

# DevX

Introduction to User Experience Design



Connecting

# What is User Experience Design?

<https://vimeo.com/52861634>

# Are you a User?

**We're all users.** As humans we interact with products, devices, and design systems multiple times a day without giving it conscious thought.

Have you ever been frustrated when using a device, an app, a website or product?

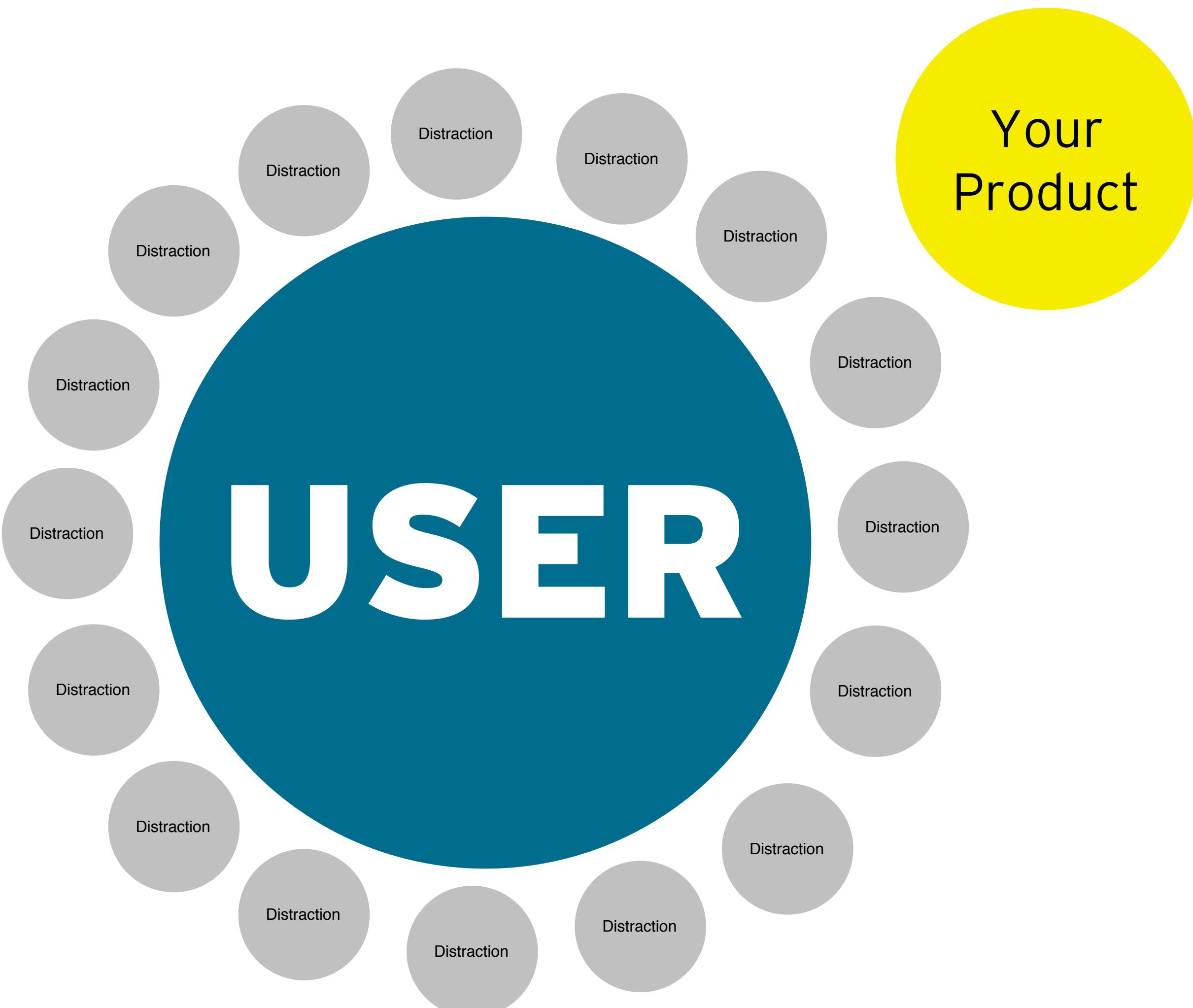


# Why should we care about users?

Users validate great products, and make profitable companies.

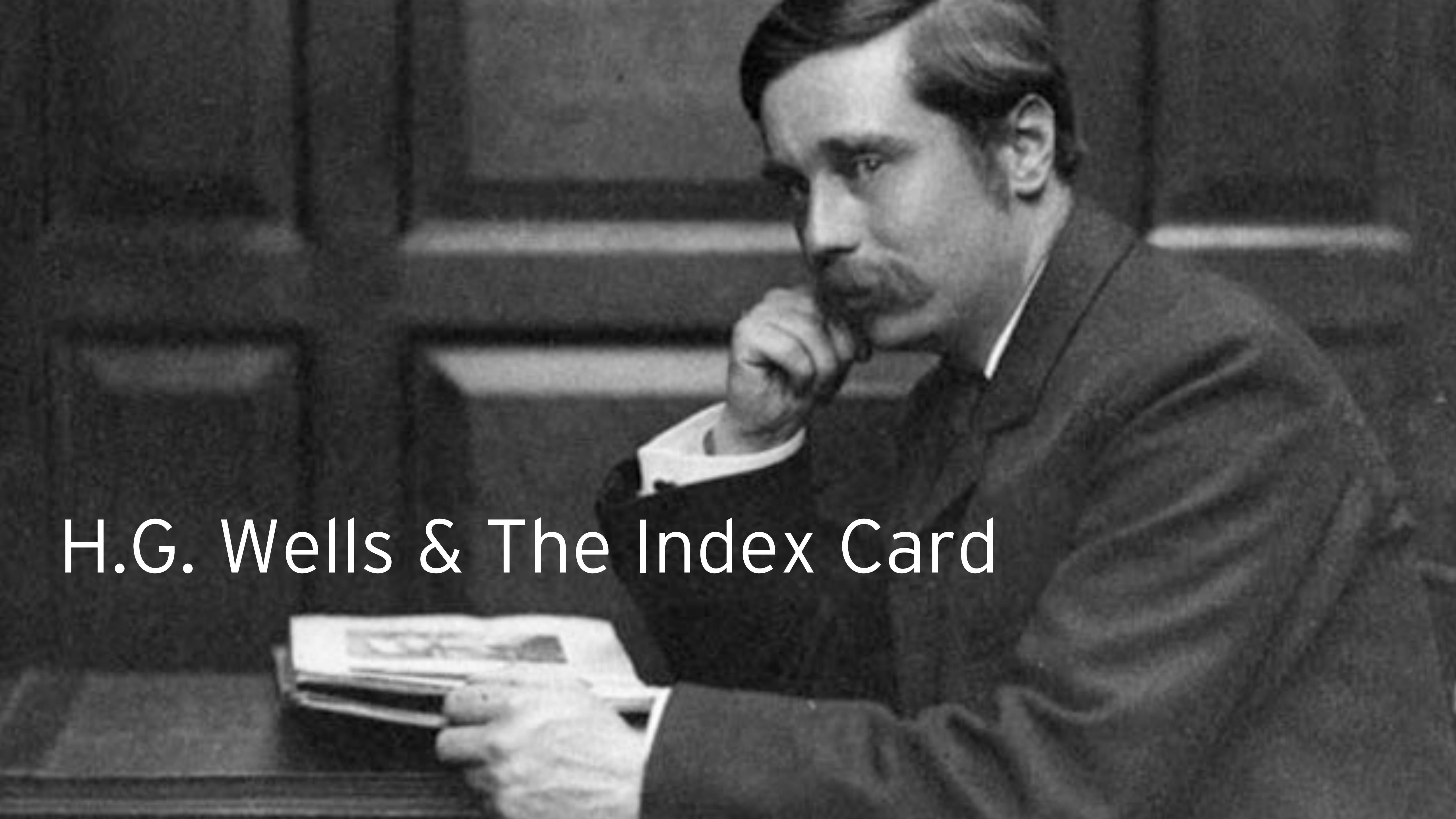
But, they can also create ill-will, dissent and abandon products that are too complex and require a disproportionate amount of their time to the task you are supposedly simplifying.

Our most precious resource is: **a user's time.**



# A brief history of Human-Computer Interaction (HCI)

HCI involves the study, planning, and design of the interaction between people (users) and computers.



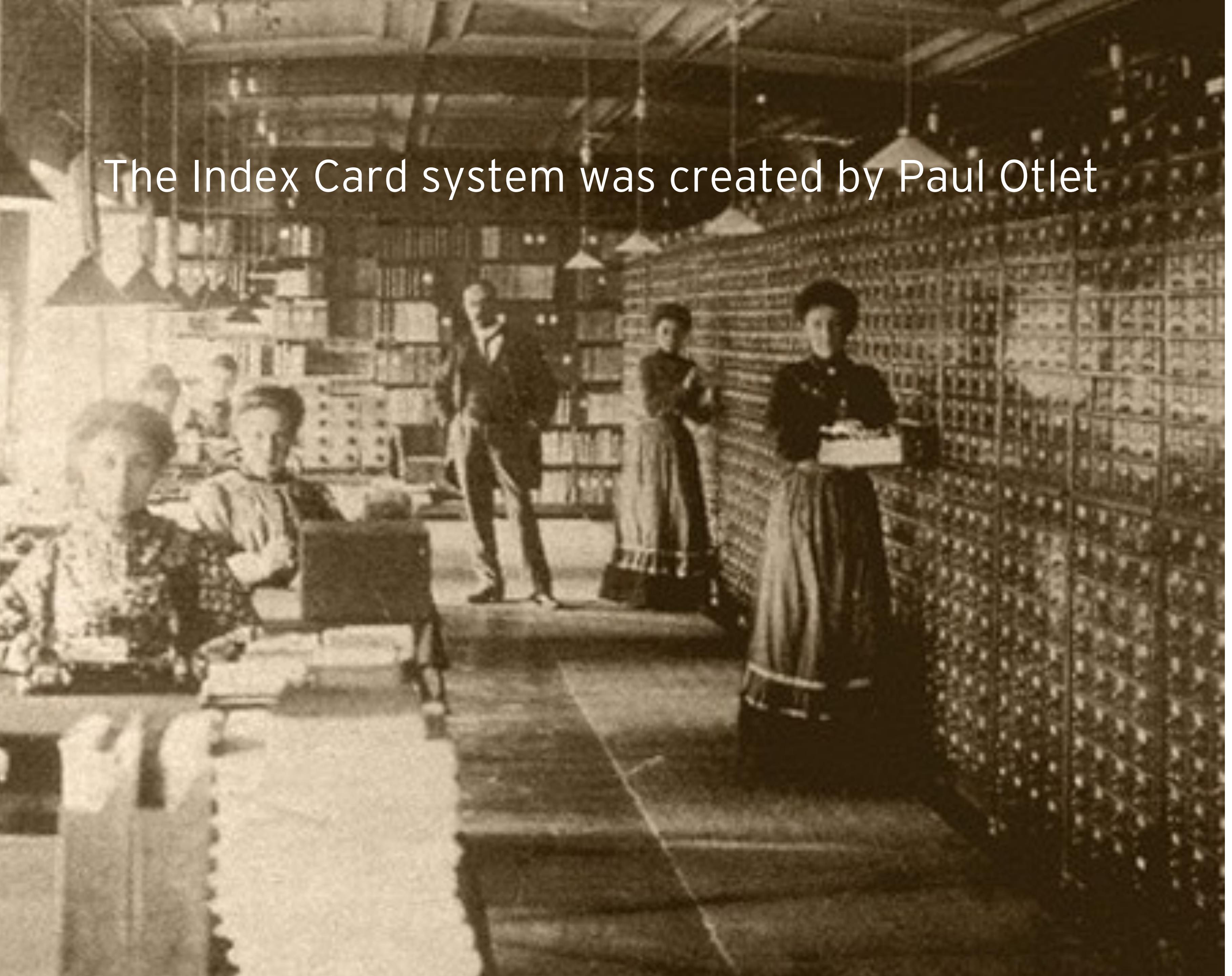
# H.G. Wells & The Index Card

# The Google of 1905

These **index cards** might conceivably be transparent and so contrived as to give a photographic copy promptly whenever it was needed, and they could have an attachment into which would slip a ticket bearing the name of the locality in which the individual was last reported. A little army of attendants would be at work on this index day and night...

*An incessant stream of information would come, of births, of deaths, of arrivals at inns, of applications to post-offices for letters, of tickets taken for long journeys, of criminal convictions, marriages, applications for public doles and the like.*

A filter of offices would sort the stream, and all day and all night for ever a swarm of clerks would go to and from correcting this central register, and photographing copies of its entries for transmission to the subordinate local stations, in response to their inquiries...



