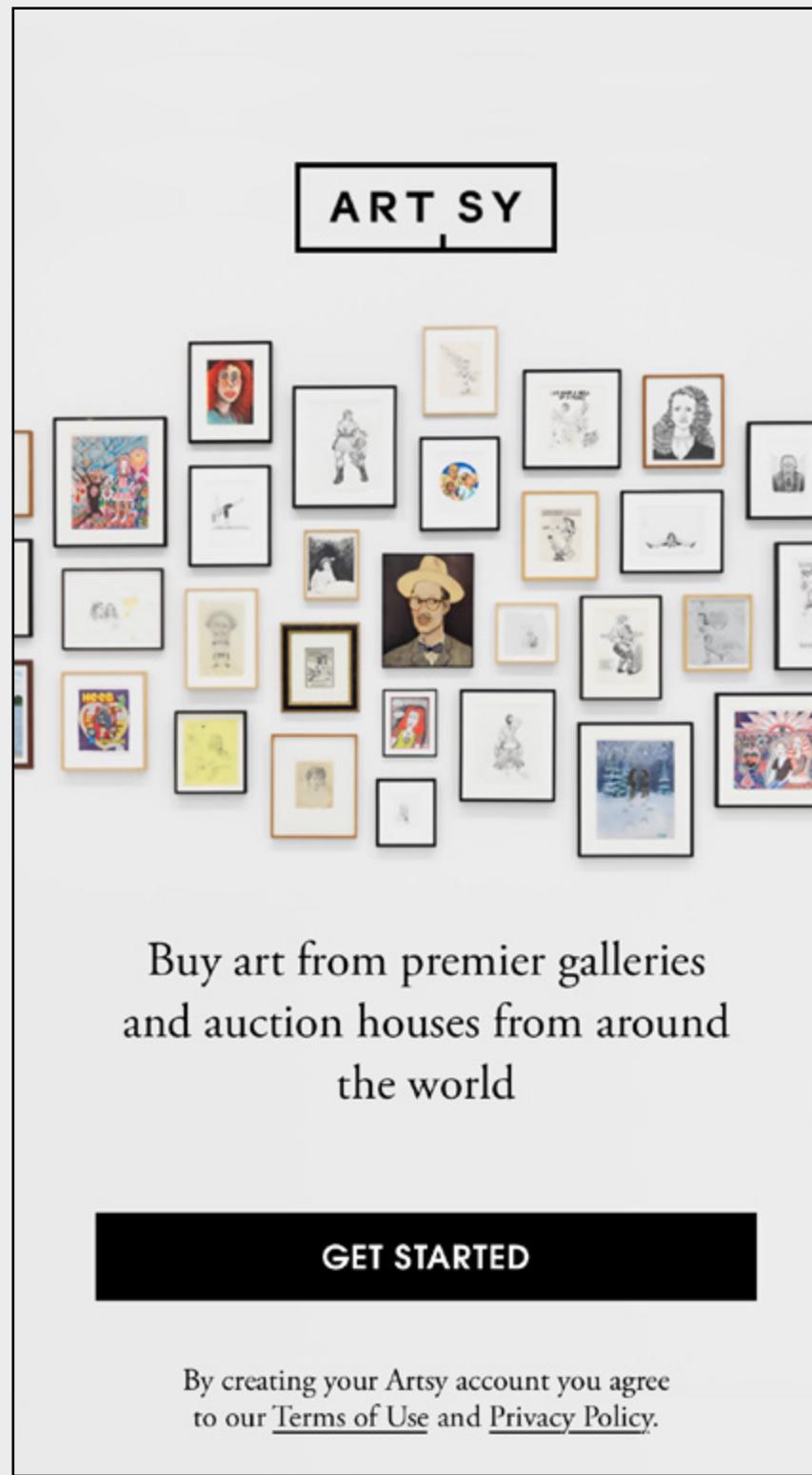
Star Walk 2



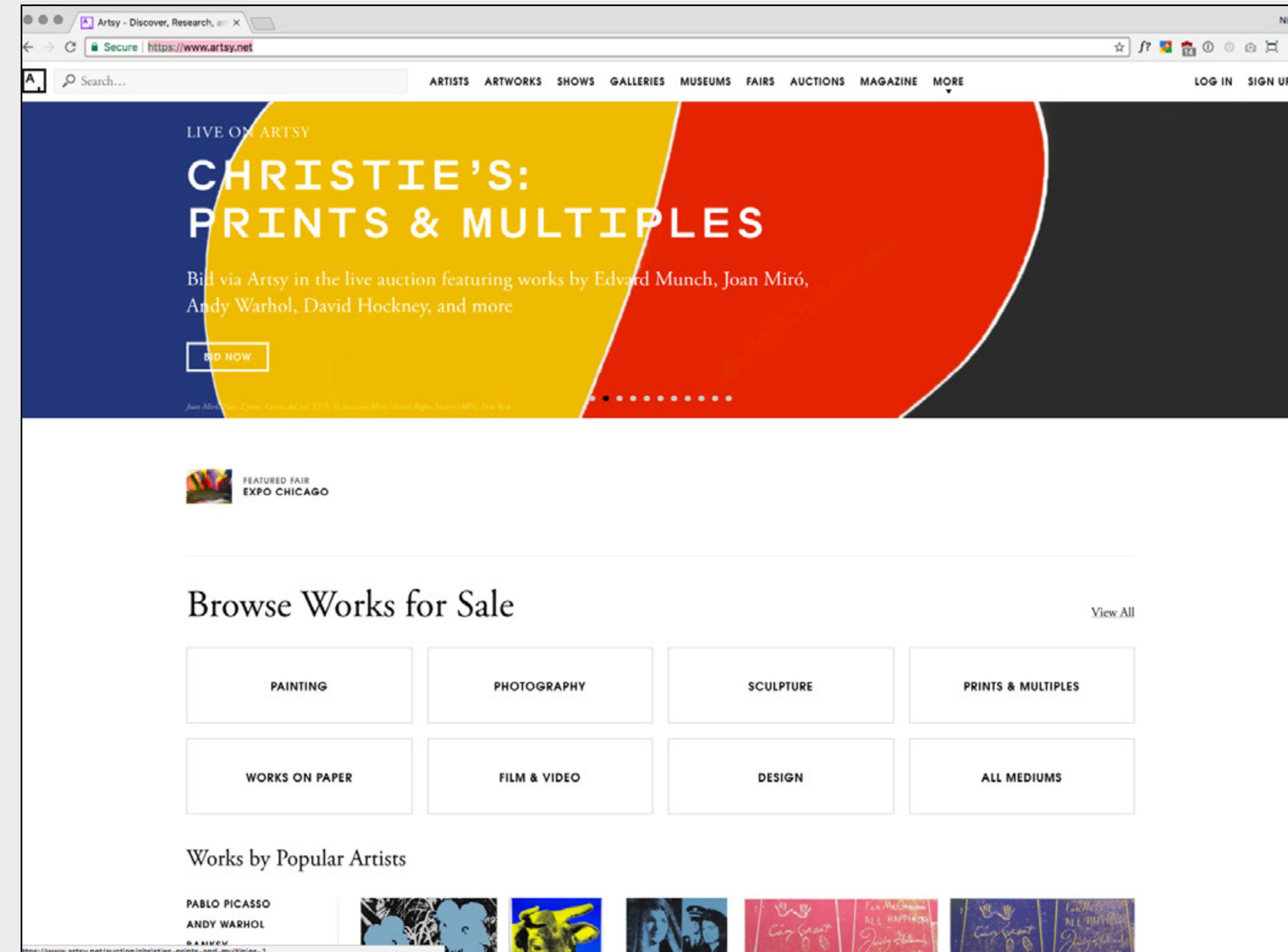
Variable Location

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



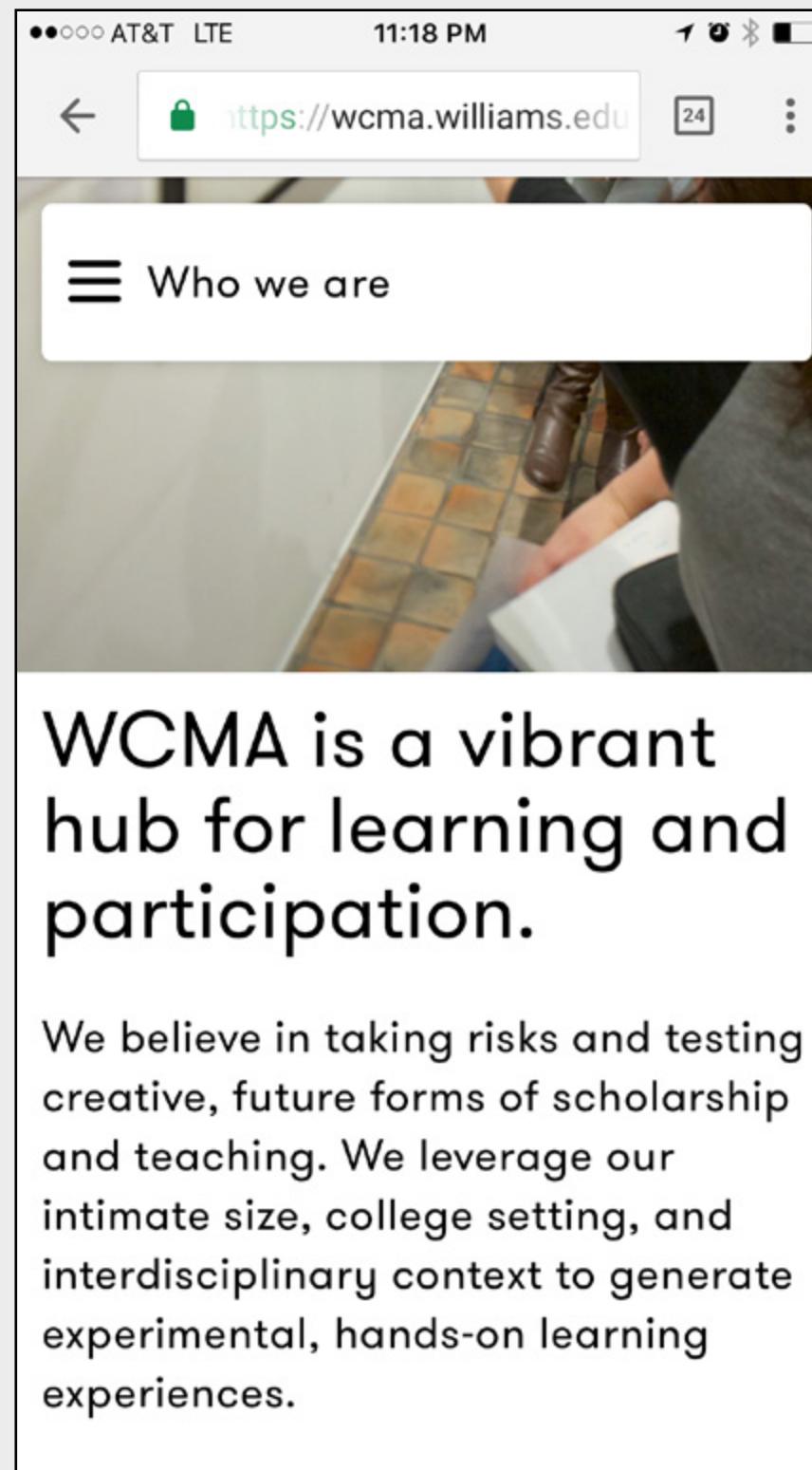
Artsy Site



