Informatics 43

LECTURE 12

"HOW DO WE MAKE SOFTWARE THAT MEETS THE USER'S NEEDS? (PART 2)"

Last Time

- We use HCI/UCD methods for good reasons
  - Sales increase
  - Performance increases
  - Traffic counts increase
  - Frustration decreases
- It's all about the user!

Today's lecture – **How do we make software that meets the user's needs?**

- User-Oriented (User-Centered) Methods
  - Interviews and observations of end users
  - Personas
  - Scenarios
  - Storyboards
  - Wireframes and Mockups
  - Design guidelines
  - Heuristic Evaluation
  - User testing

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Interviews and observations

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Personas

openmoko

The Greenhorn

JOHN

Profile

- Probably the single biggest segment of mobile users.
- Want simple: turn on their mobile, dial a number and talk to their intended party.
- Don't care about anything other than the mobile being able to be used as a phone, and possibly contacts.

I didn't get my first phone until 2001. My daughter bought it for me. I didn't feel it was necessary but since then, I have it with my all the time and use it more than my home phone.

The Casual User

EMILY

Profile

- Take advantage of most phones features, but not all.
- Use the phone to make calls, use the contacts, send text messages, and take pictures.
- Their mobile is always with them.

My phone has to look cool. I personalize it with decals, charms, and ring tones. I talk on it everywhere, so my phone style is everything. Of course, it has to work too. I usually talk on the phone, but recently started taking pictures and recording video. My phone is my favorite accessory.

The Texter

AKIKO

Profile

- Texting is far more popular than calling.
- Will send and receive thousands of text messages per month.
- Rarely use their phones for calling.
- Want a clean texting interface with the fastest possible input.

I prefer texting than calling because it's more fun and creative. My friends and I probably text each other around 40 times a day. We'll even text to order food. It's far more interesting and less intrusive. I don't have to worry about disturbing people on the train with my talking. I love it.

The Business User

STEPHAN

Profile

- Wants a phone that is simple, but functions as an integrated smart device.
- Want to read email and call back the sender with the least amount of effort.
- Needs "Popular" mail server integration, including Blackberry and Exchange.

My mobi is my life. Without it my business would suffer. I take conference calls while driving down the M25. If someone text me, I need to ring them without taking my eyes off the road. And since I use my mobi everywhere, it needs to be durable. The last thing I need is for it to break after one drop.

The Power User

ROBERTO

Profile

- Will use almost all of the built-in functionality.
- Will also extend their phones functionality with additional software.
- Will flip through every menu options and changing settings.

I'm addicted to new toys. I get the latest gadgets as soon as they arrive on the market. I upgrade my phone every 6 months. I guess you can say this is almost a sport for me. Or an addiction? I just love to explore the latest and how it can make life fun.

The Hacker

RICKY

Profile

- Care more about customization.
- Want to make changes to every aspect of the phone.
- Belong to mailing lists and forums about hacking the phone.
- Contribute to the open source community.

As soon as I found out about an open source phone, I jumped on it. I created two apps for the phone and am working on the texting solution. I probably should spend more time at my day job, but this is far more fun. Of course, I use my phone for calls and texting too.

MyFlix Content Consumer

"I'm so excited that a new independent theater opened up, I'm going to tweet my friends about it."

Blake is a Sci-Fi buff and also likes independent and edgy films and TV shows. He usually follows a few shows with his close friends and they talk about the shows with quotes on social media.

Blake

Age	27
Gender	Male
Marital Status	Single
Children	None
Degree	Bachelors, Software Engineering
Occupation	Programmer

Goals

- Keep in touch with his like minded friends
- Discover new interesting content
- Share his particular opinions

Tasks

- Watches unique shows with friends
- Shares opinions and quips on social media
- Works at a software company

Technical Skill

Blake has been knowledgeable about technology since he was a kid, and as a programmer keeps on top of the latest trends. He is very familiar with how apps typically work and uses several gadgets.

Environment

Blake likes to use his iPhone during his commute and watch TV in his apartment. He has a latest generation "smart" TV and is nearly always on the computer at either home or work.

Source: https://launchschool.com/books/agile_planning/read/myflix_personas

MyFlix Application Administrator

"When those episodes are approved, I need the files ASAP so I can upload them to the site!"

Carrie works as an application administrator at a movie studio's corporate office, overseeing customer's interacting with their website. She is detail and task oriented and likes to get her work done efficiently.

Carrie

Age	33
Gender	Female
Marital Status	Single
Children	None
Degree	Bachelors, Communications
Occupation	Episode Distribution Coordinator at RGR Studios

Goals

- Upload content in a timely fashion
- Move up the ranks at her job
- Quickly solve customer problems

Tasks

- Upload approved video files to the application
- Understand how popular certain content is
- Trouble shoot customer issues

Source: https://launchschool.com/books/agile_planning/read/myflix_personas

Personas for Dolendar…

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Scenario 1: Joining MyFlix

While Blake is searching the Internet to find out if there are any local theaters playing a newly released independent film, he finds the profile page for the film which is also released on MyFlix. Excited that he can watch it and similar films in the comfort of his apartment, he creates an account and begins paying the regular monthly fee. He accesses his account from his TV's browser and is able to stream the movie.