The Index Card system was created by Paul Otlet

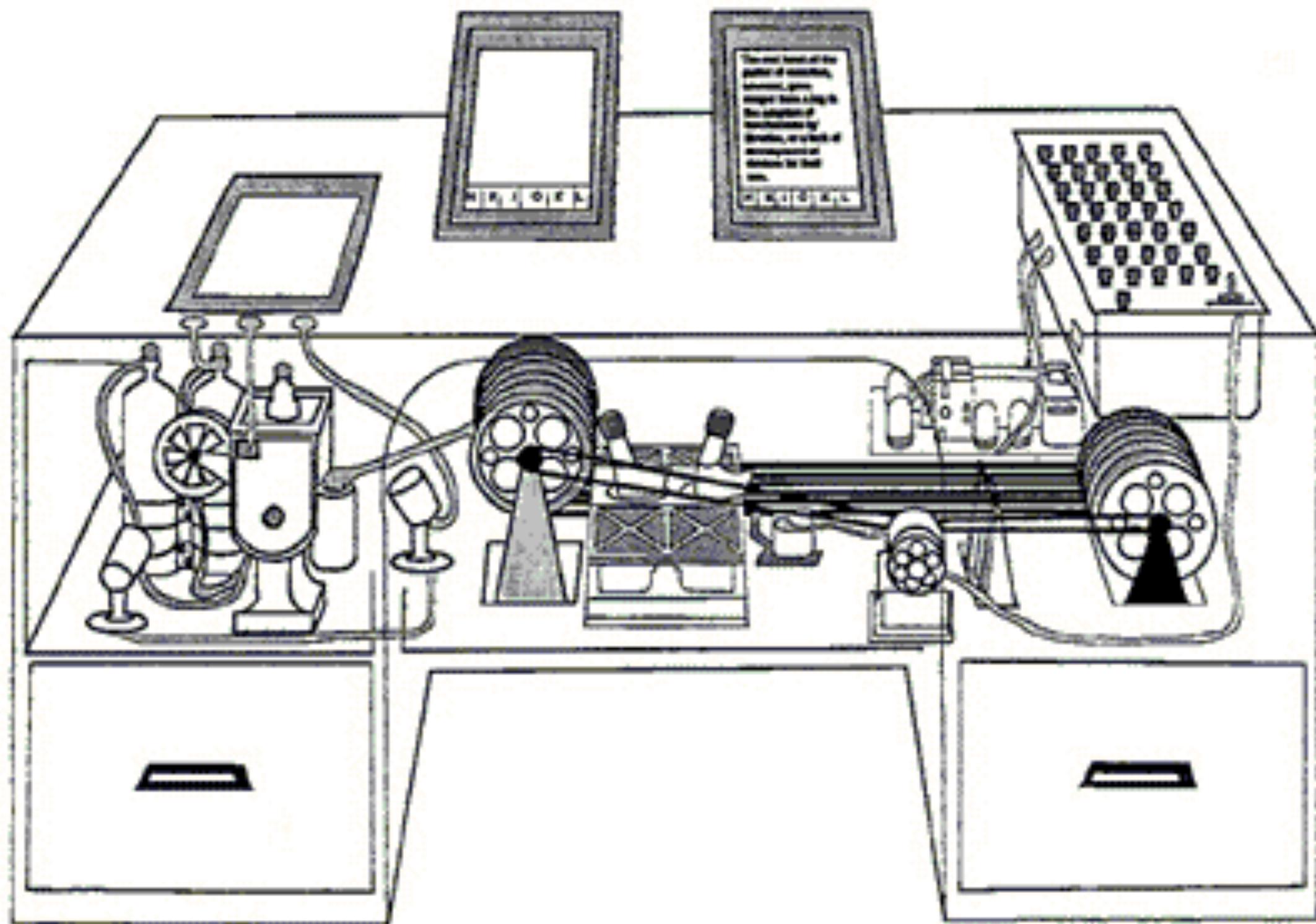
Otlet is considered the father of "Information Science". He created the **Universal Decimal Classification system** and more importantly for the field of HCI he founded the Central Office of Associations.

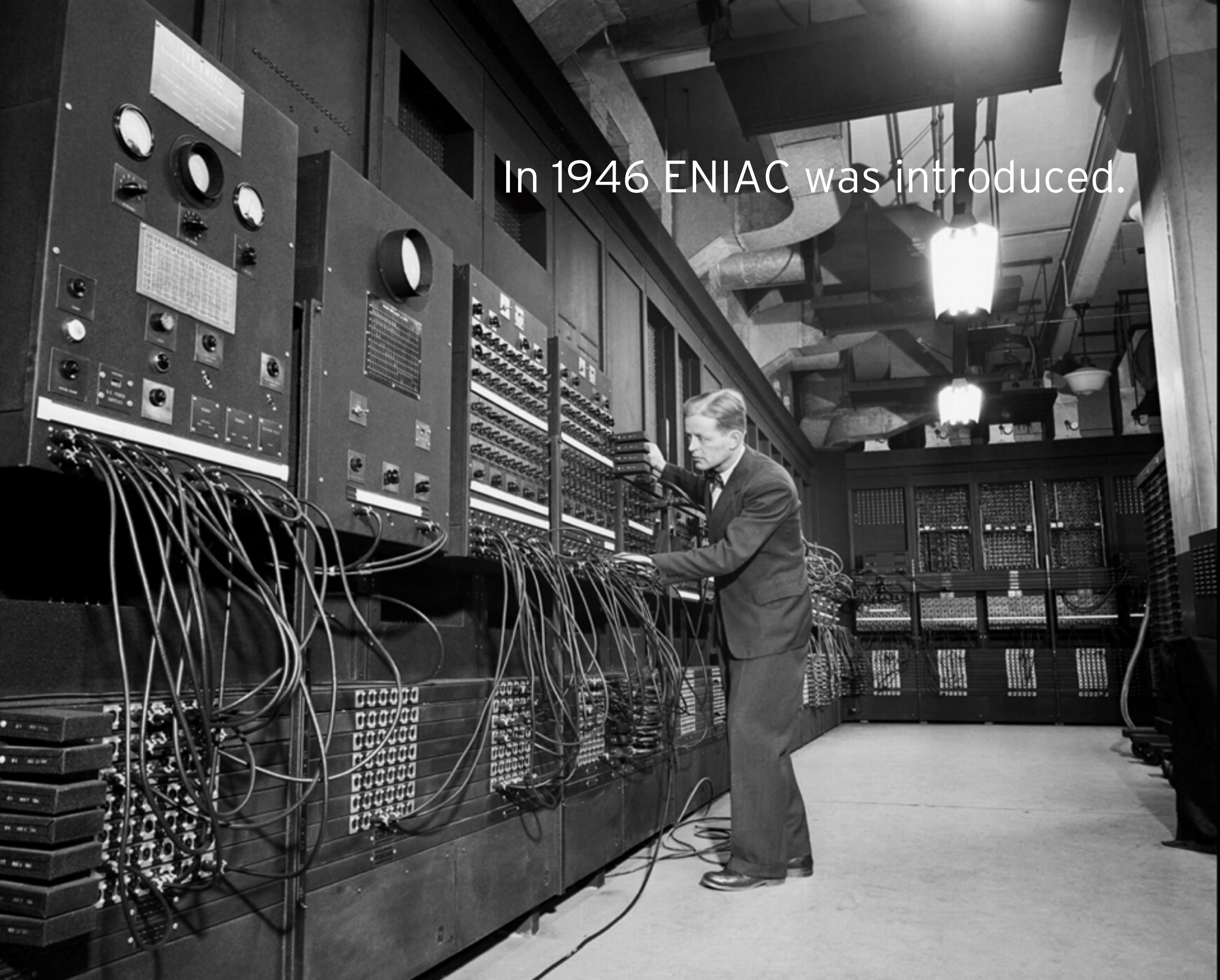
It was funded by the Belgian government. Over time they collected over 15 million Index Cards and images representing the world. These index cards were connected by the UDC system, and cross-referenced throughout multiple components.

# MEMEX

Vannevar Bush's essay, "*As We May Think*" laid the ground work for bringing Paul Otlet's system of universal information and H.G. Wells visionary ideas into reality.

In his essay, he outlines hypothetical system for accessing interchangeable encyclopedias, that would be readily available to everyone for finding and interacting with information. He published his essay in a 1945 edition of the Atlantic Monthly.





In 1946 ENIAC was introduced.

**Electronic Numerical Integrator And Computer (ENIAC)** was the first general-purpose computer designed during WWII, and completed in 1946. This was also the advent of HCI. For a size reference, ENIAC amassed 1800 sq. ft. and demanded enough power to run a small town.

ENIAC worked by simplifying the process of loading programs and replacing vacuum tubes, eliminating the need for large teams of operators and simplifying the process of interaction.

# ENIAC required three sets of users.

**Managers:** Oversaw design, development & operation of features.

**Engineers:** Wrote the scripts used by programs.

**Operators:** Execute the programs. Programs could take days to configure by setting the correct dials, tubes and switches.

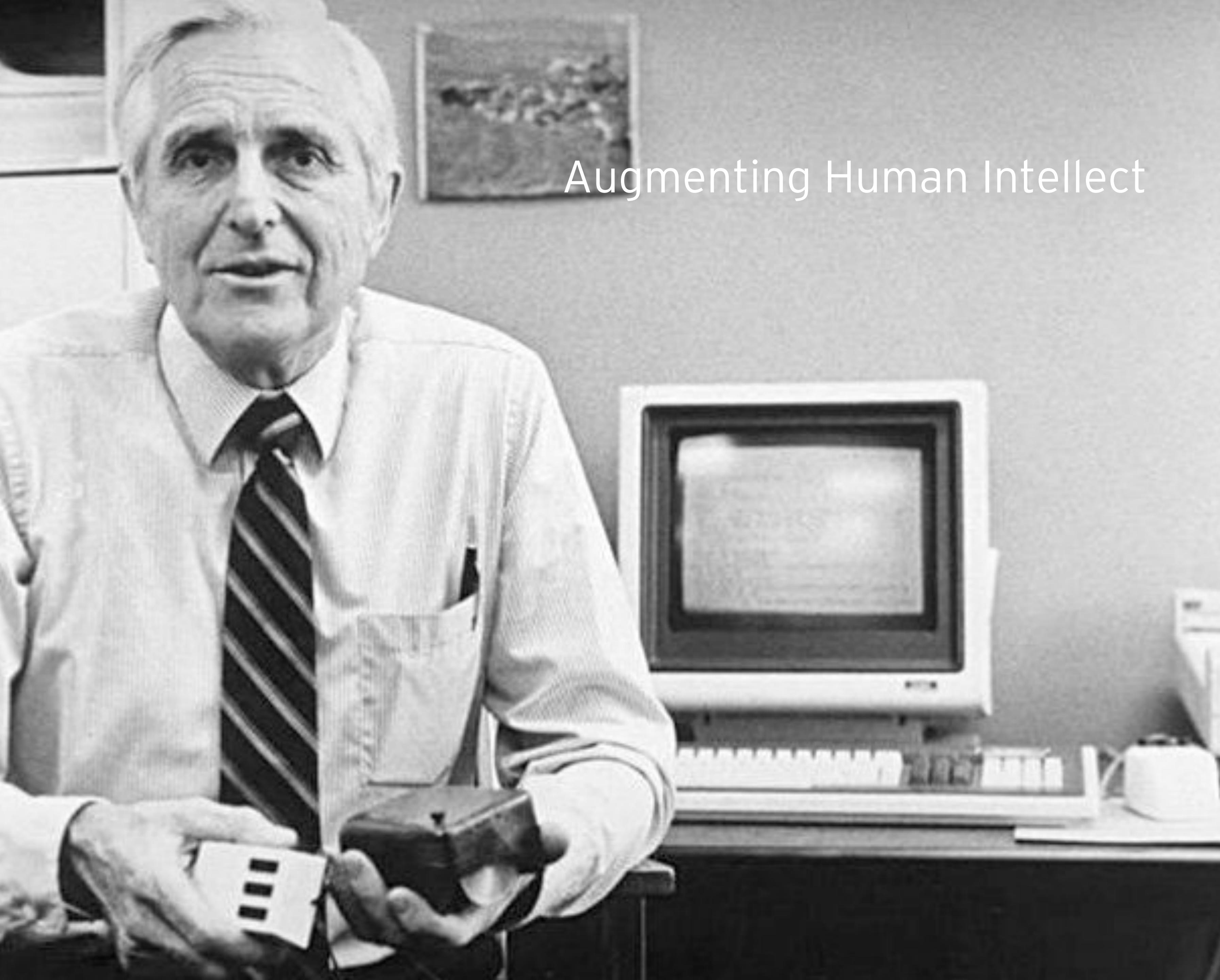
# WIMP

Window - Icon - Menu - Pointing Device

## Augmenting Human Intellect

In 1960, work by **Doug Engelbart** introduced basic theories of hand-eye coordination to make a dramatic breakthrough in the design and development of computers.

Rather than approach a computer by code, he did so with a monitor and a mouse-driven cursor to effect change.



# GUI

Graphical User Interface

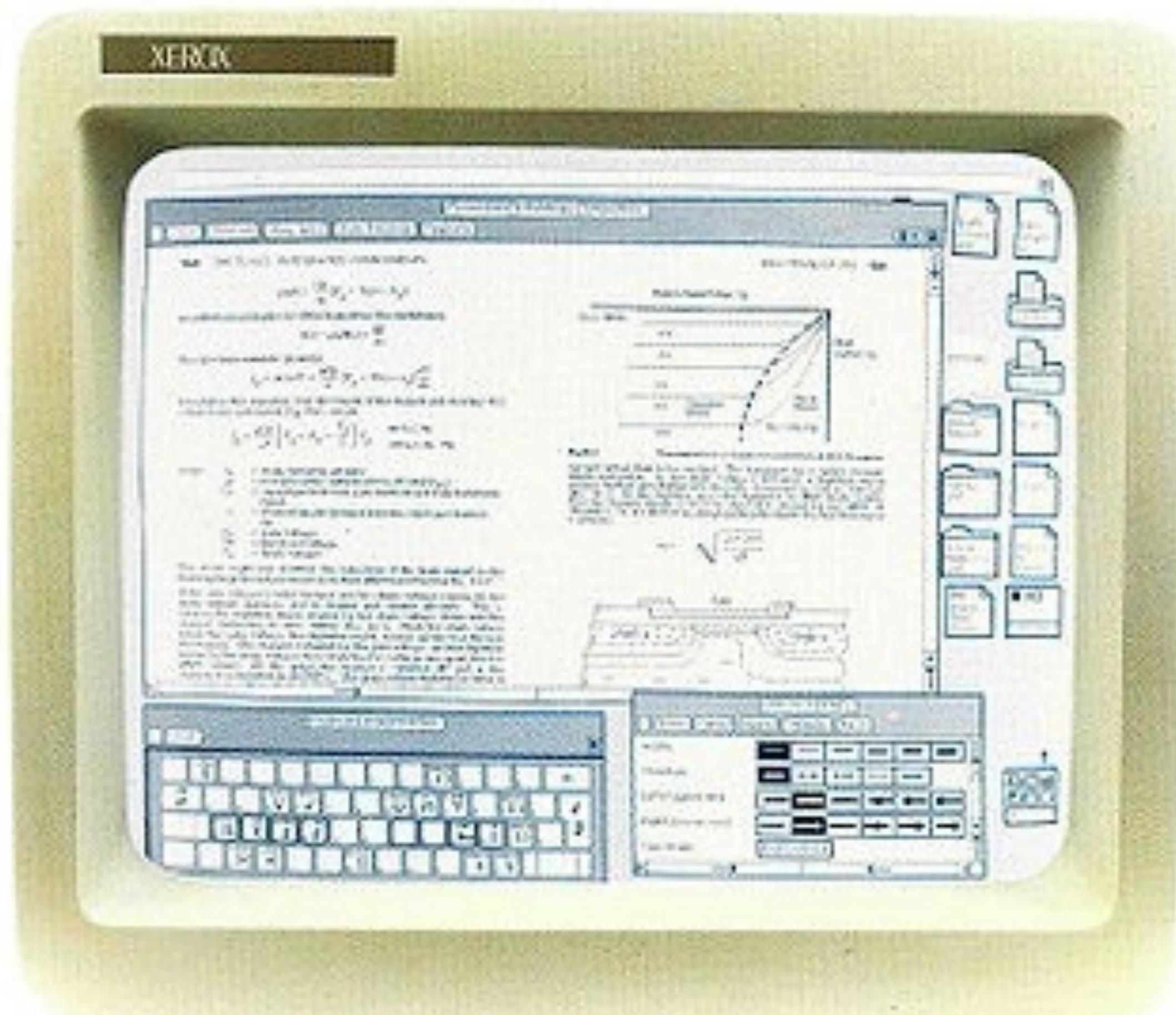
**The Xerox Parc** was the first computer to demonstrate Englebarts theories of the graphical user interface, using a bitmapped screen, and cursor device to control commands.