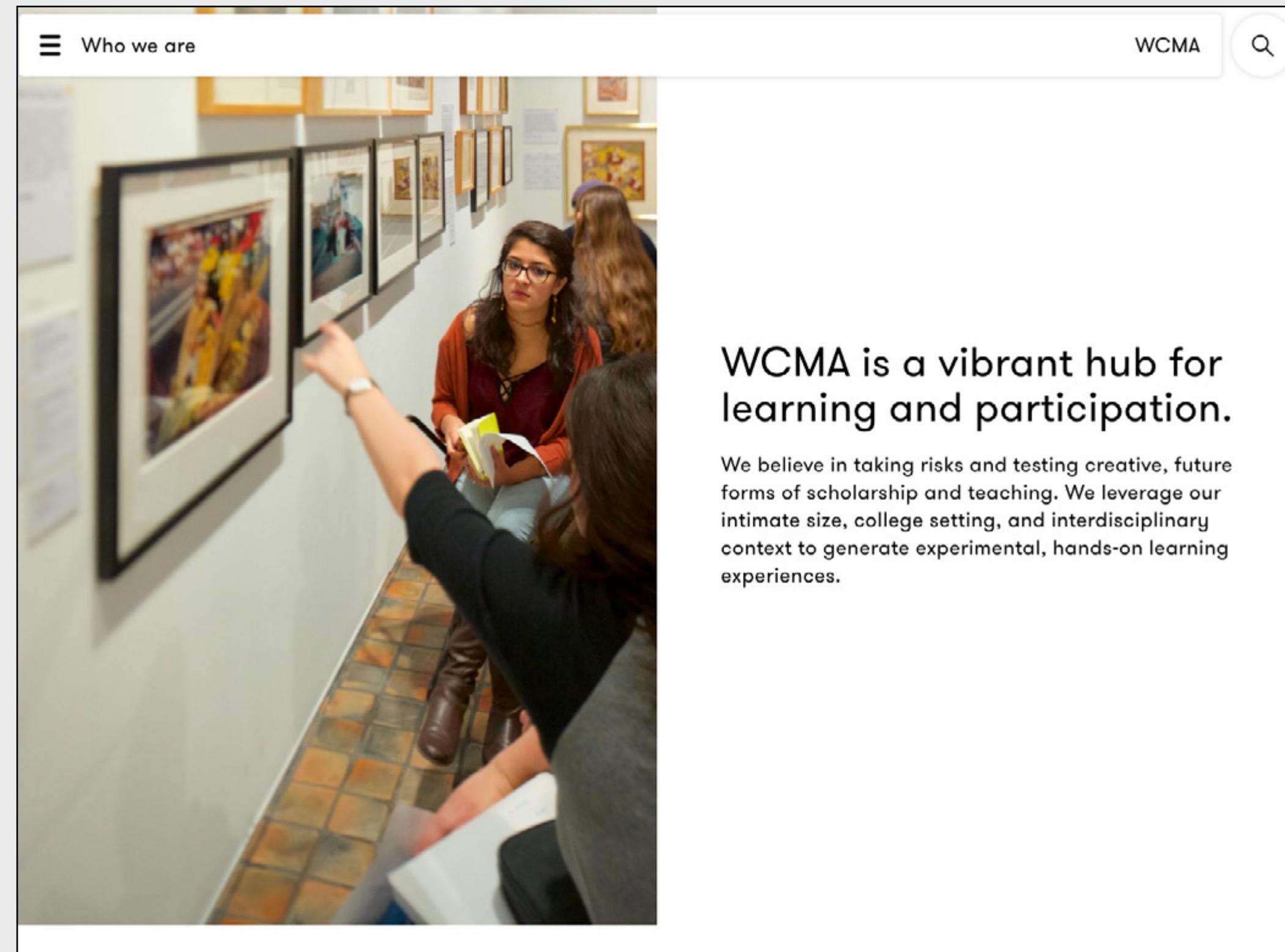
Less Real Estate

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

WCMA Mobile



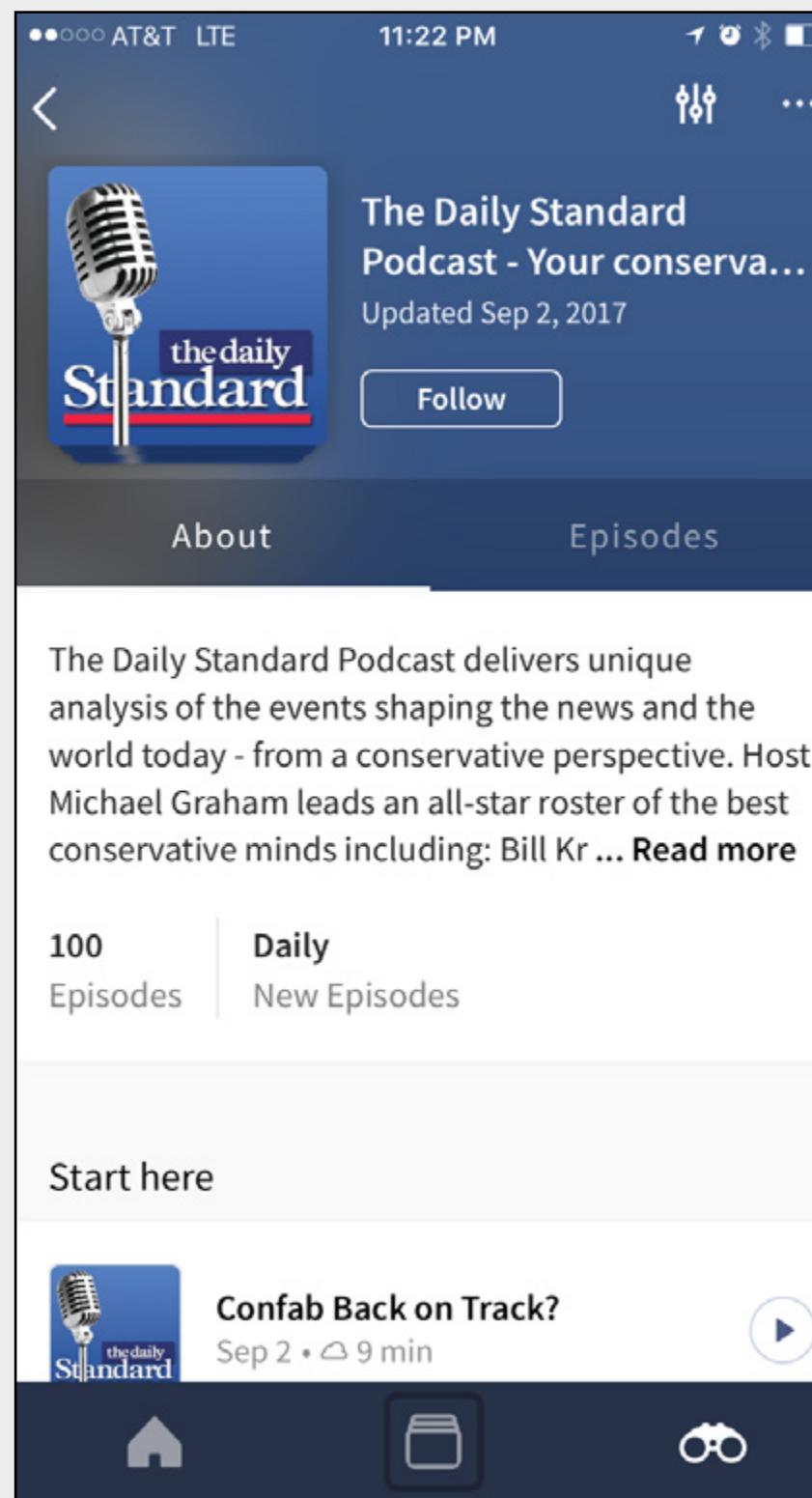
WCMA Desktop



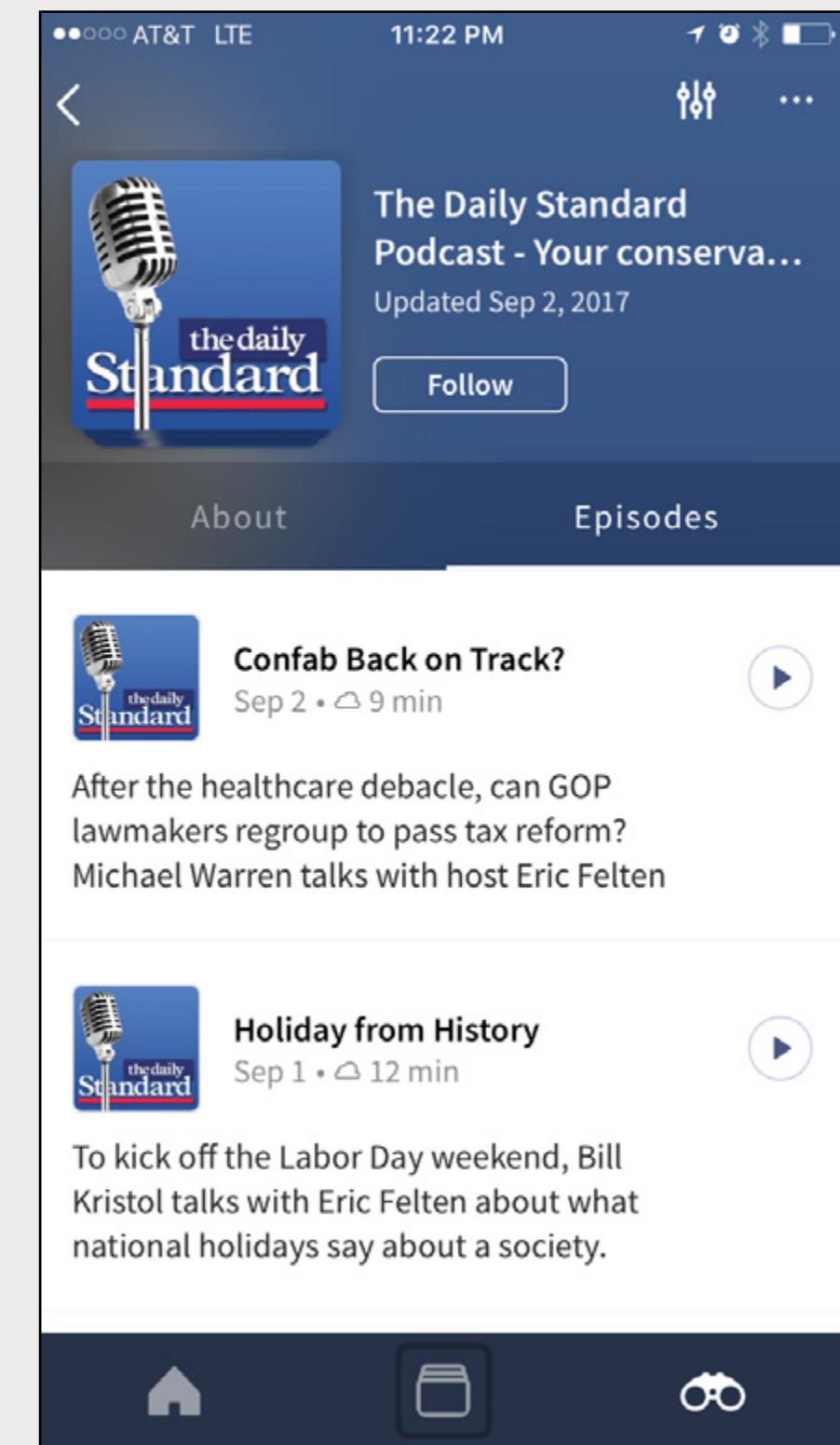
Legibility Key