Source: https://launchschool.com/books/agile_planning/read/myflix_scenarios

Scenario 2: Discovering Content

Blake has some pretty specific tastes in films and TV shows. At work he browses through various categories on the MyFlix website and reads the reviews on some films in the categories he likes. Reading several summaries and recommendations that match his preferences, he adds these films to his ever growing queue, so later he can quickly pick something to watch.

Source: https://launchschool.com/books/agile_planning/read/myflix_scenarios

Scenario for Dolendar…

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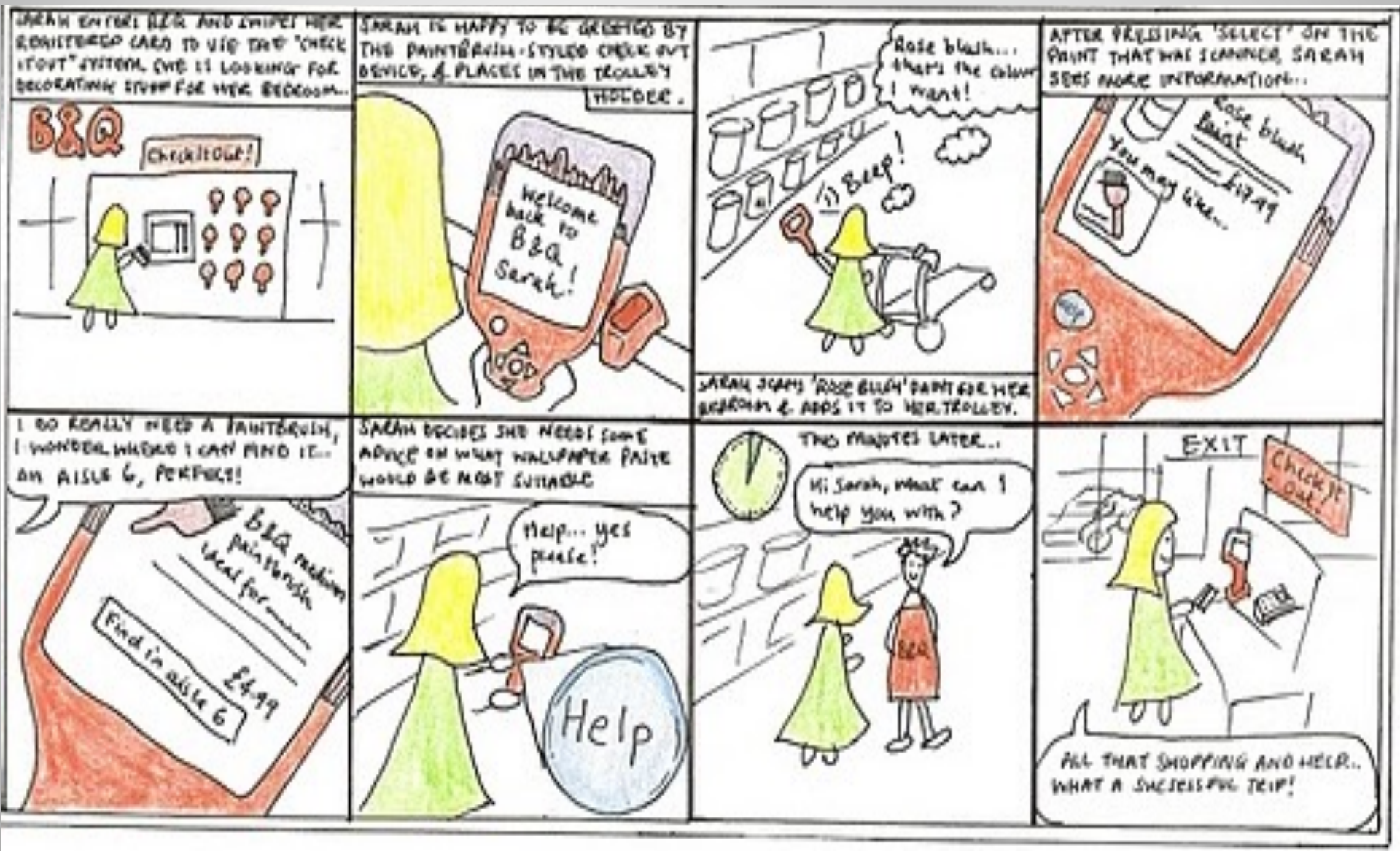
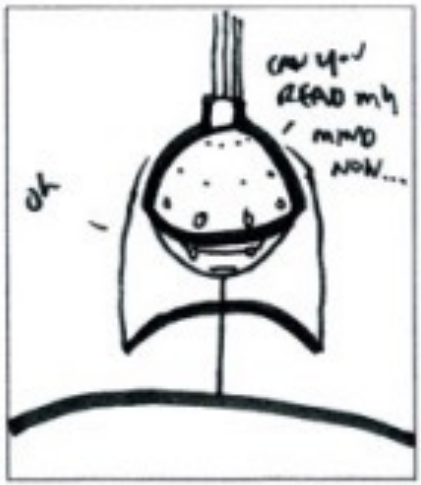
Storyboards