**This lead to the introduction of Alto, the first, mass produced computer.** Although not commercially available, the Alto could be found throughout Xerox's office and some select Universities. It is directly attributed to the development of early personal computers by Apple & Sun Workstations.

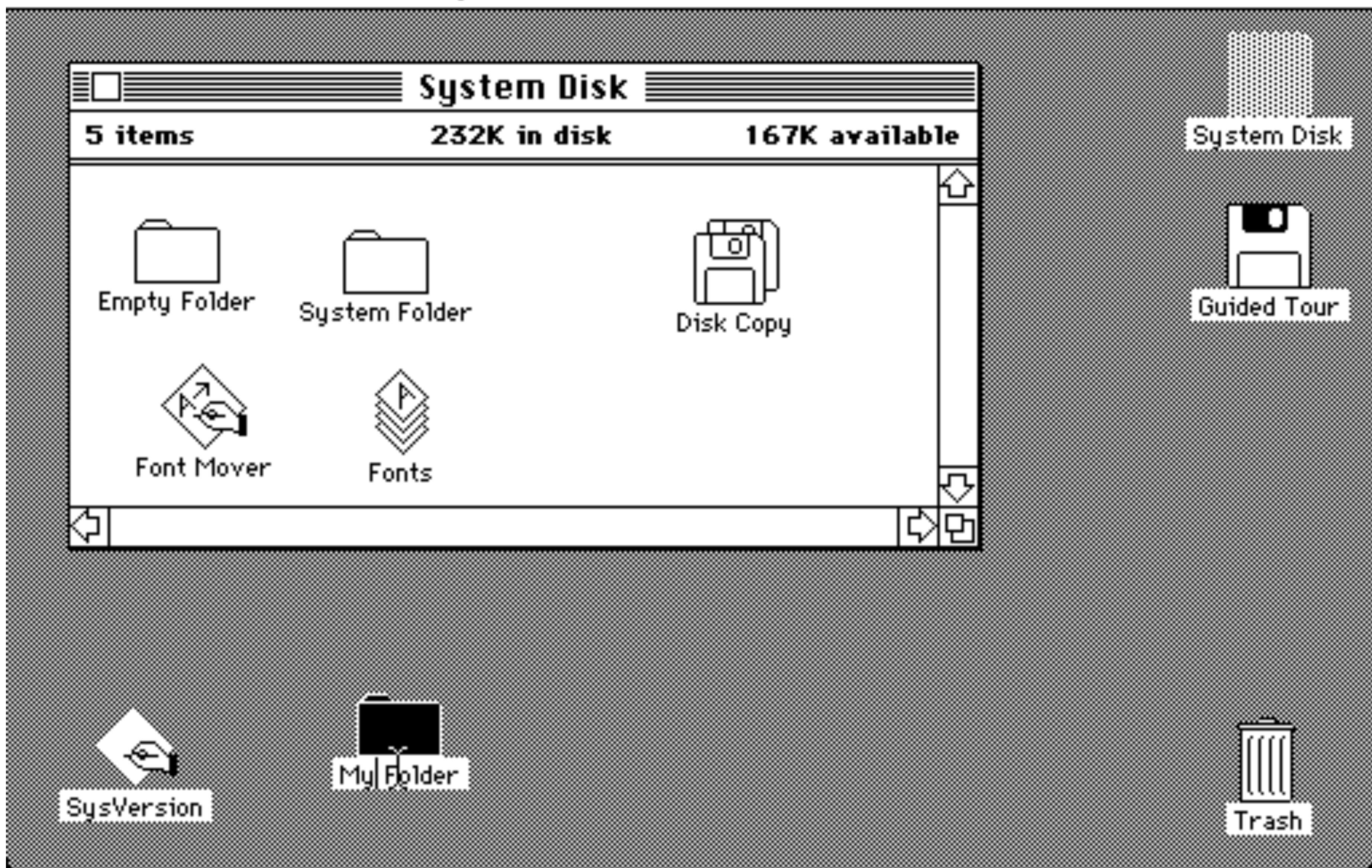
The Parc labs first introduced the concept of creating, moving & deleting files. It was also the first time a fixed drop-down menu was used.

# Xerox Gypsy - WYSIWG

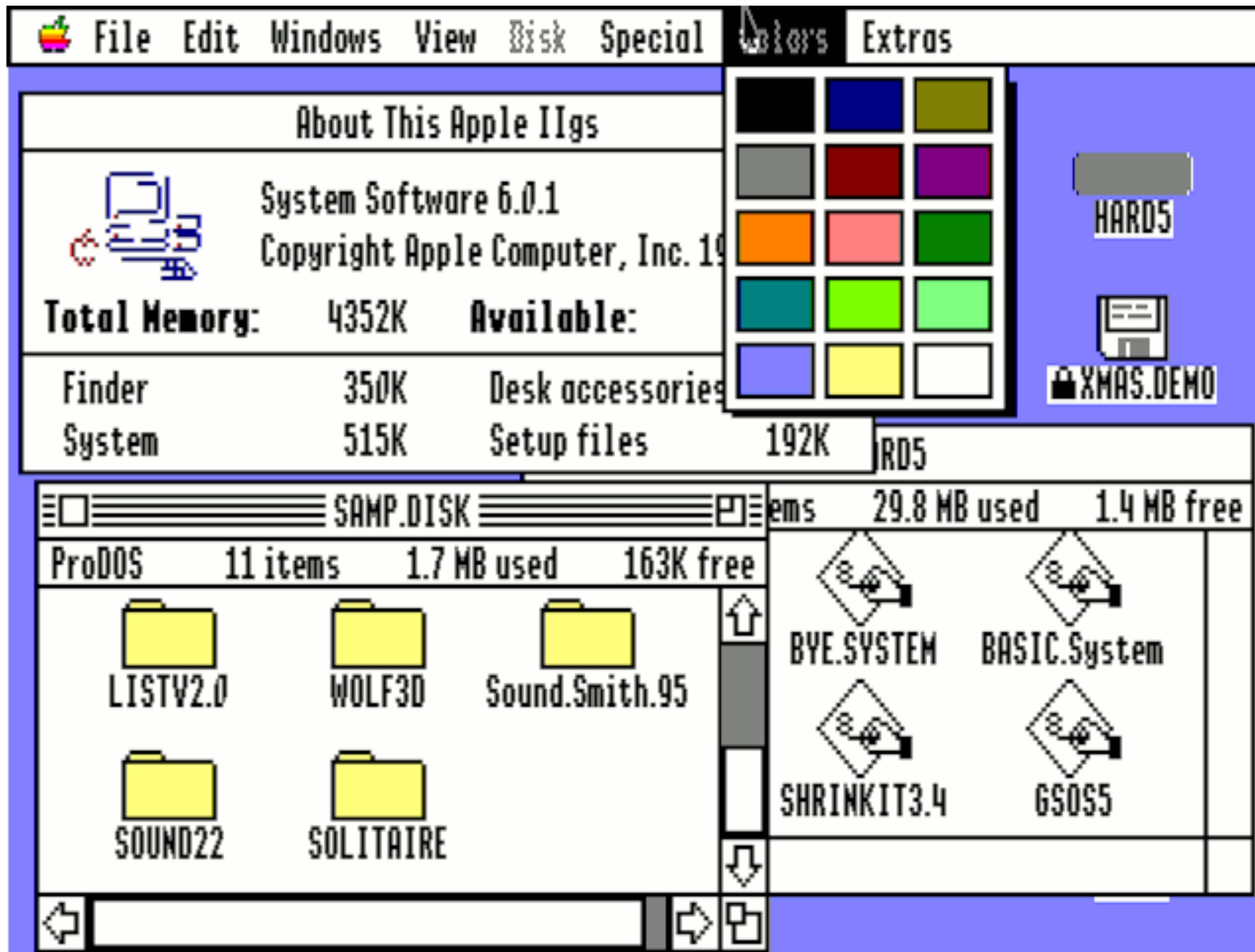


As the Xerox Parc project advanced, the **Gypsy** was developed. The Gypsy introduced the first bitmapped **WYSIWG (What-you-see-is-what-you-get)** bitmapped editor and pop-up menus.

File Edit View Special

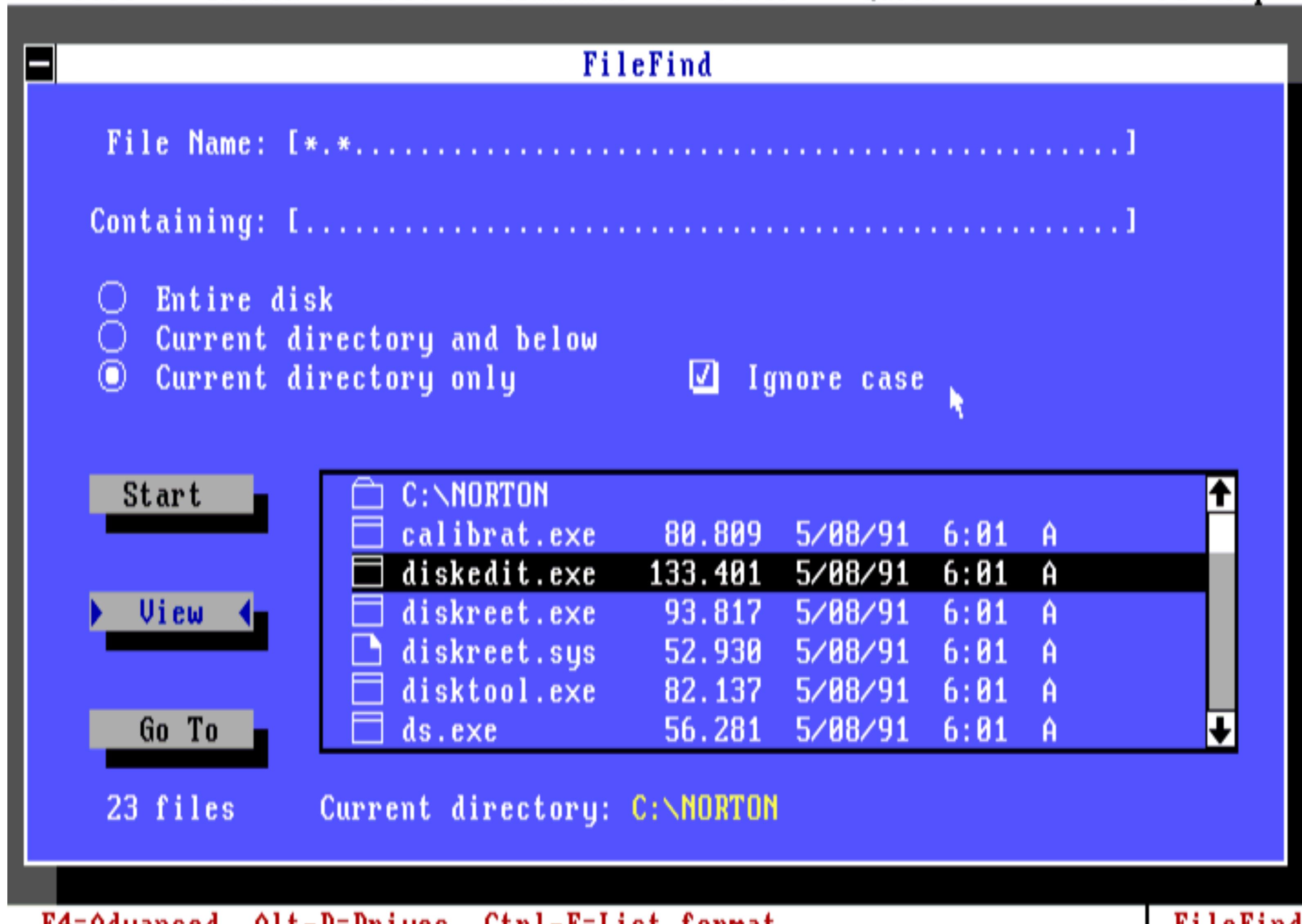


Apple Macintosh Desktop 1984



Apple II GS/OS Desktop 1986 - 16bit design

File    Search    List    Commands    Viewer    Quit!    F1=Help



? Pict Brush Tech Sten Font Misc Pref



DeluxePaint II for MS DOS 1989



Microsoft Windows 95 - A Computer in Every Home



Apple Mac OS X

# Non-WIMP Interfaces

It's a new era in User Experience Design and Development



Apple iWatch 2 - 2016



Google PIXEL - 2016



Oculus VR - 2016



Google Cardboard - 2016

# How to make a PB&J.

In five minutes, please use the blank sheet of paper in front of you to create a visual guide on “How to make a PB&J” sandwich using the ingredients shown in class.





Using your instructions, can we build a PB&J?

In a group of five, use a pad of sticky notes to create a new set of instructions.