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

Radio Public



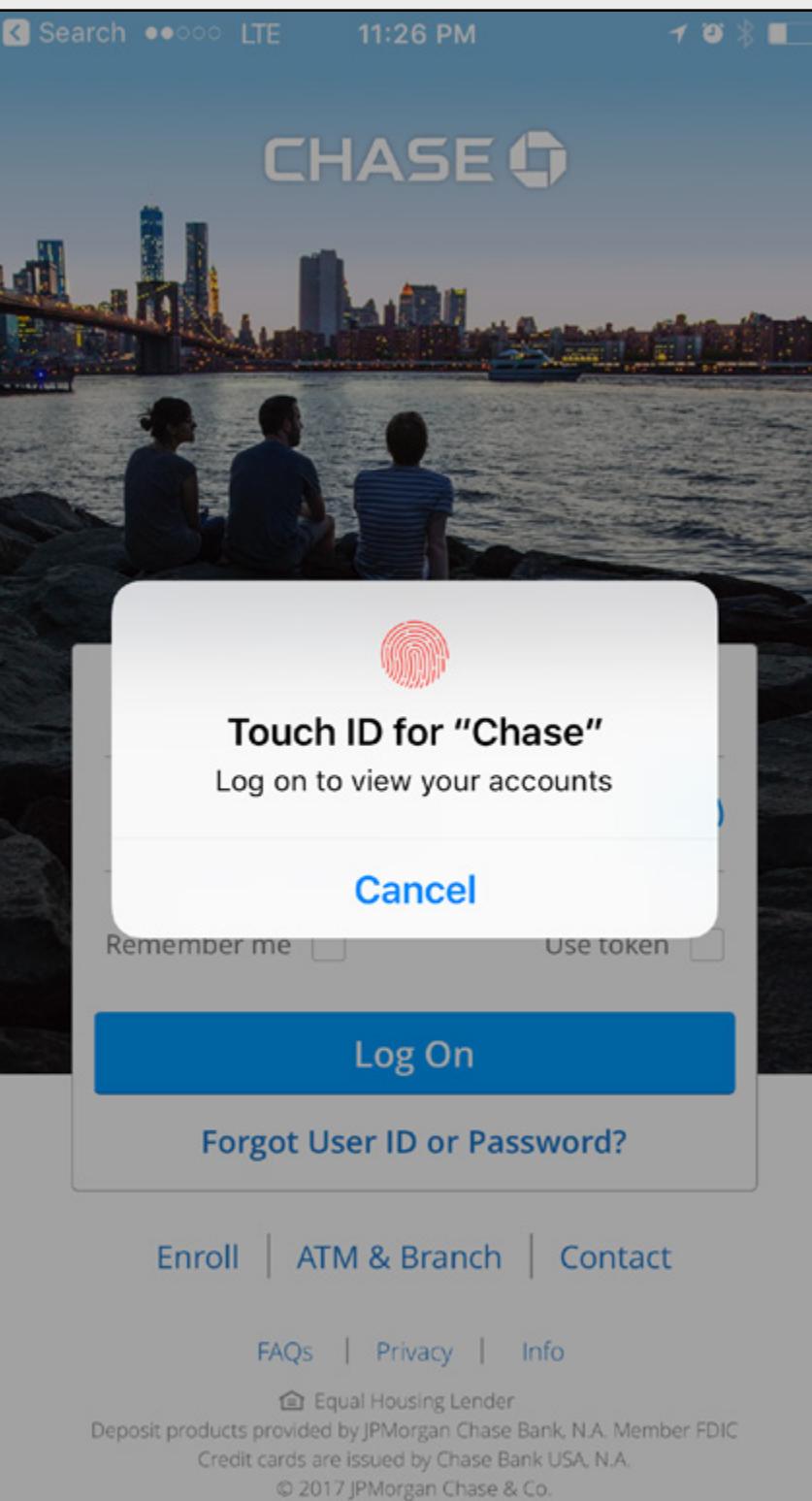
Radio Public



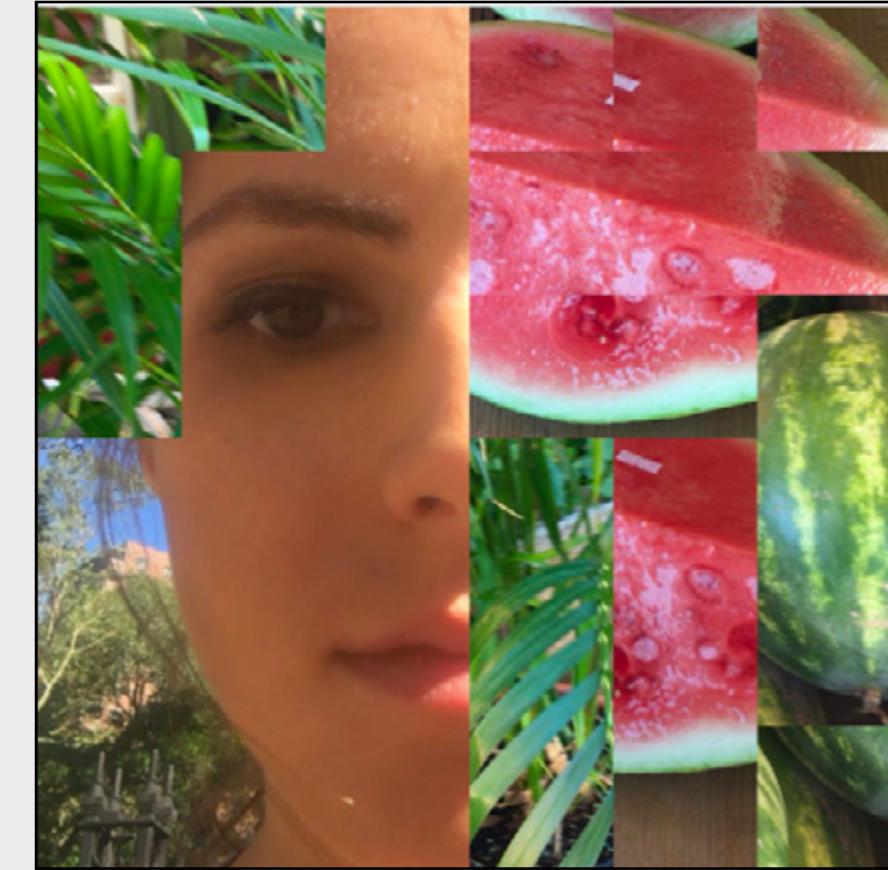
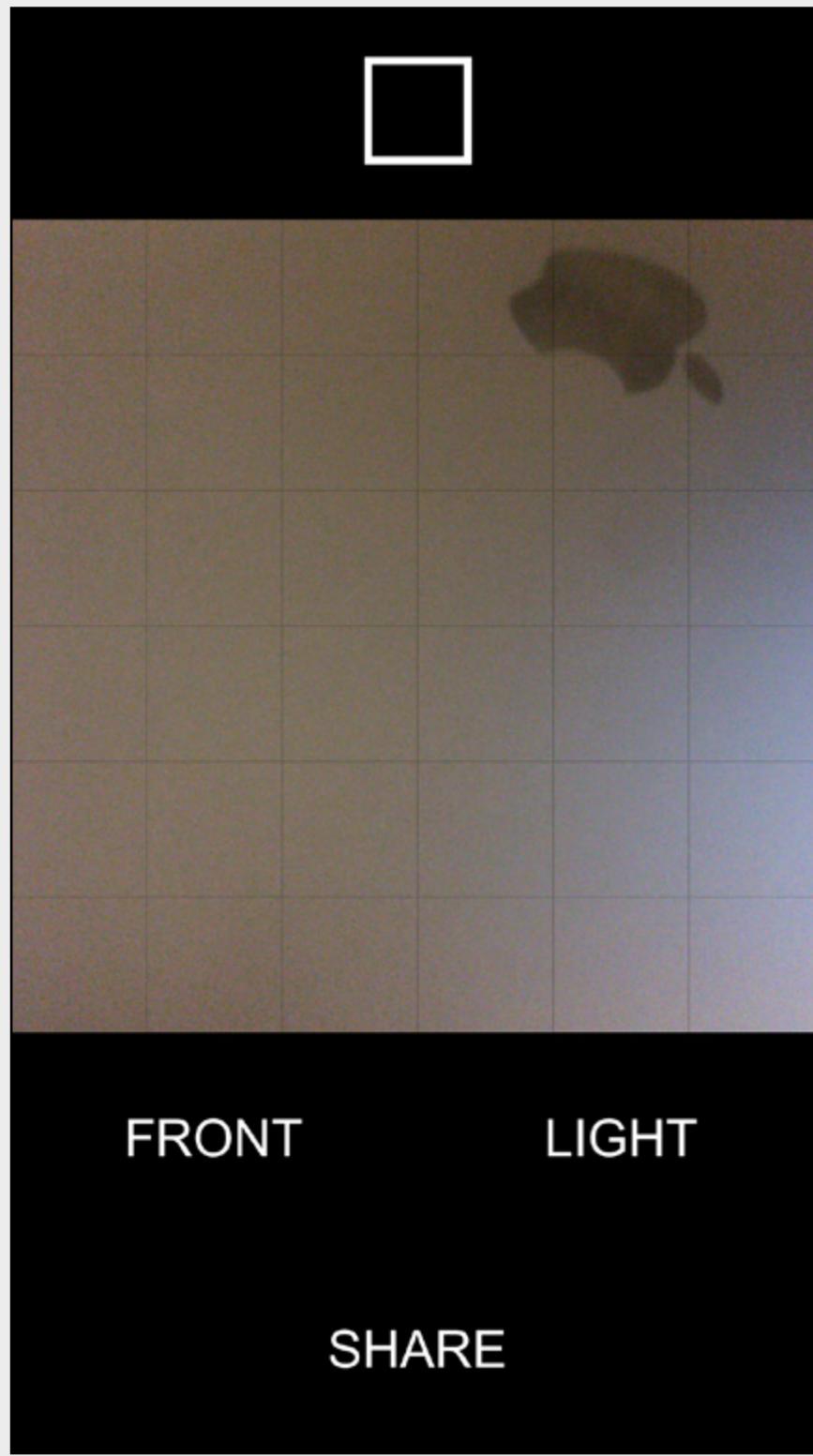
No Mouses. Simpler interactions.

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

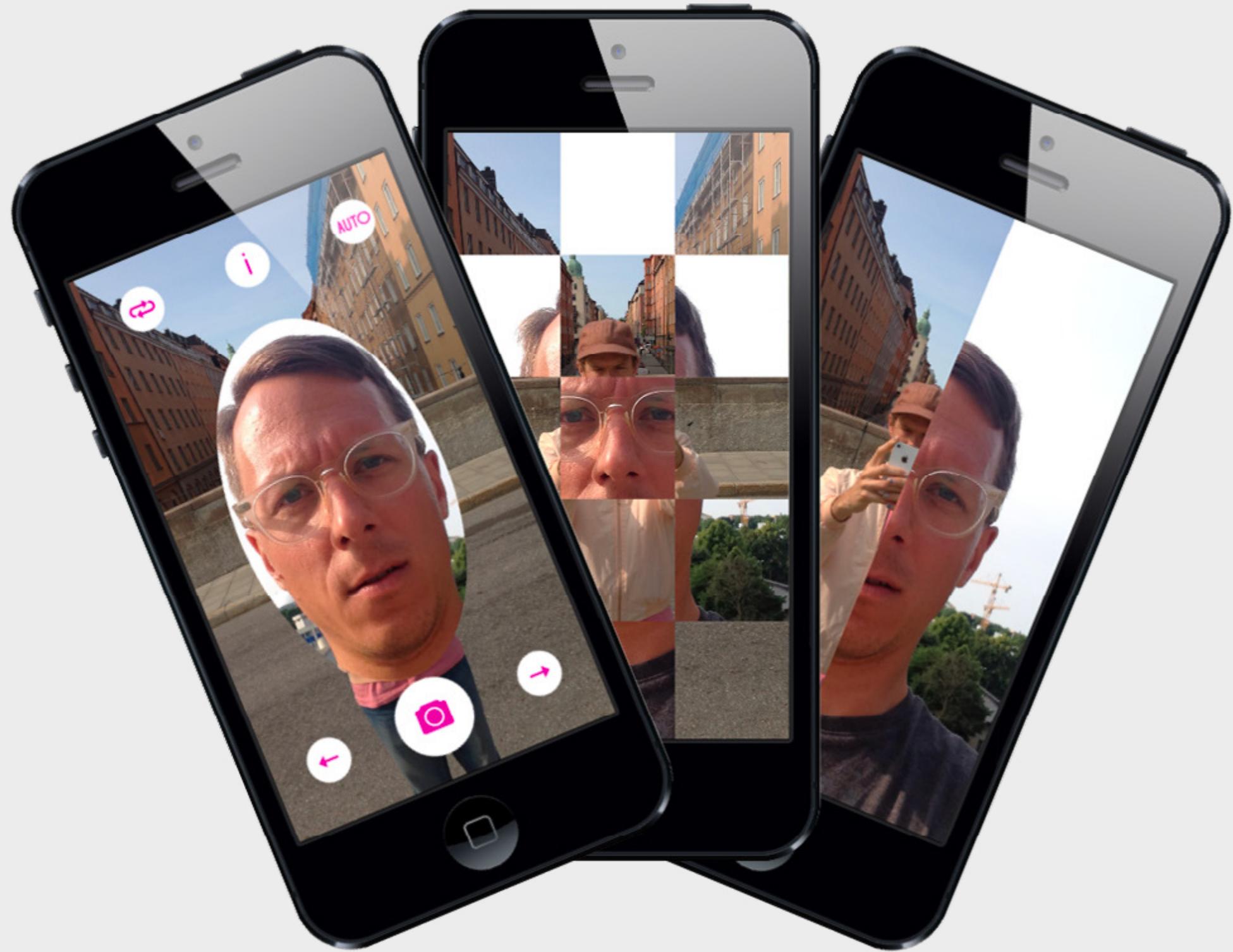
Chase



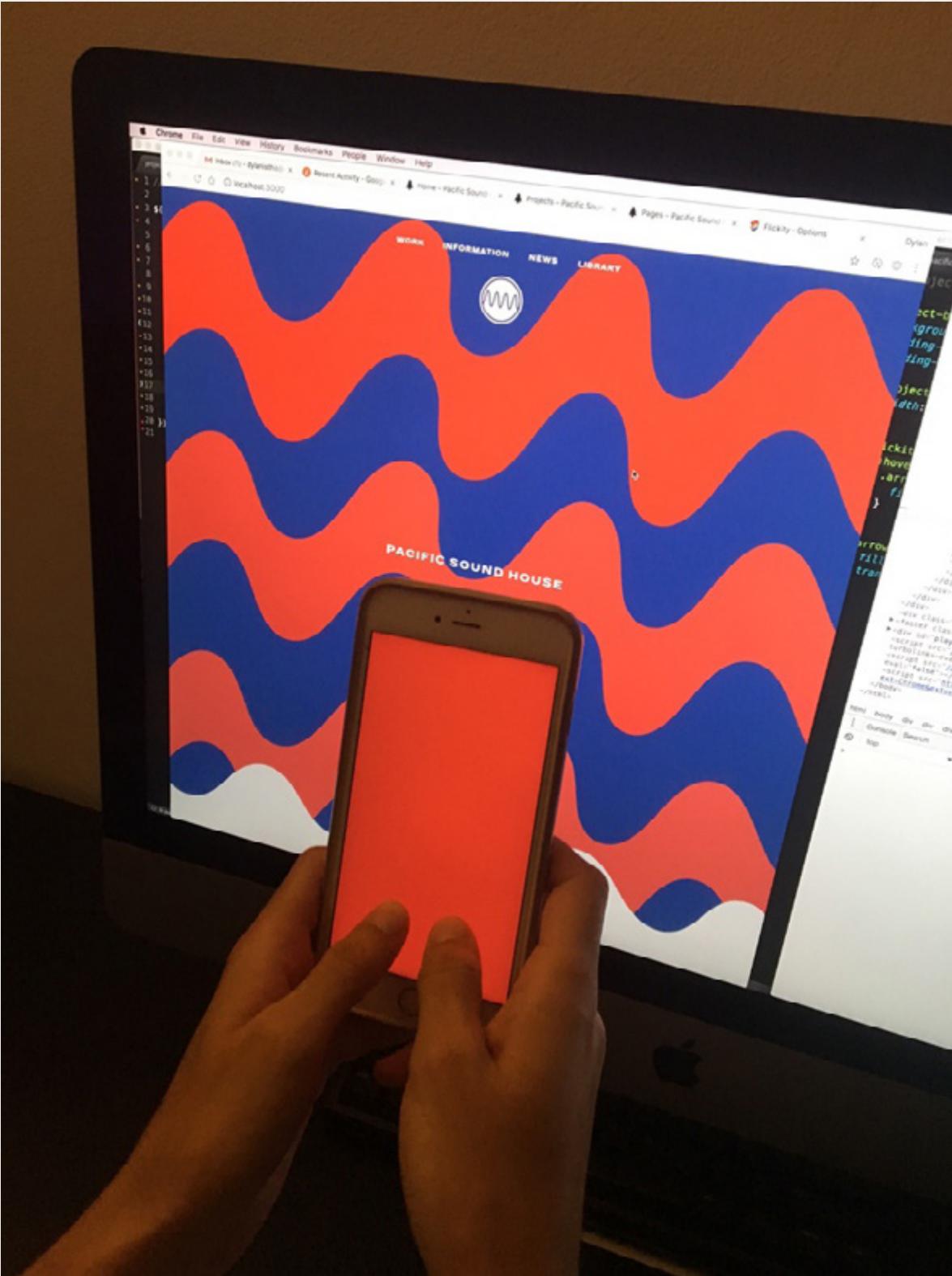
Mobile phones generally carry more personal info
Payments, contacts, logins, exact location. etc.



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

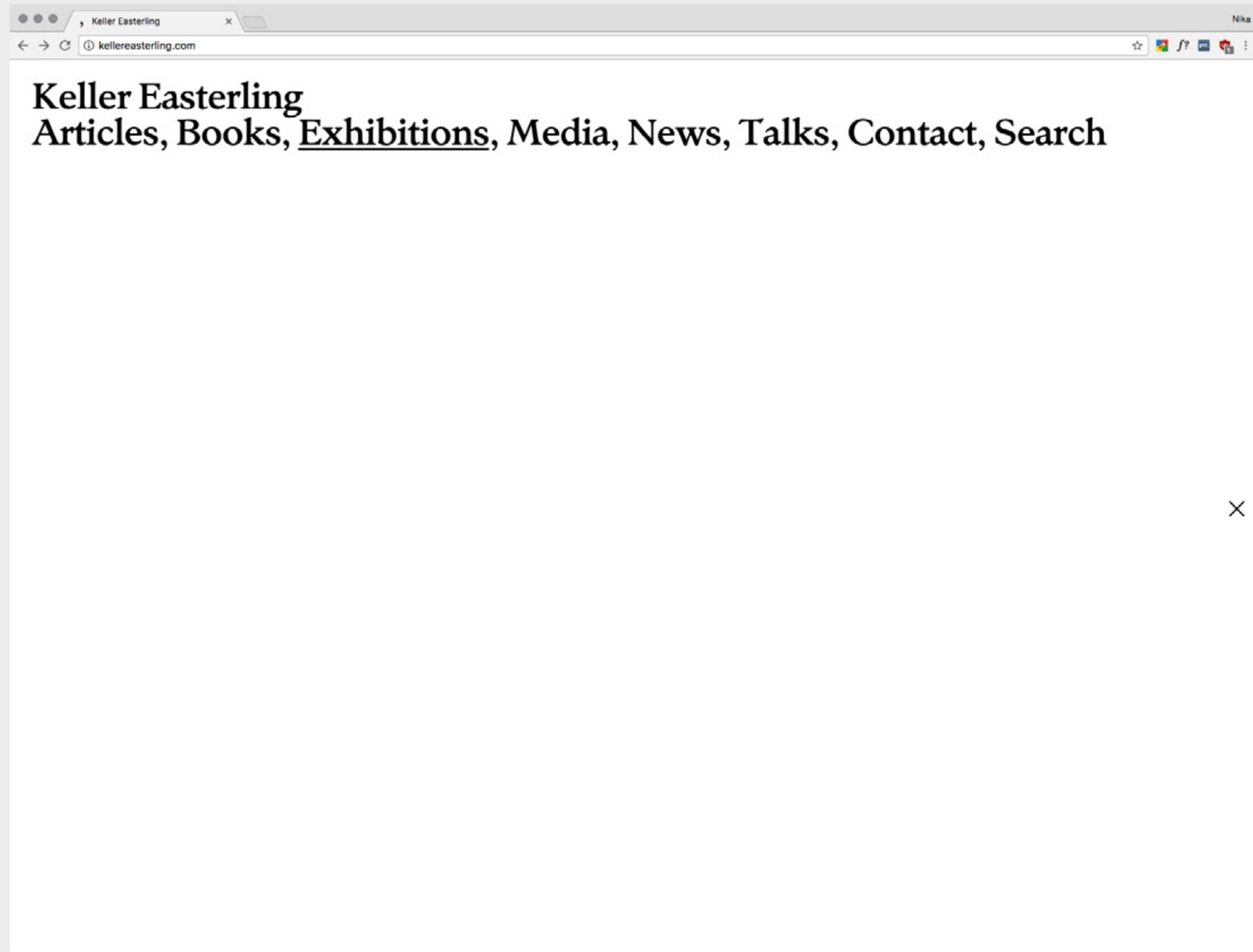
Navigation and Layout

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

A screenshot of a web browser displaying the [This American Life](https://www.thisamericanlife.org) website. The page shows the header "This American Life" with a logo, and navigation links for "Archive", "Recommended", "How to Listen", "About", "Donate", and social media icons for Facebook and Twitter. A message at the top left says "This Week: 637 February 2, 2018". Below it, a large play button icon is next to the episode title "Words You Can't Say". The main visual is a photograph of a green, textured object, possibly a piece of ice or a block of cheese, resting on a purple surface with small blue bubbles around it. The photo is attributed to "Jennifer Heuer". Below the image, a text blurb describes the episode's theme of political sensitivity and includes a link to "View episode details".