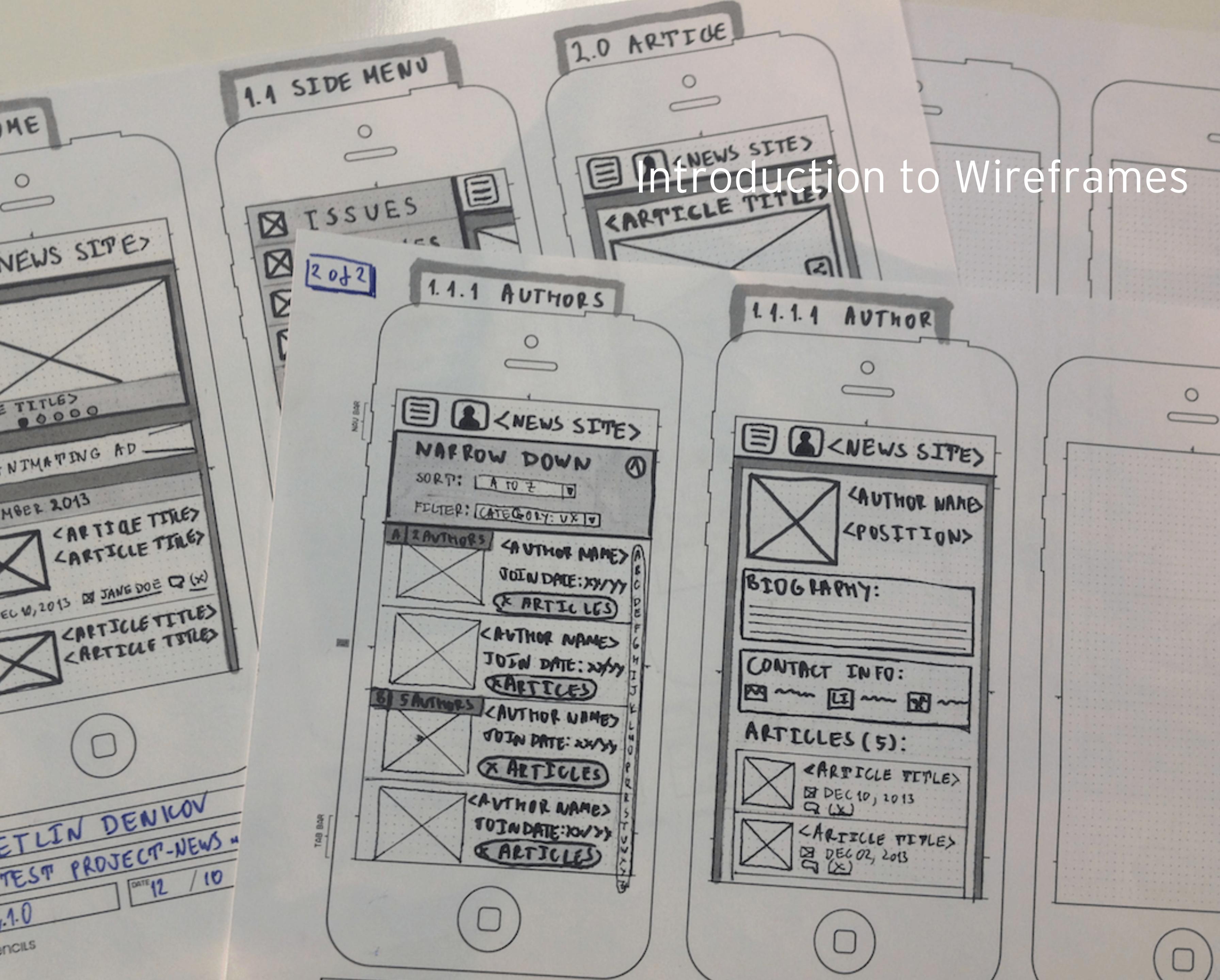
How about now? Let's try again.

What have we learned  
about users?

Morning Break

“Asking users to adopt new behaviors or even modify their existing behaviors is very, very hard.”

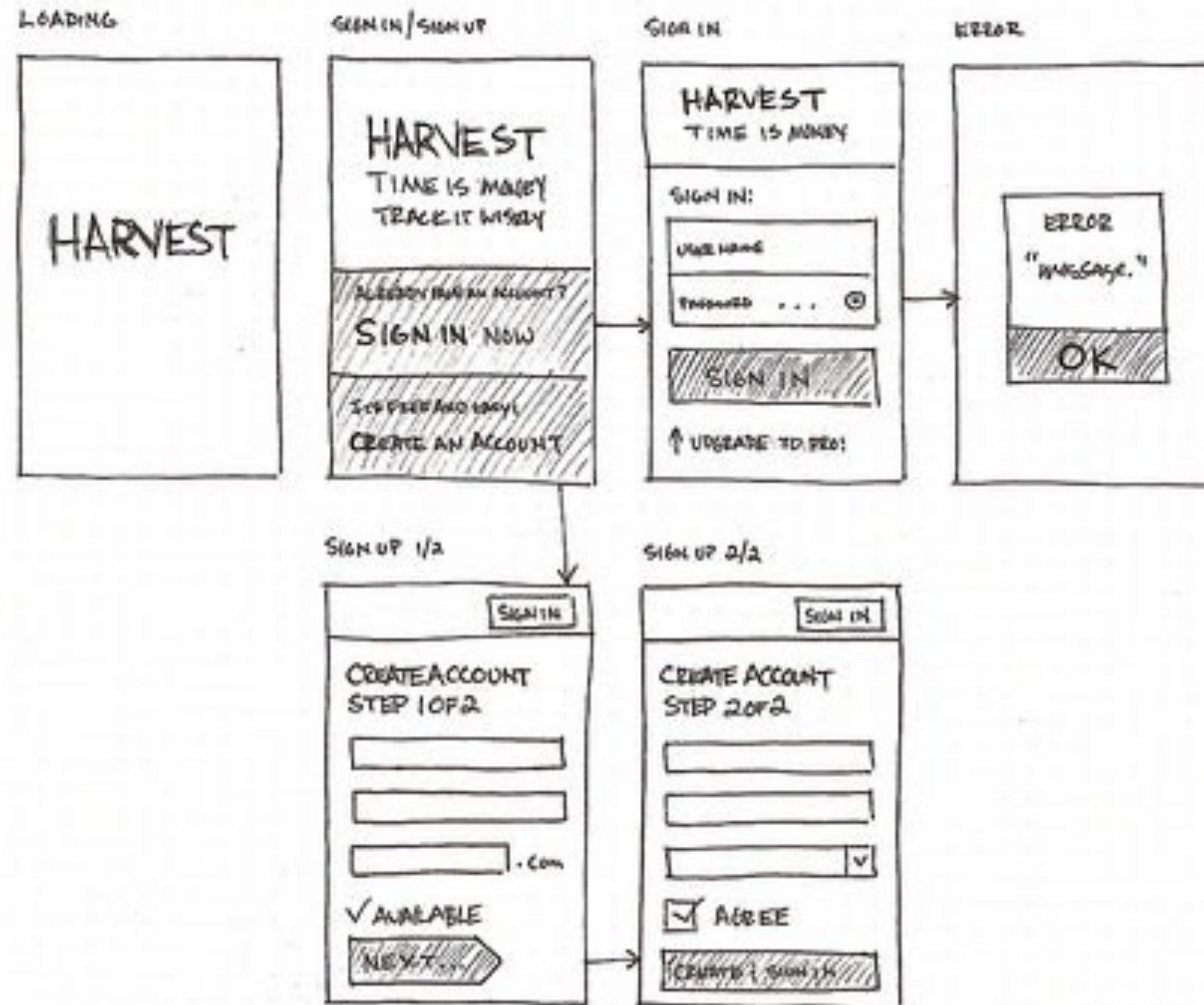
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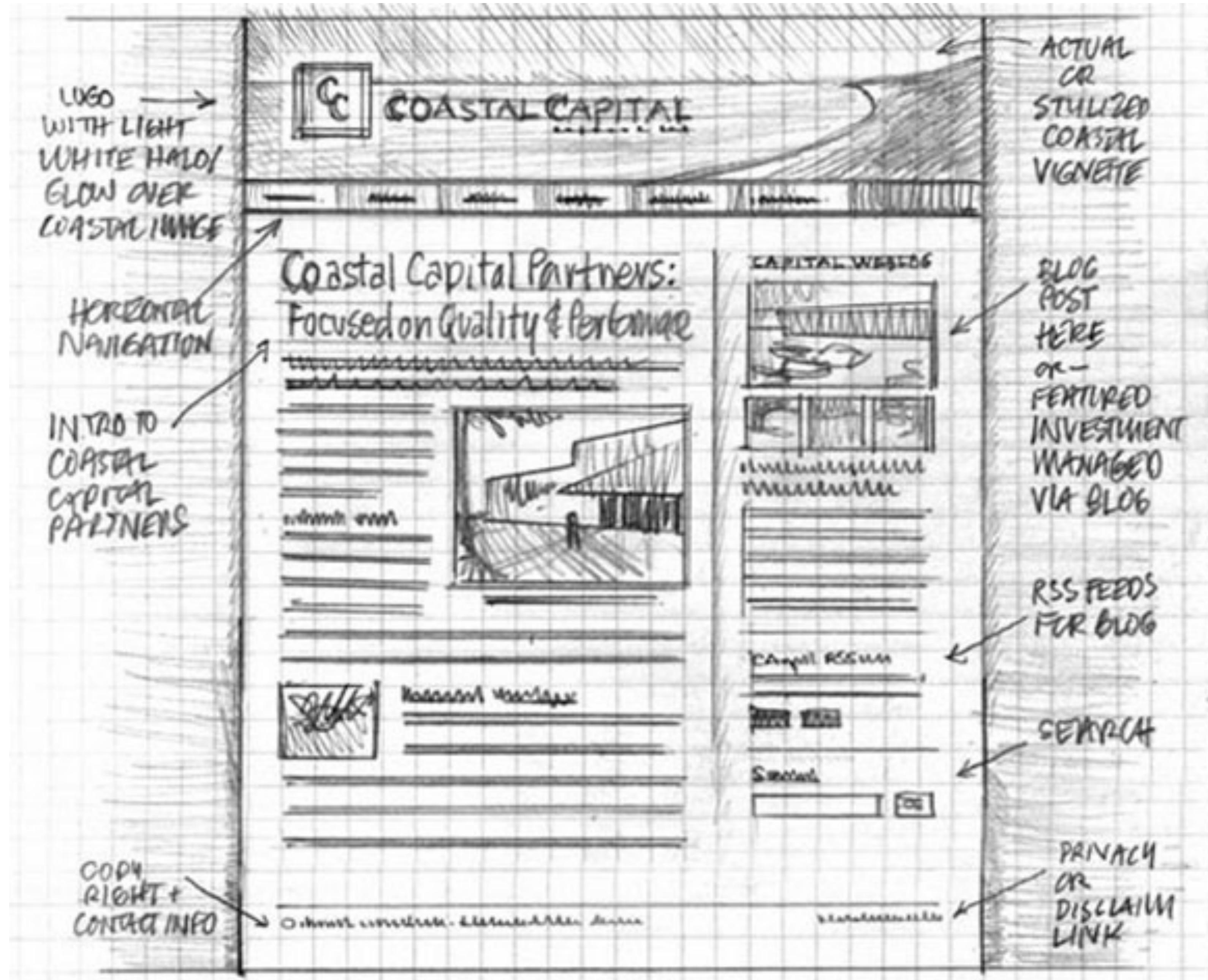