This Week: 637 February 2, 2018

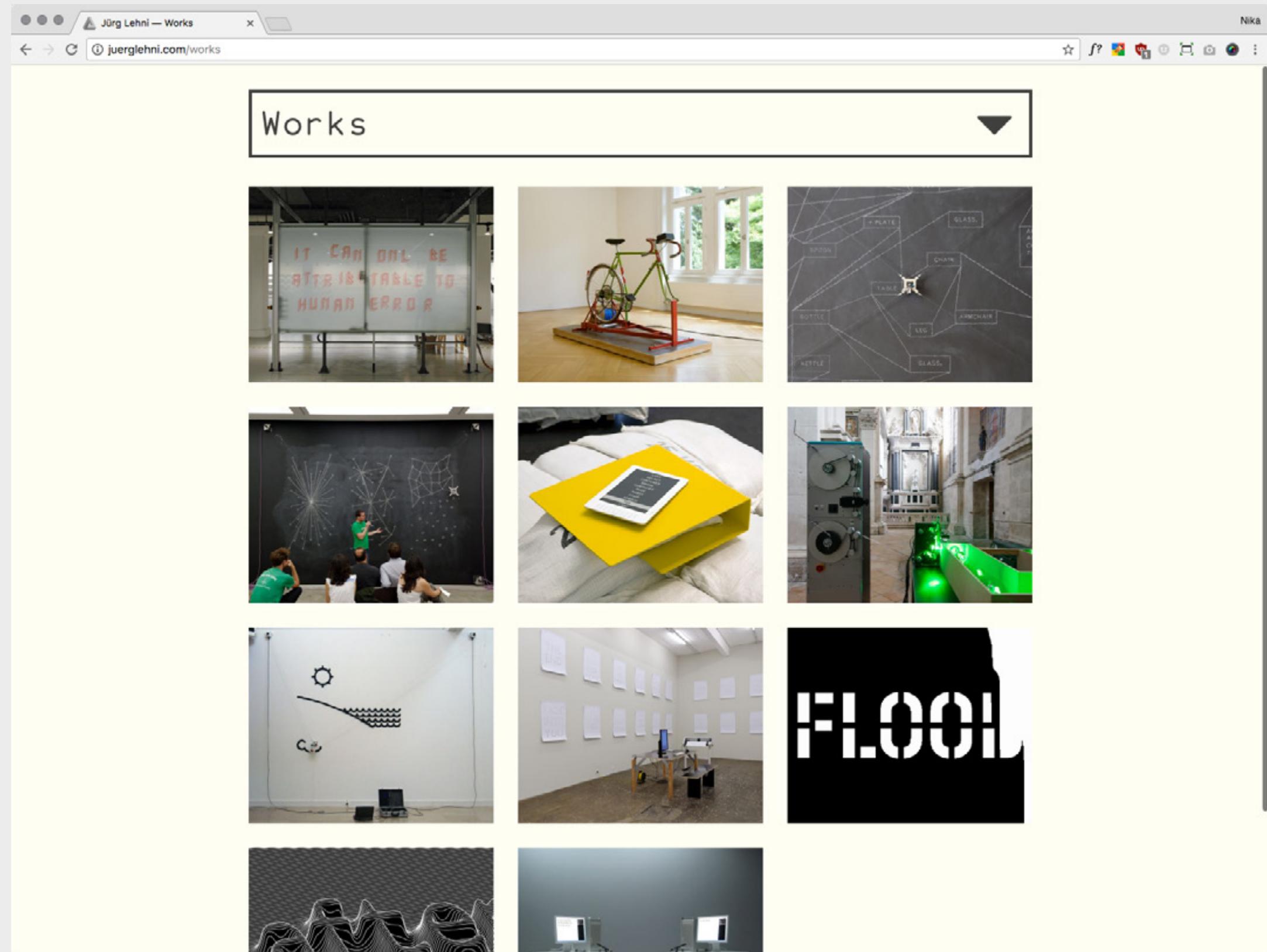
Words You Can't Say



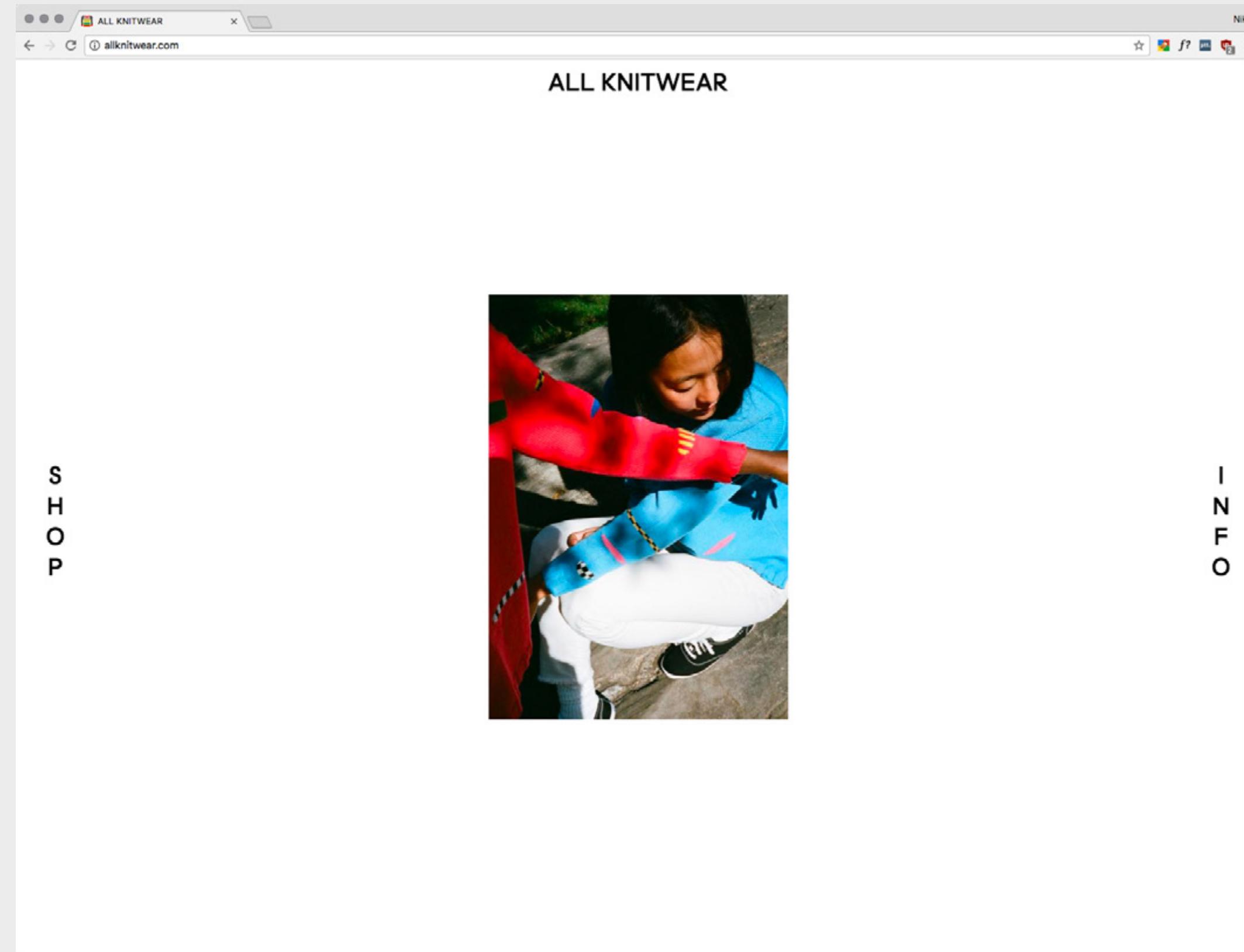
Jennifer Heuer

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