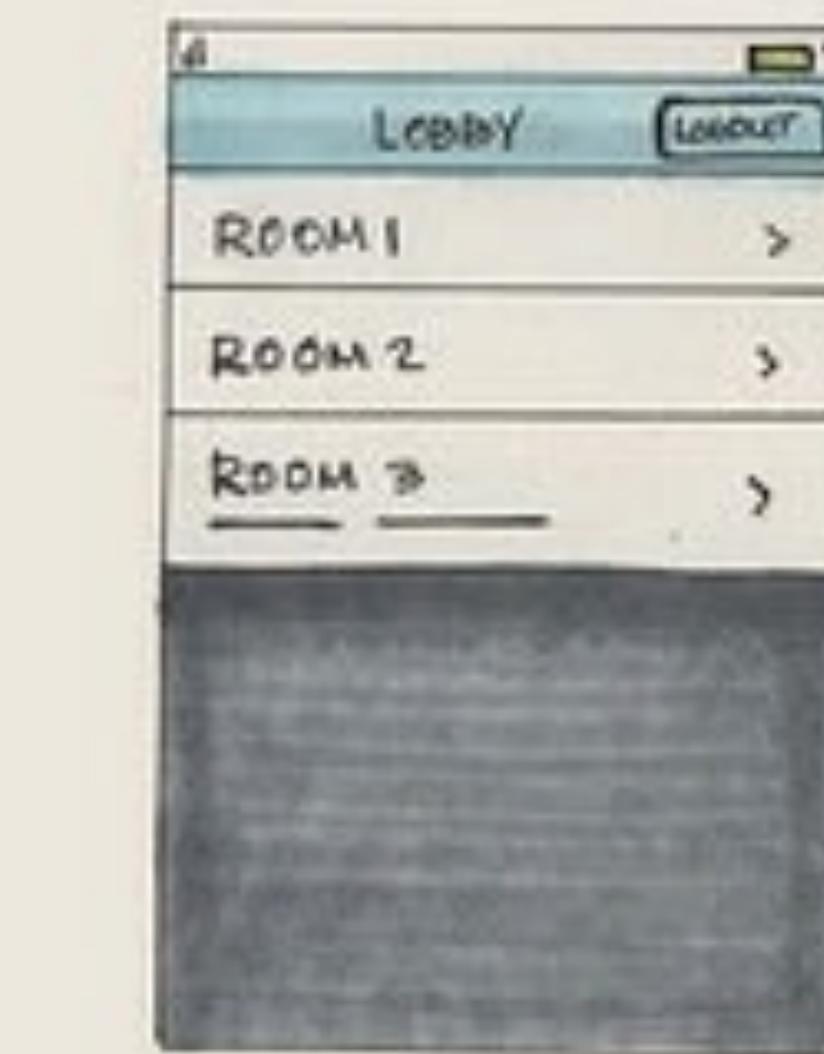
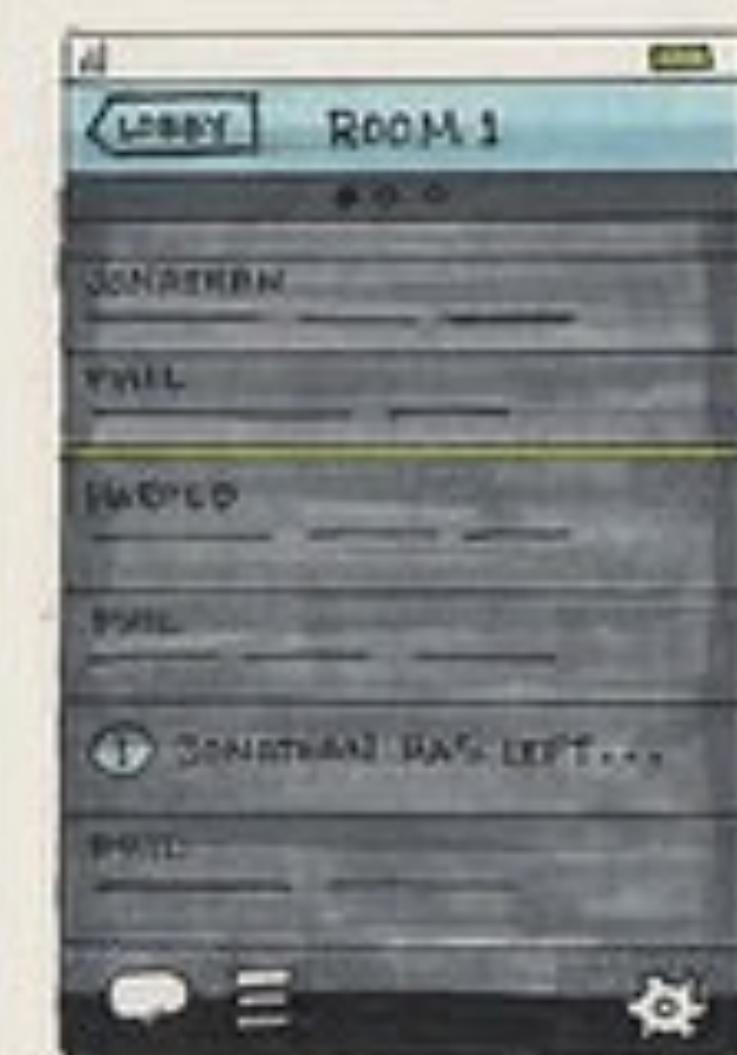
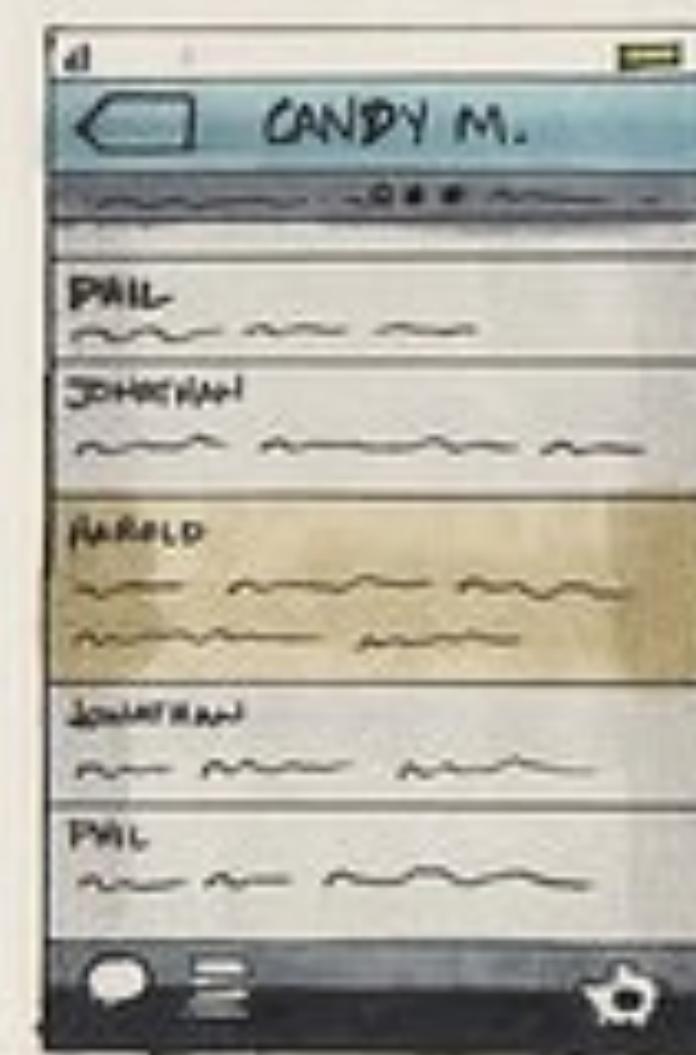
# Introduction to Wireframes

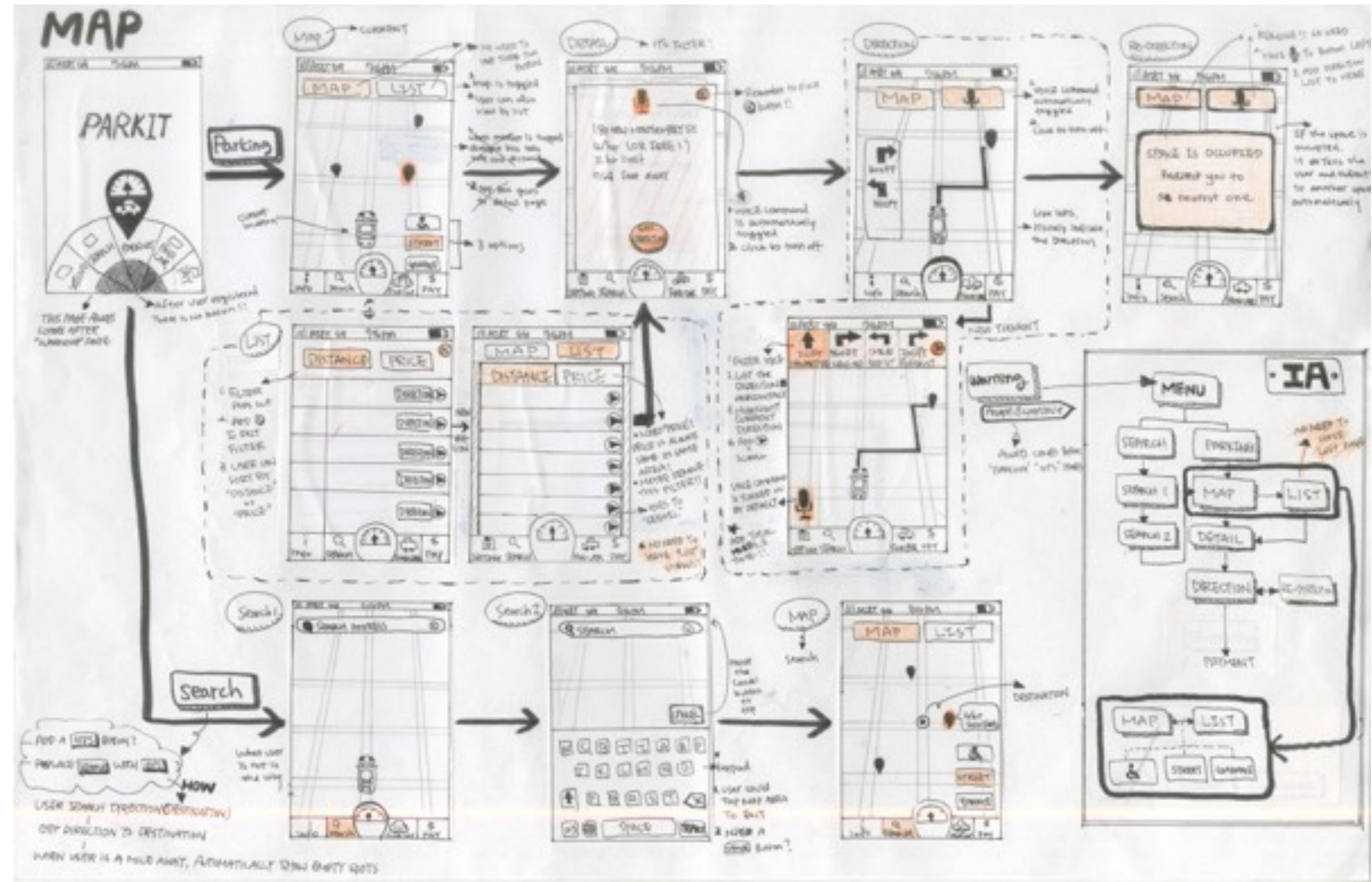
Wireframes are essential in designing and creating interactions. They allow designers to work through simple and complex design interactions on paper, before committing to the final styling requirements.

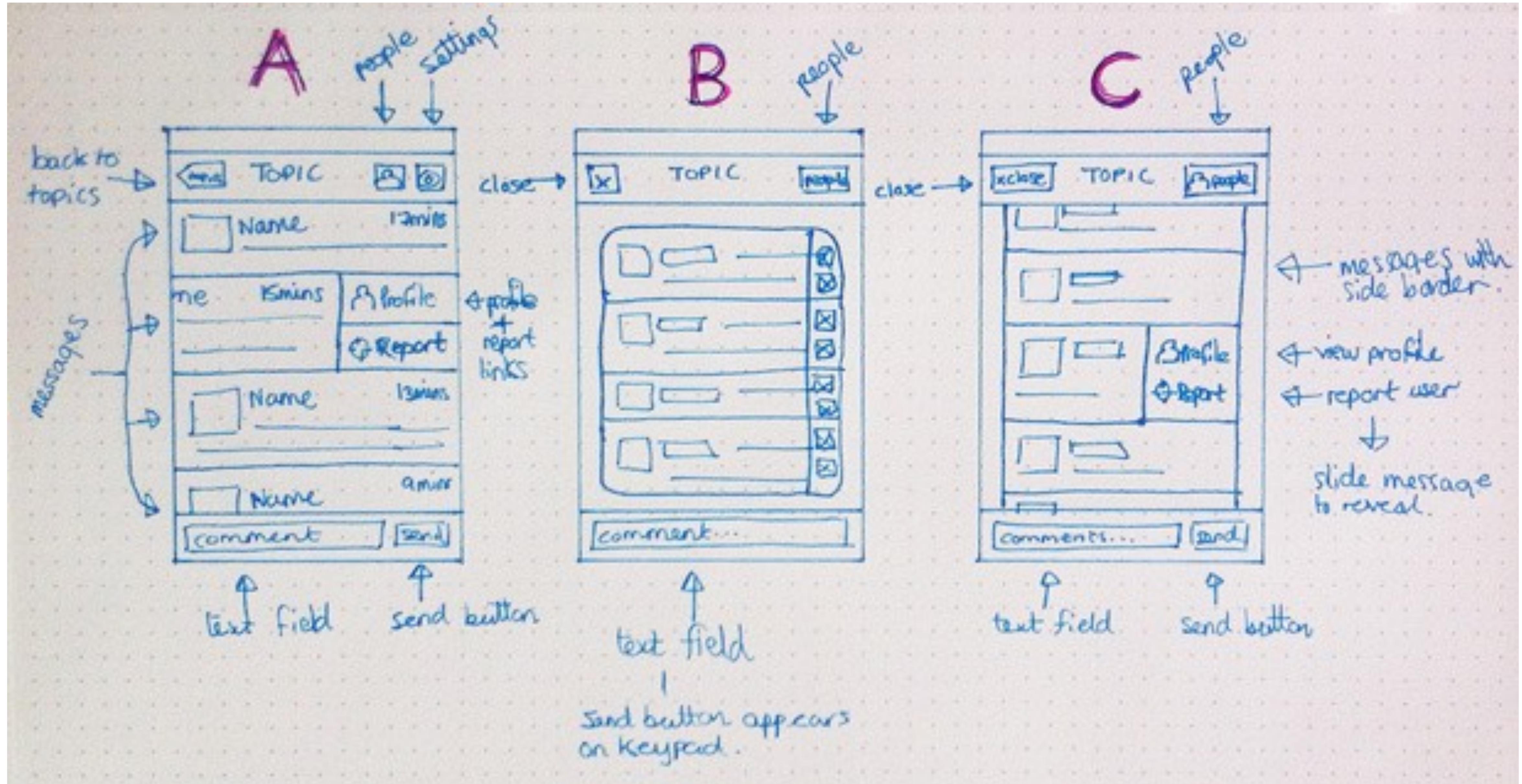
Additionally, they allow for ease of use testing with users, who judge the interaction, rather than the veneer.



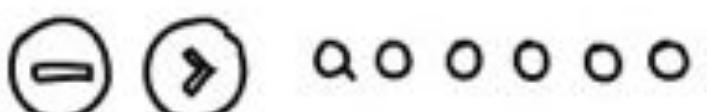
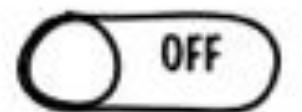
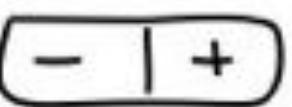
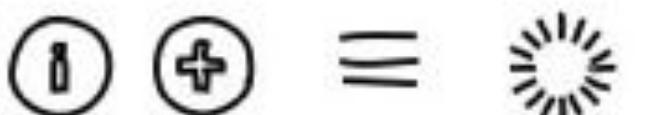




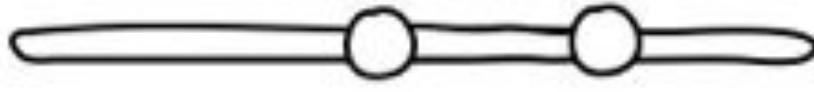




# Sketching basics



1234



Button

Wed Nov 9	4	50	
Thu Nov 10	5	50	AM
Today	6	00	PM
Sat Nov 12	7	05	
Sun Nov 13	8	10	

4	50	AM
5	50	AM
6	00	PM
7	05	
8	10	

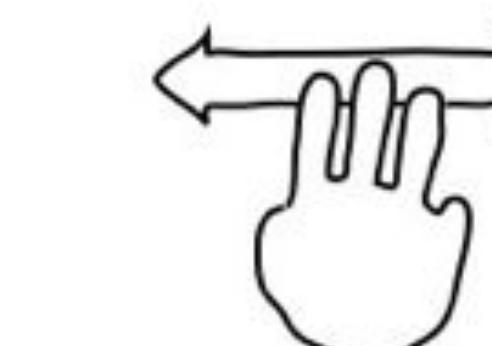
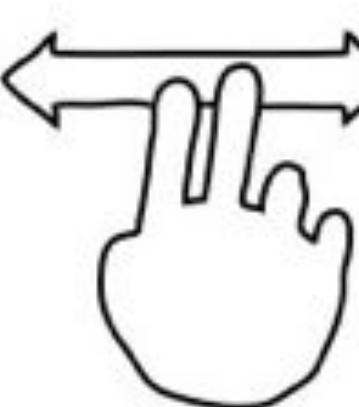
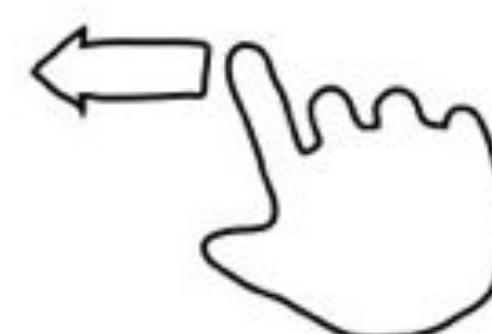
0	4
1	5
2 hours	6 minutes
3	7
4	8

Notes

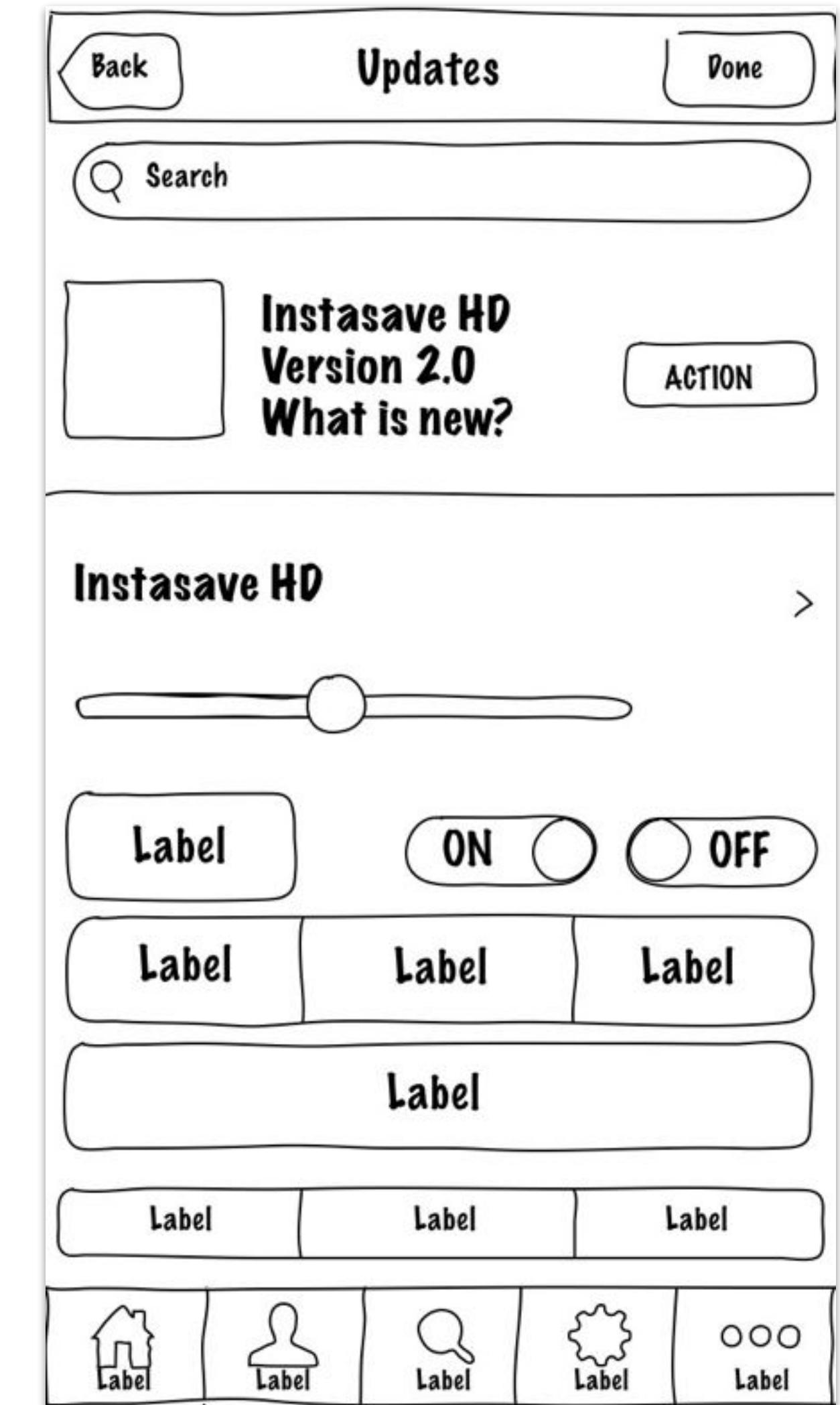
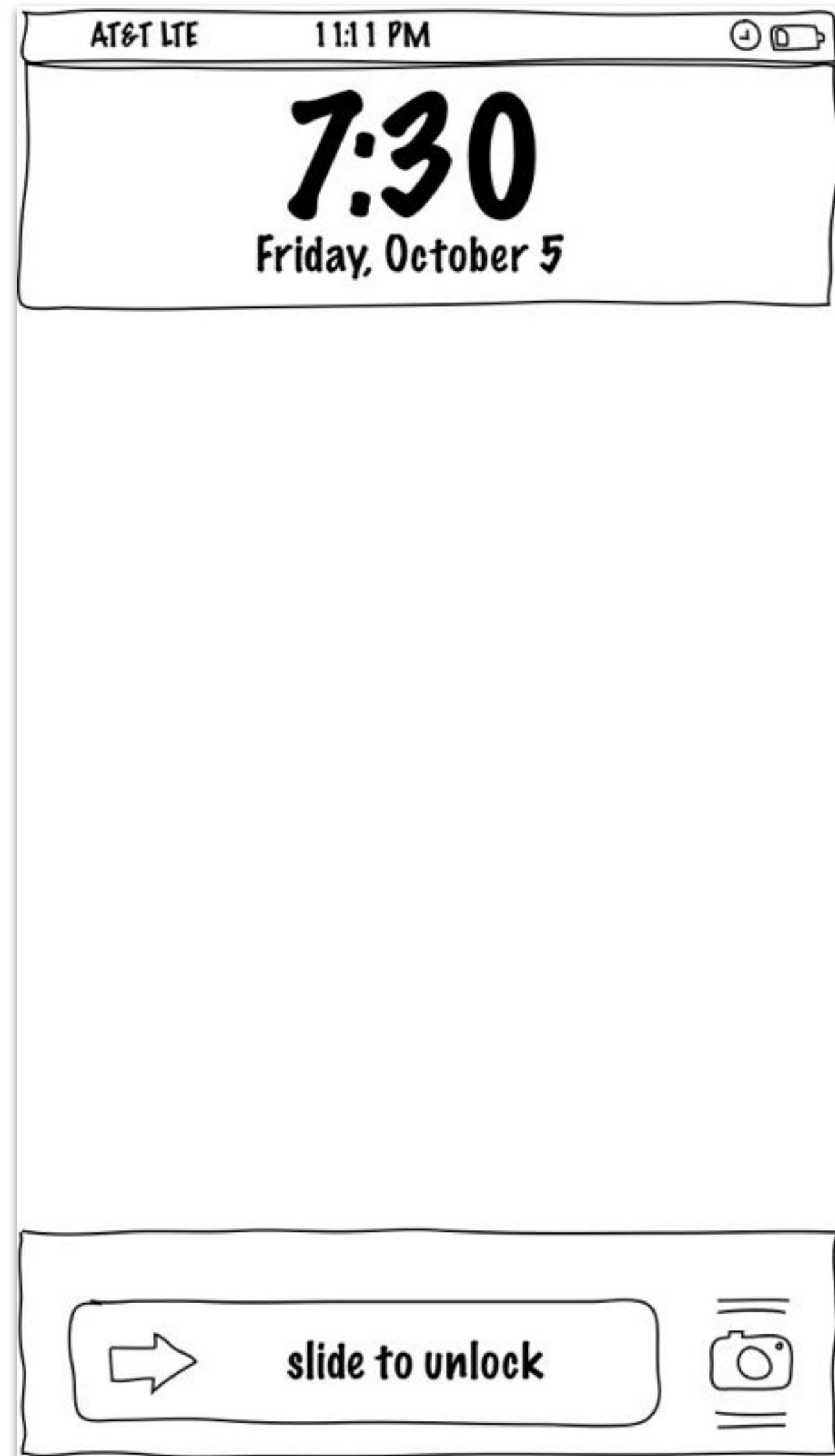
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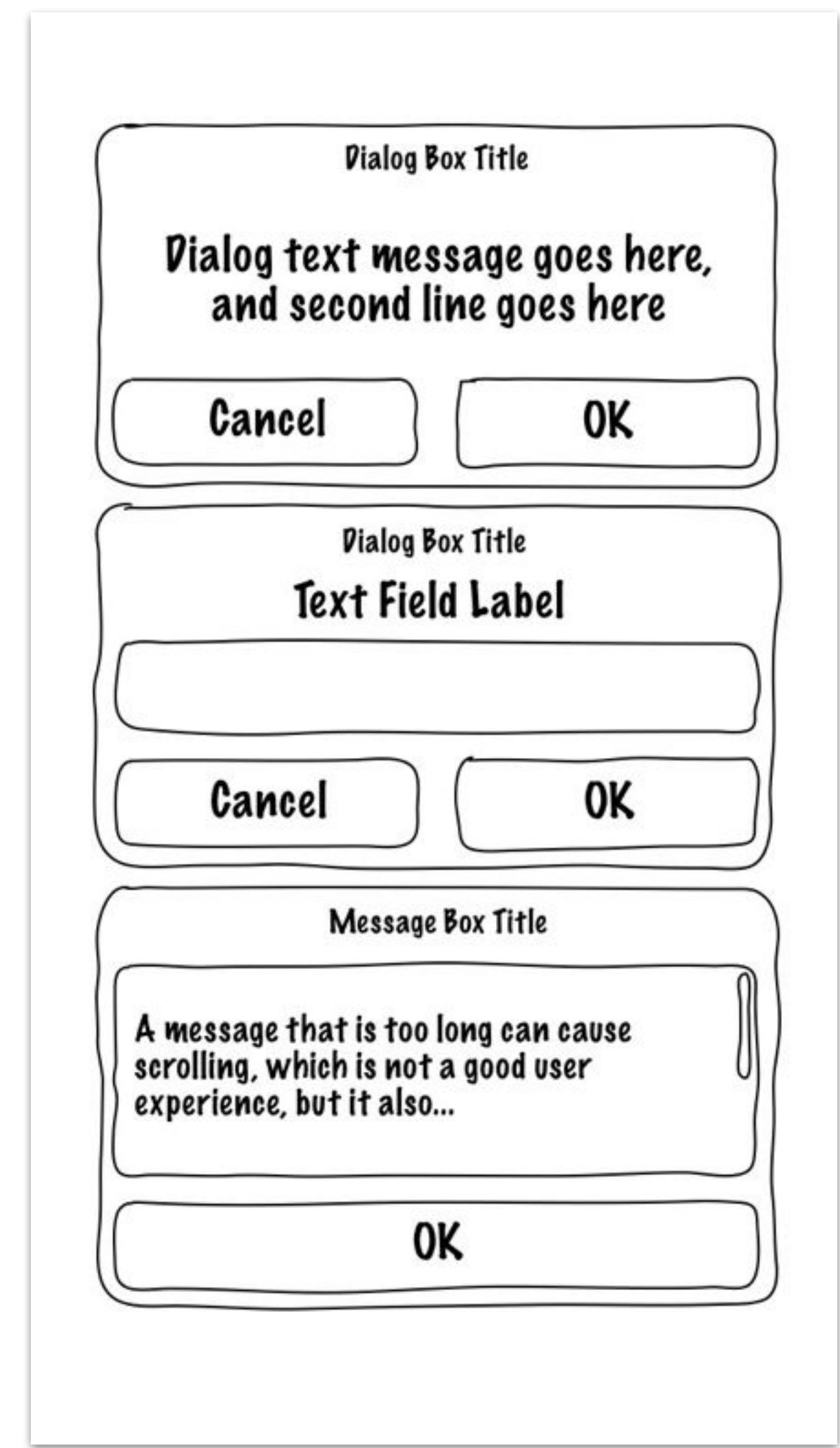
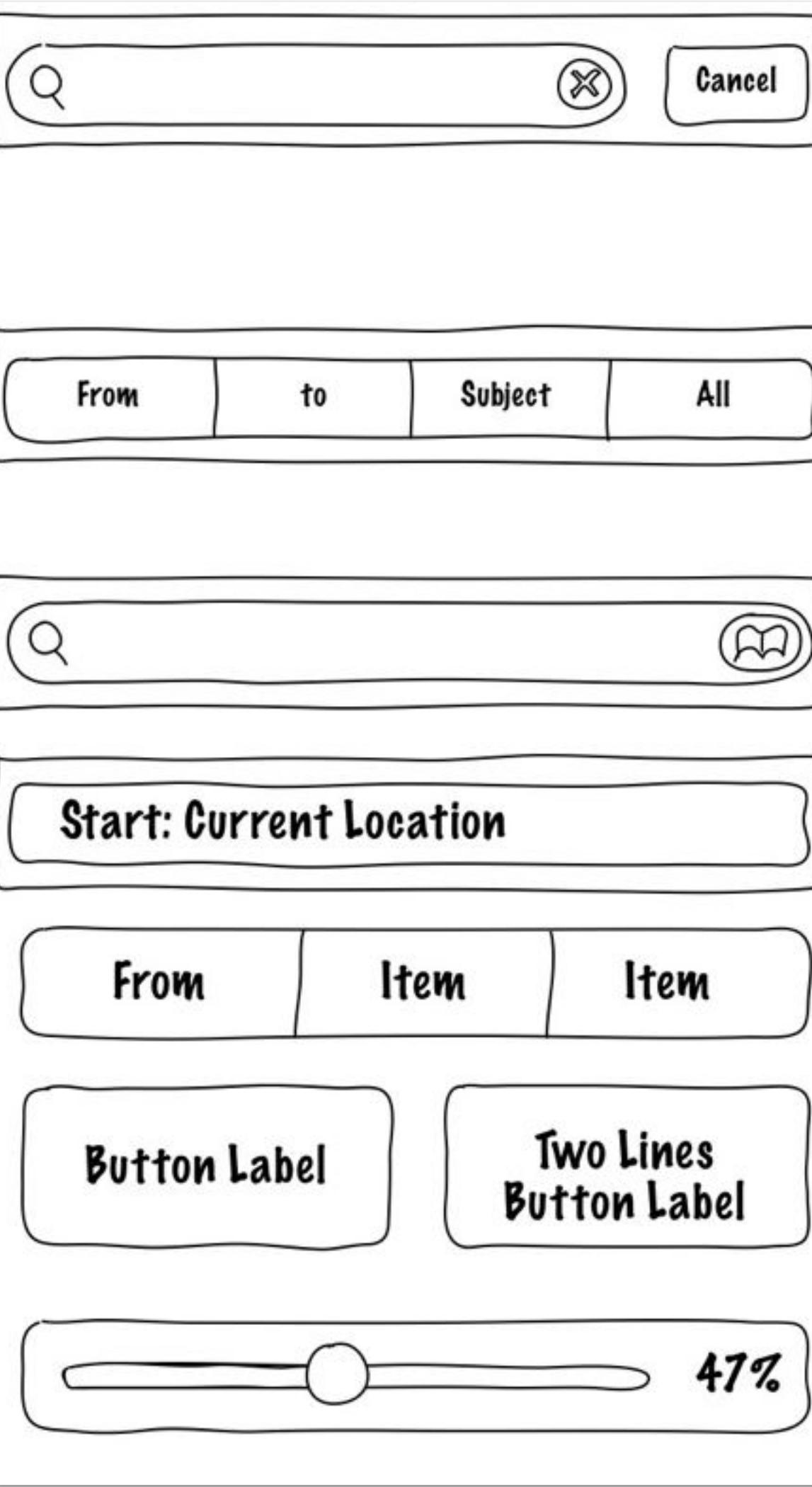
- RadioButton       Checkbox
- RadioButton       Checkbox