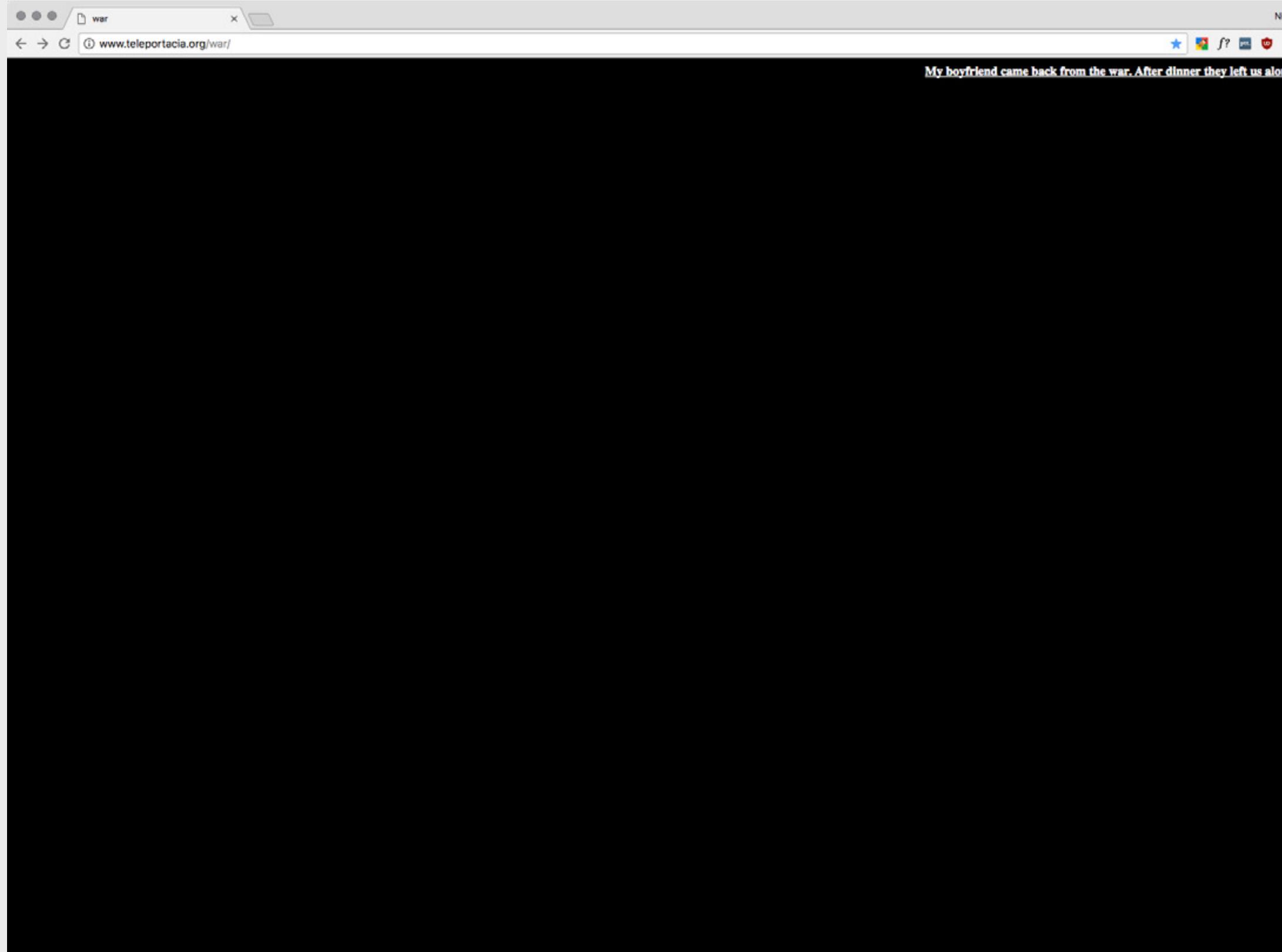
Julia Kim Smith, Linked by Air



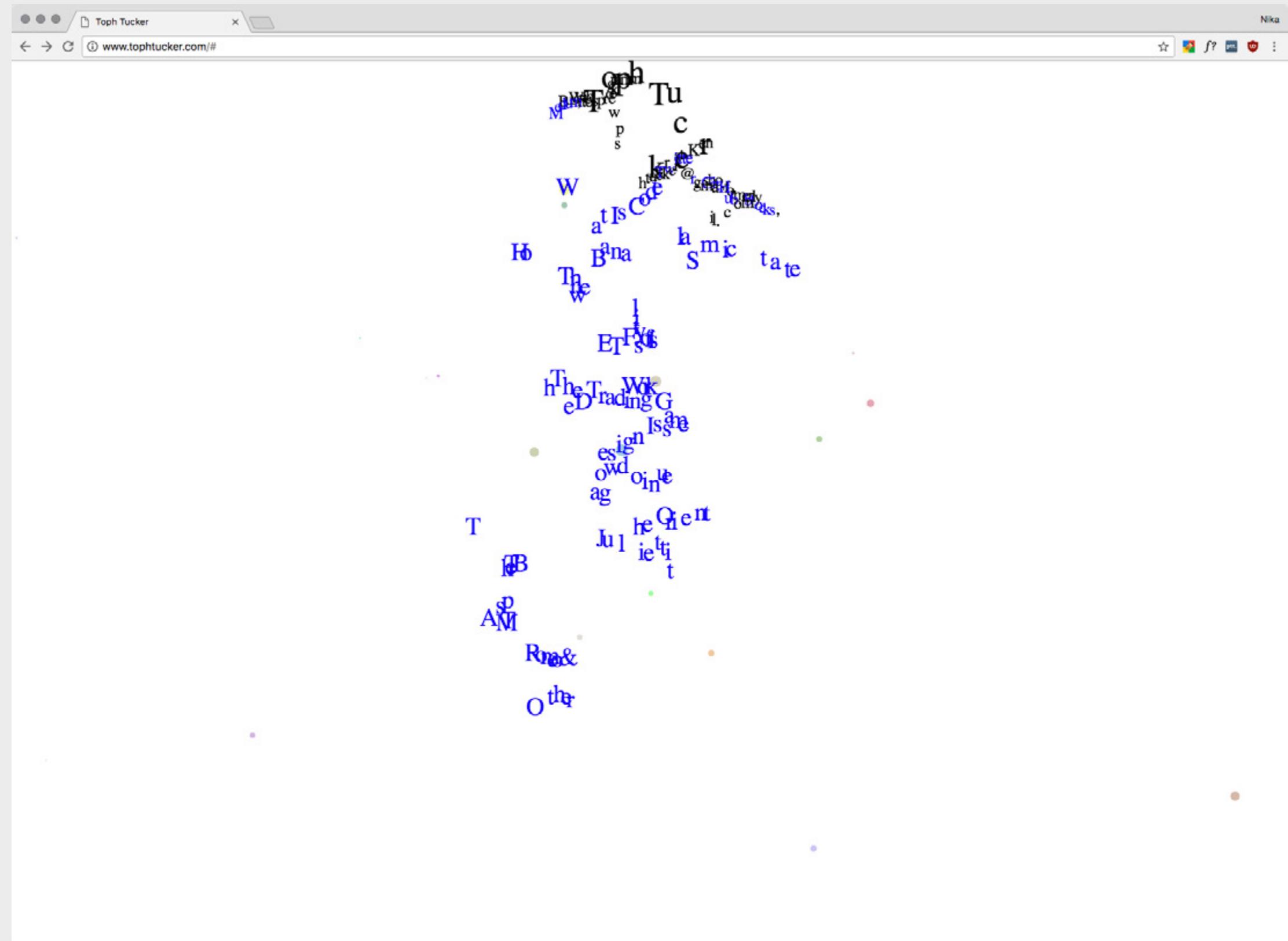
2

Navigation as narrative

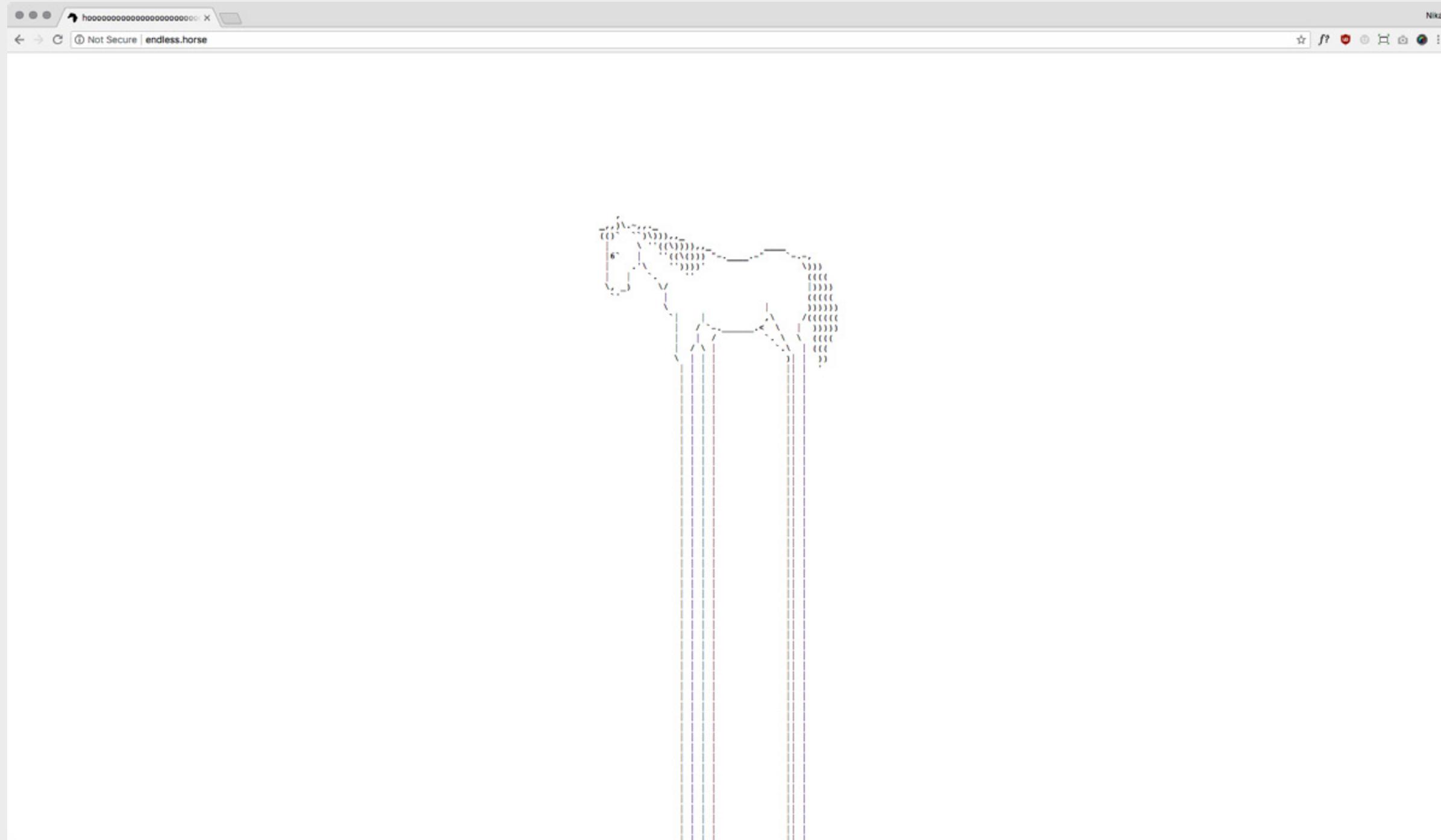
My Boyfriend Came Back from the War, Olia Lialina