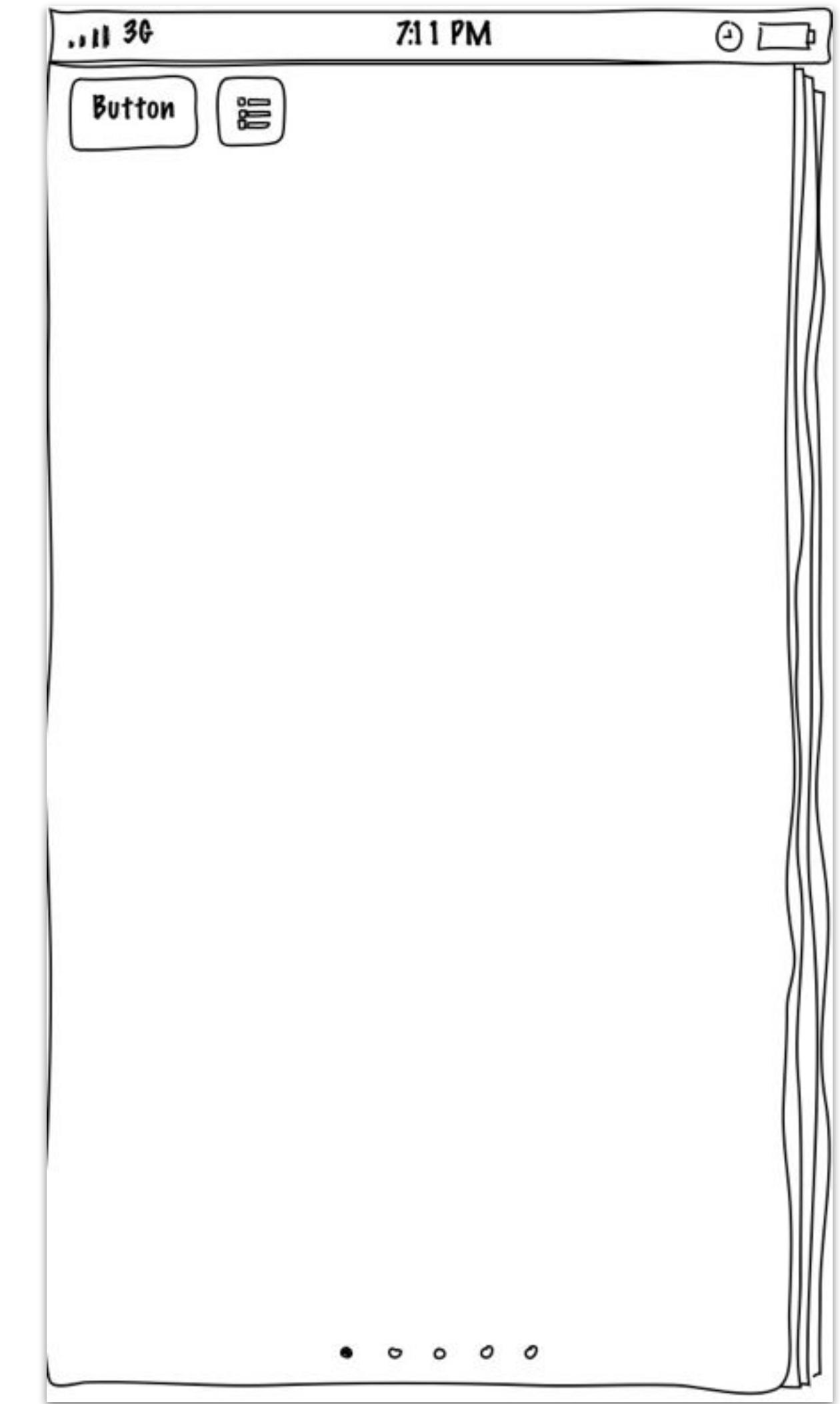
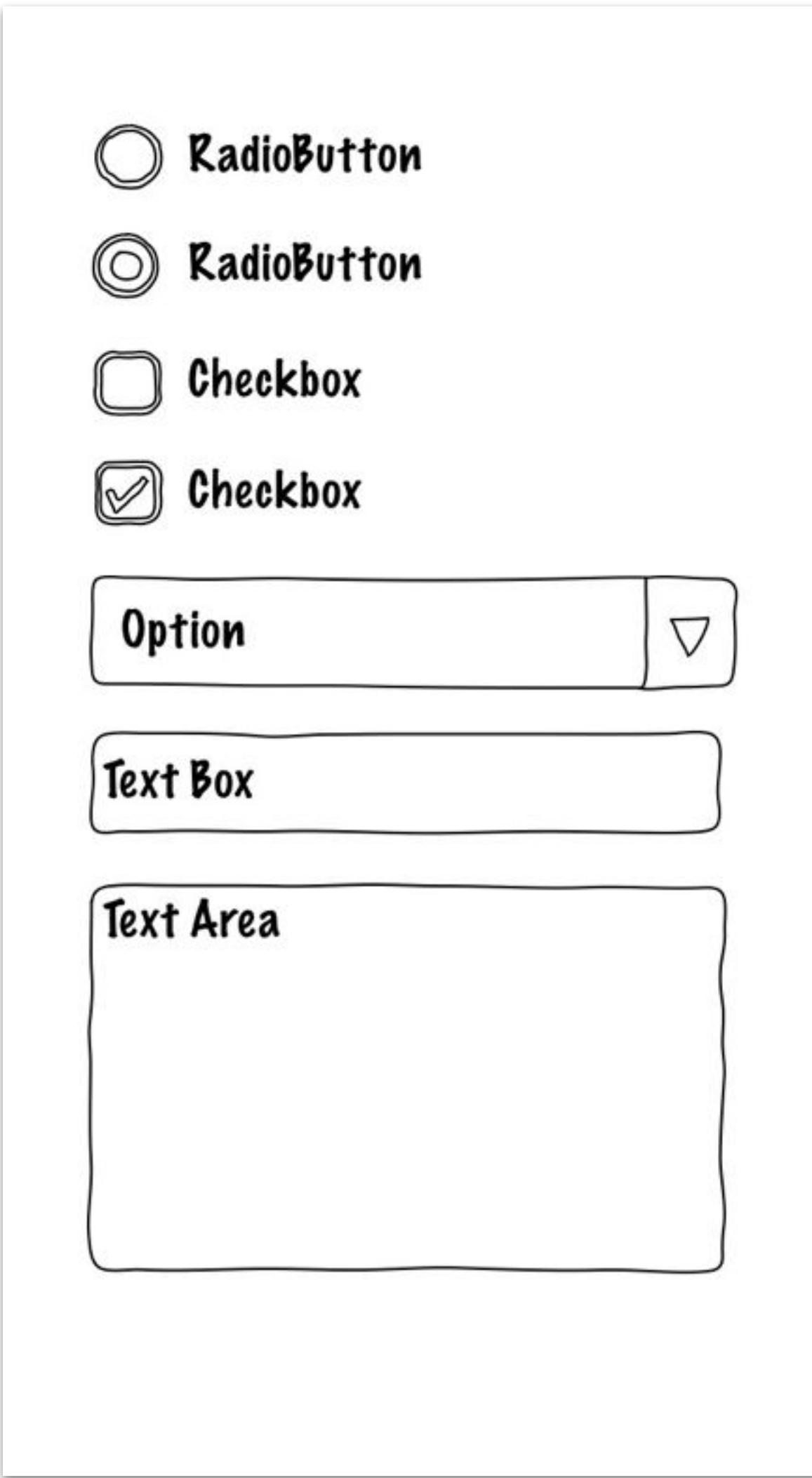
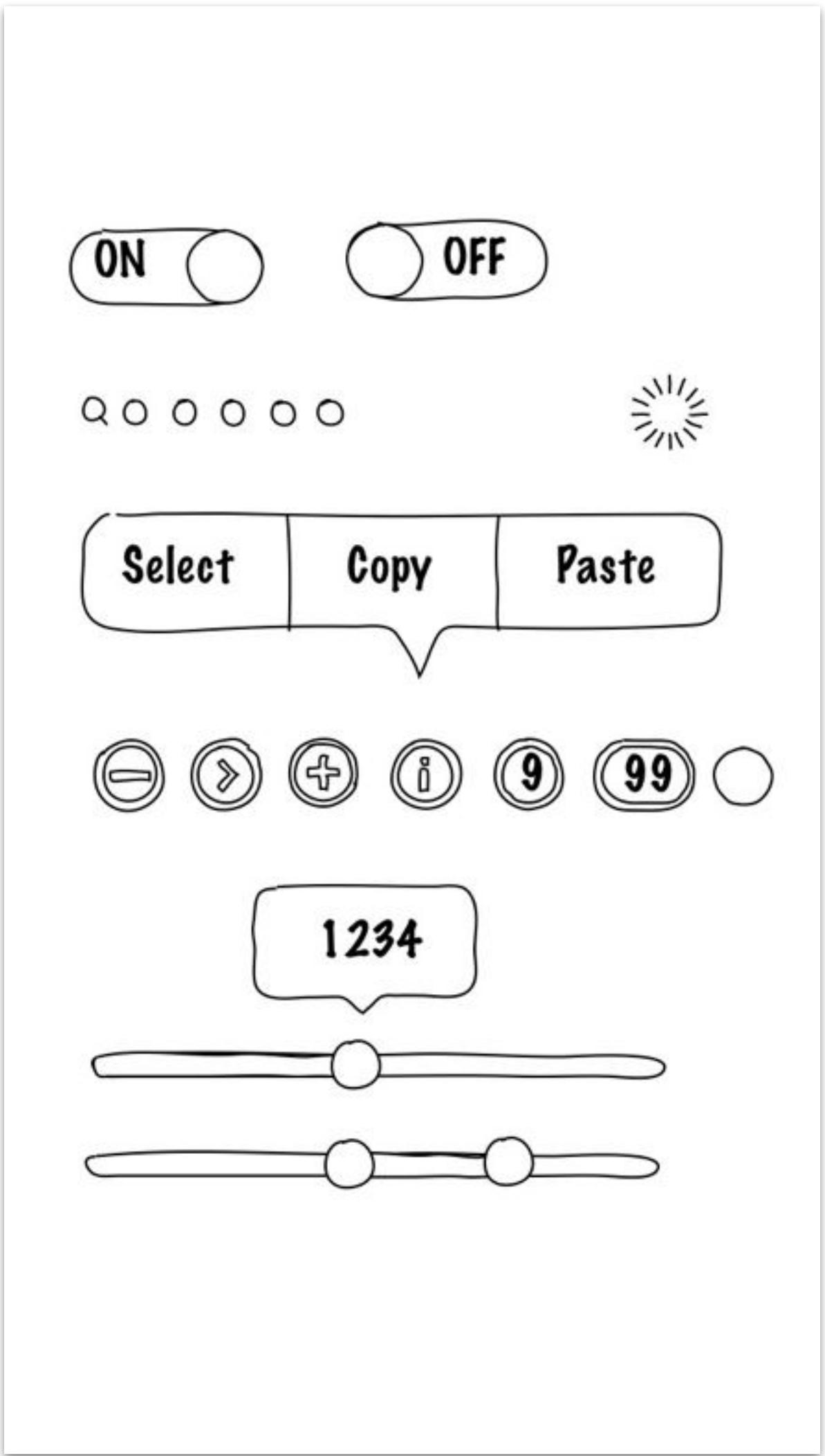
4	8
5	9
6	10
7	11
8	12