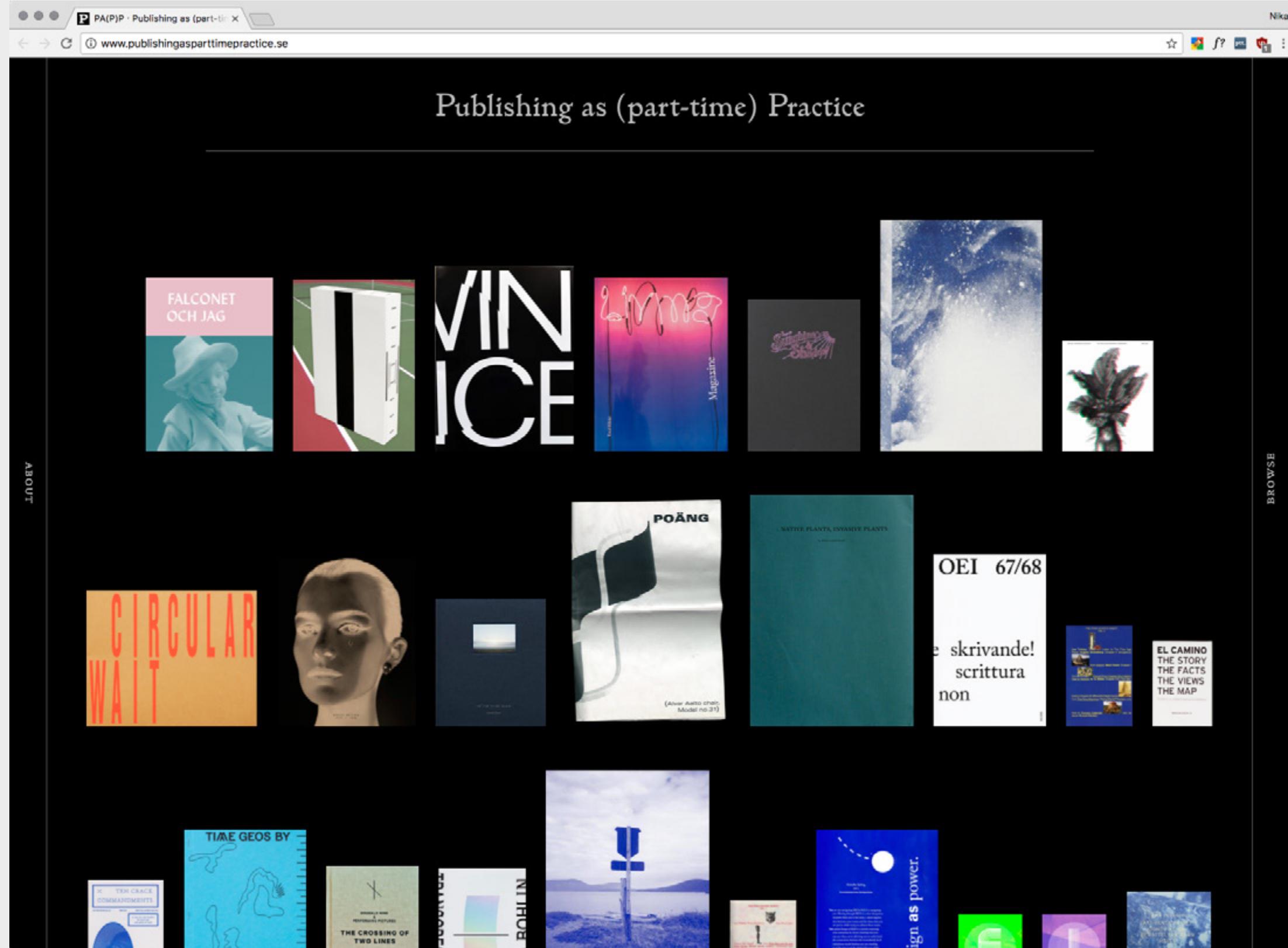
Toph Tucker



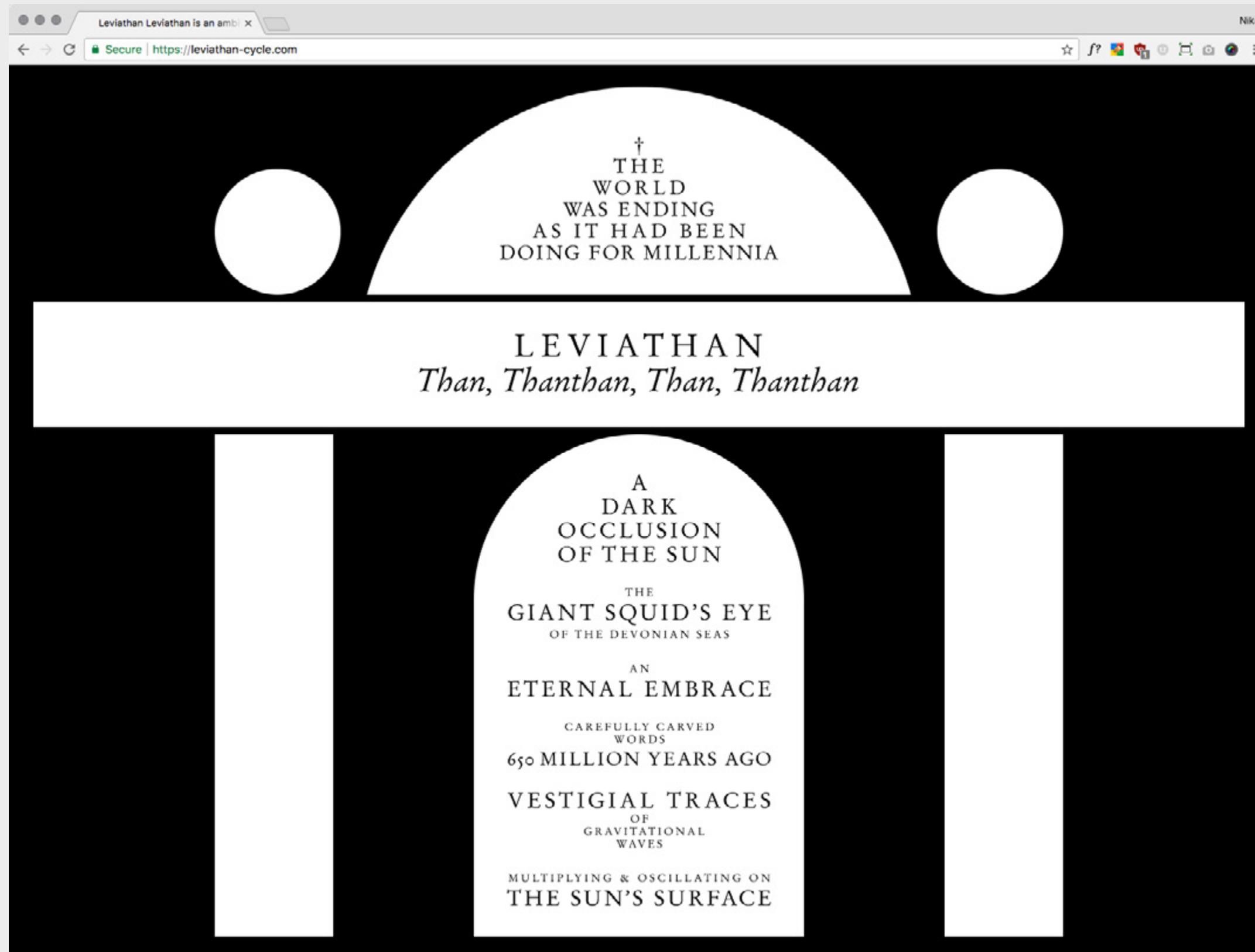
Endless Horse



Publishing as Practice, Konst & Teknik



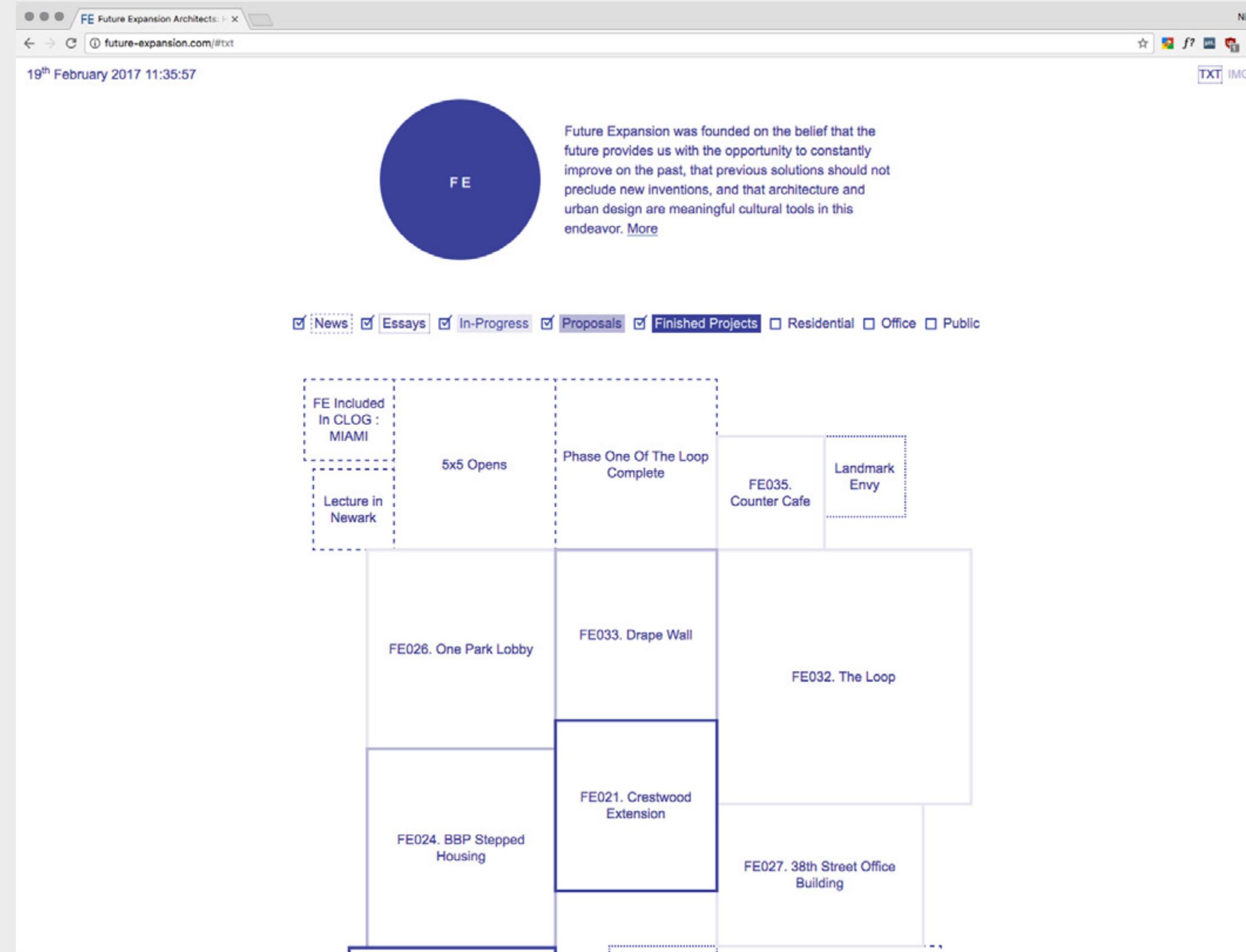
Leviathan, Shezad Dawood. Site by OK-RM



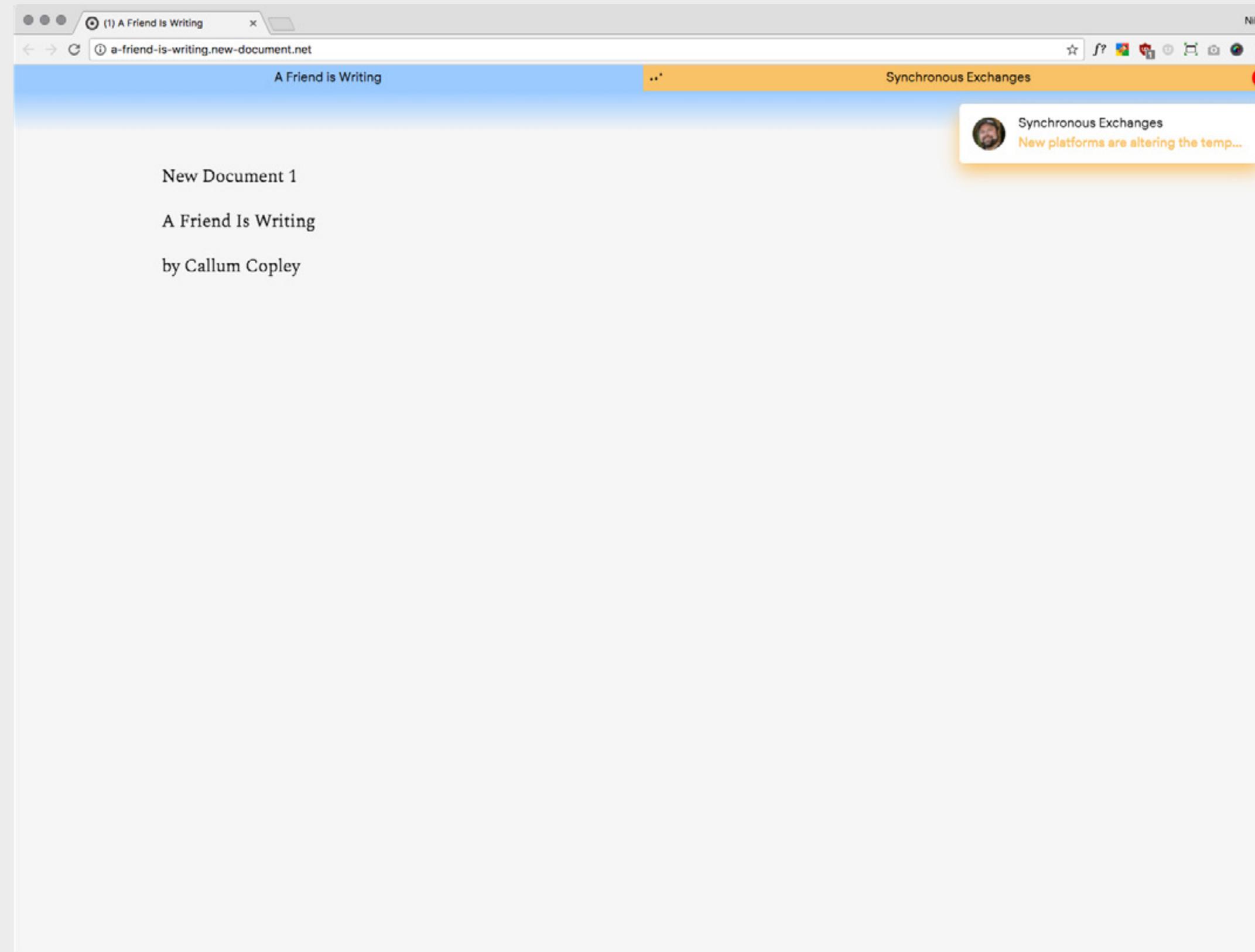