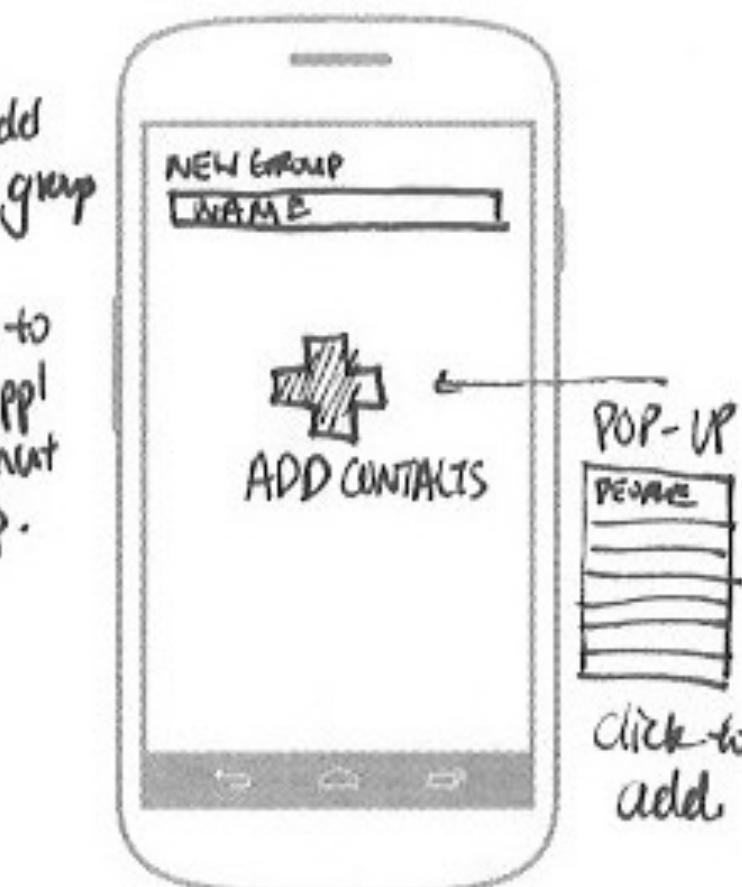
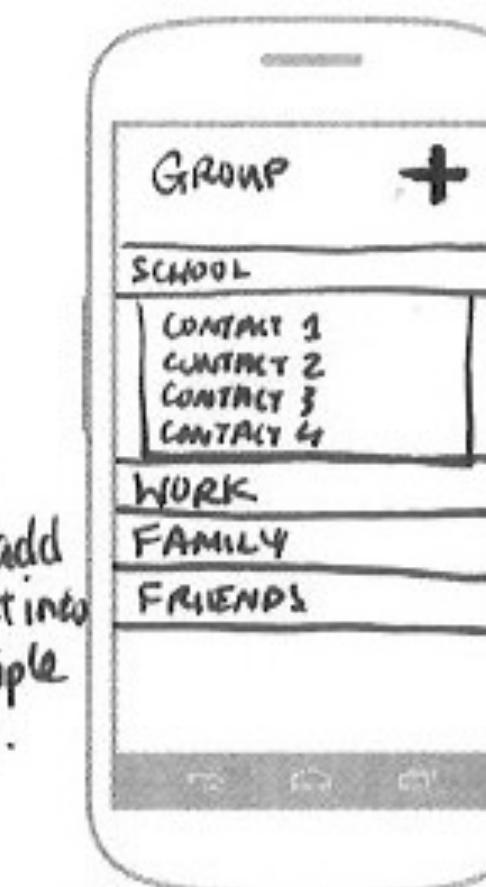
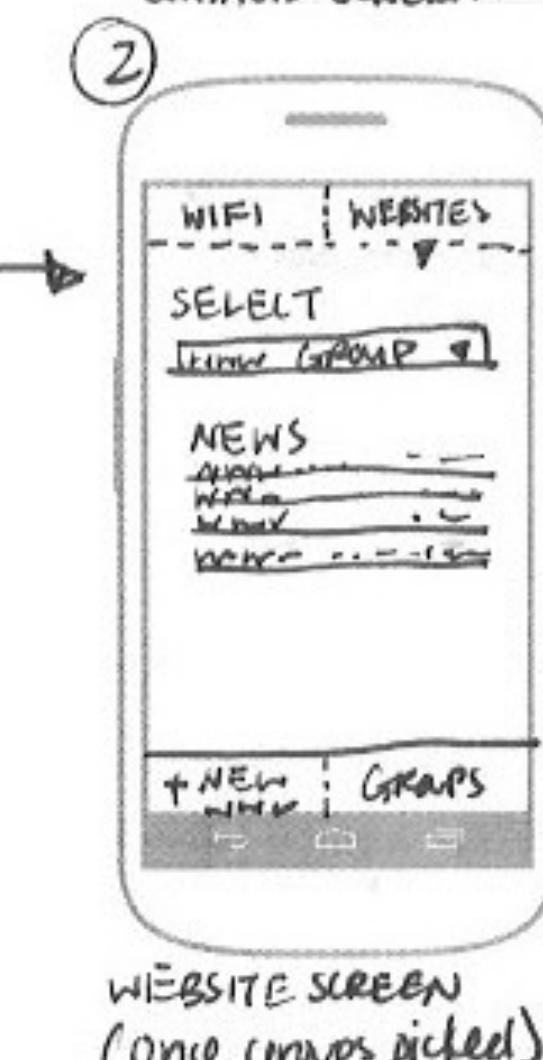
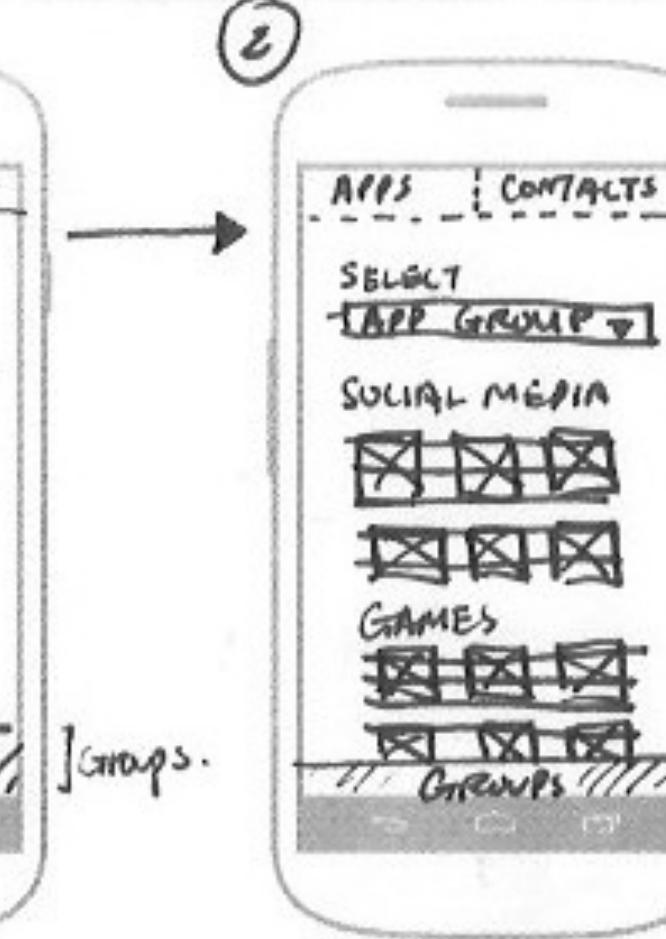
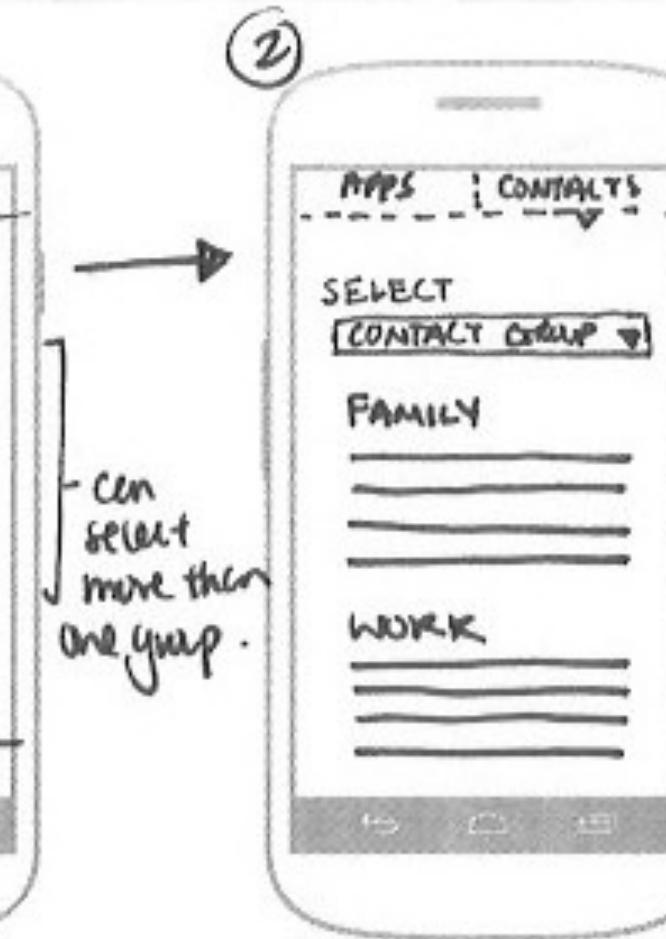
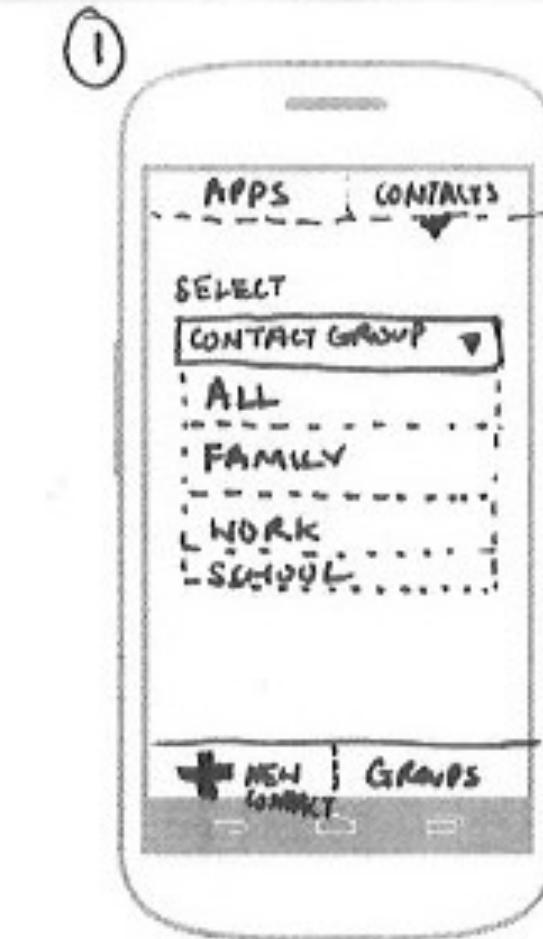
Test Advertisement





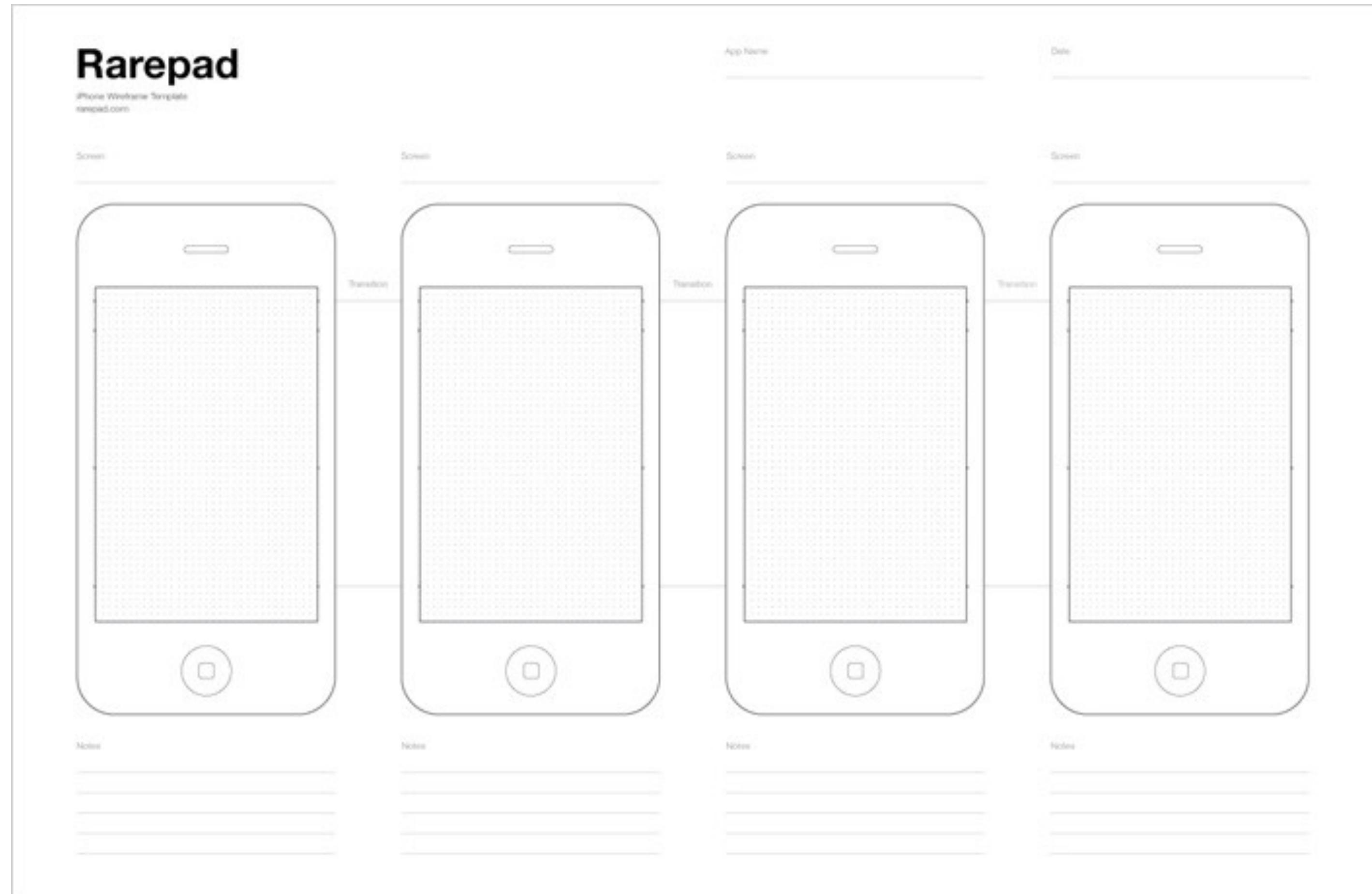


## CREATE FILTER / EDIT FILTER PAGES.



POP-UP  
NAME  
ADD CONTACTS  
PEOPLE  
+ NEW GROUP

# Sketch: mobile site wireframes



Now that you've mastered how to build a PB&J, please take 10 minutes and the supplied grid paper to build a mobile first web site showing users how to create the sandwich.

# Iterate: what would you change?



Switch wireframes with your neighbor and using post it notes, sketch ways to improve their mobile site.

What would make it easier on the user?

Where could you adjust their work? And, why?

# Test: let's try our work



Turn to your other neighbor and ask they use the site you've just modified.

While they're using it, ask:

- Did they enjoy it?
- Did they get stuck?
- Was it easy to use?

# Review: group discussion



What did you learn from sketching and testing your prototype?

As a group, let's build a site together on our wall.

# Your assignment

# Course Assignment

**Scope:** Build a four page responsive (mobile and desktop) site that organizes your clients information in an easy-to-use manner and allows users to quickly find the contact form.

**Directions:** You'll build the site through in-class assignments and independent study work between our first two weekend sessions.

**Presentation:** For the final day, you will prepare a 5-minute presentation of your site.