4

Navigation as content

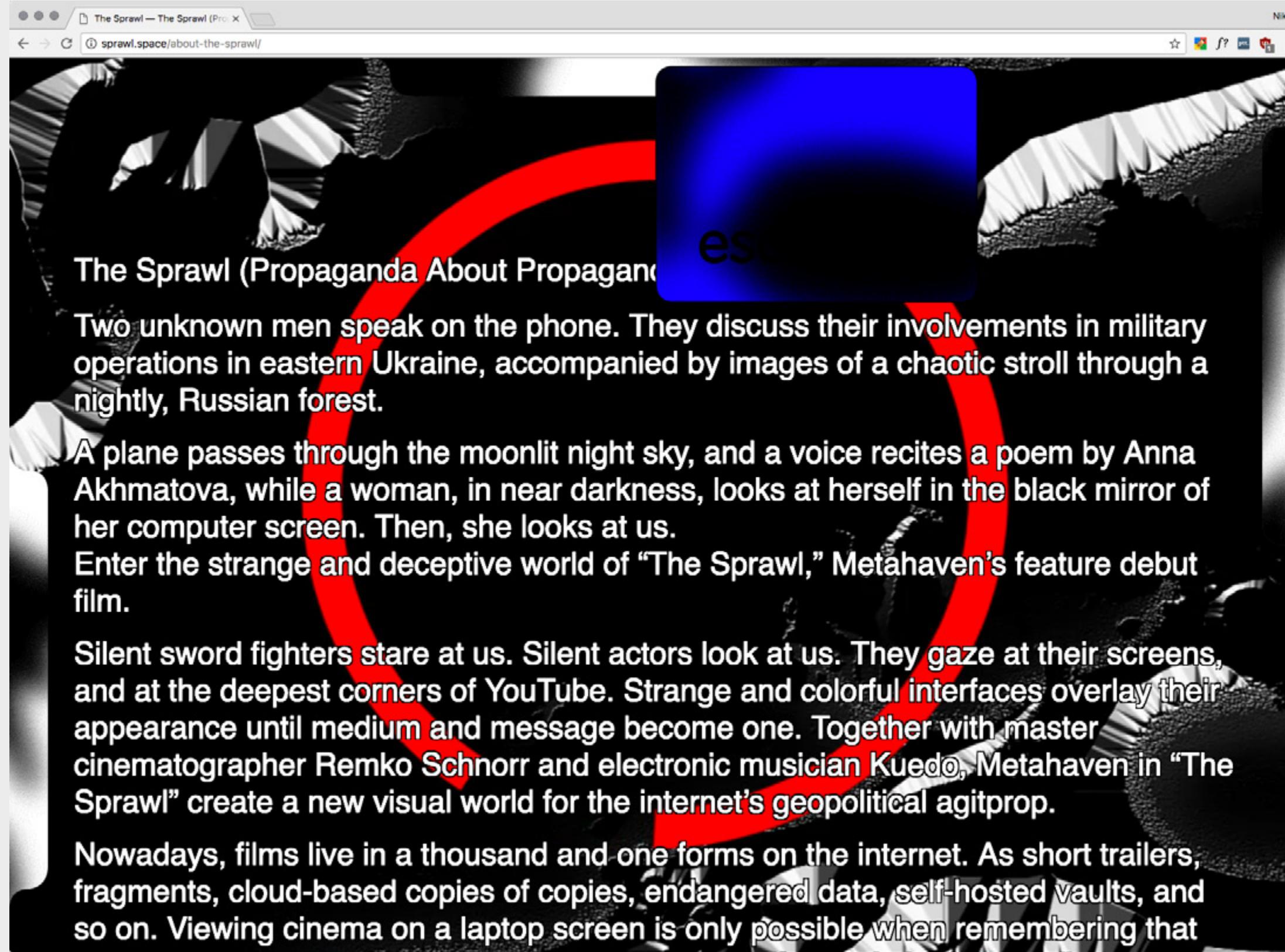
Future Expansion, Linked by Air



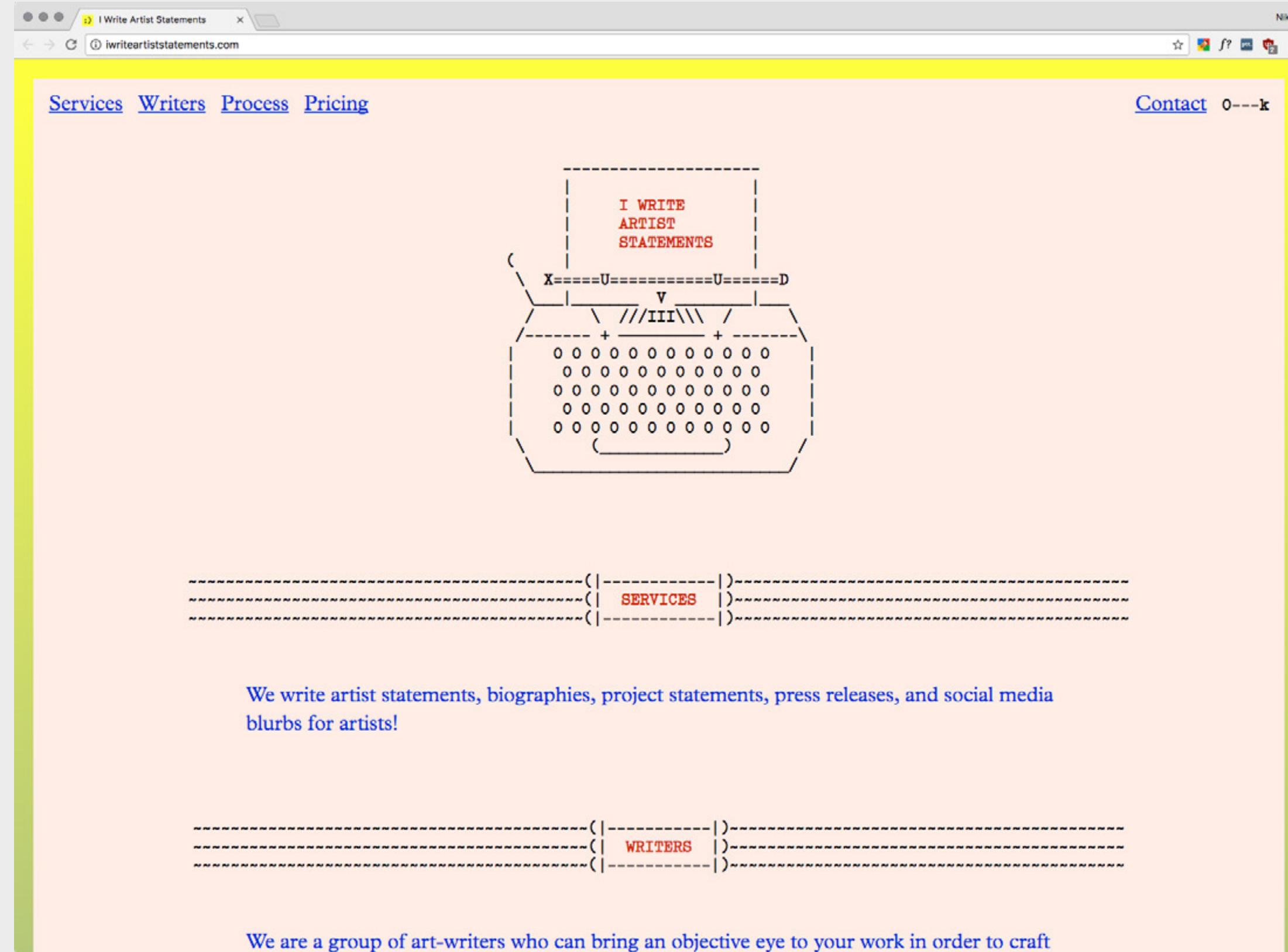
A Friend is Writing, Callum Copley



The Sprawl, Metahaven



I Write Artist Statements, Elana Schlenker



InVision Tutorial