MATT GREETS TED AND DESCRIBES THE DEVICE; TED IS A LITTLE NERVOUS



TED PUTS THE DEVICE ON HIS HEAD, HE MAKES A JOKE TO RELAX

TED READS THE TASK OUT LOUD AS HE SITS IN FRONT OF THE COMPUTER

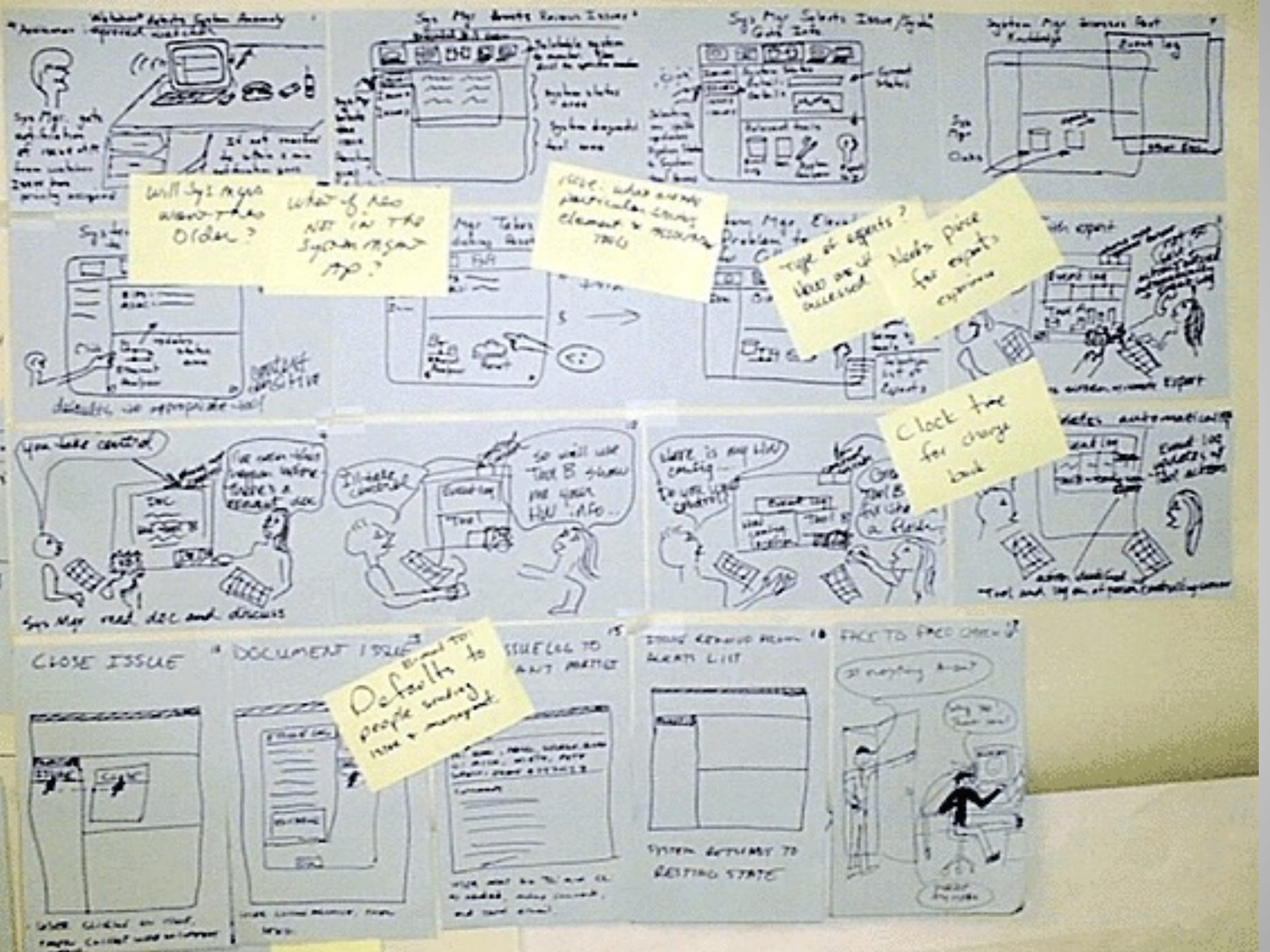
TED "TALKS OUT LOUD" AS HE COMPLETES THE TASK

THE DEVICE SENDS SIGNALS BEHIND THE GLASS.

MATT READS THE INCOMING DATA; HE IS OVERWHELMED BY THE AMOUNT

MATT THANKS TED FOR COMING IN; TED IS RELIEVED

MATT REALIZES HOW MUCH DATA HE NOW HAS TO ANALYZE.


Will Sys Mgr want this Order?
What if Neo not in the System Mgmt App?
Clock time for charge back
Sys Mgr read doc and discuss
CLOSE ISSUE
DOCUMENT ISSUE
Defaults to people sending issue & management
SYSTEM RETURNS TO RESTING STATE

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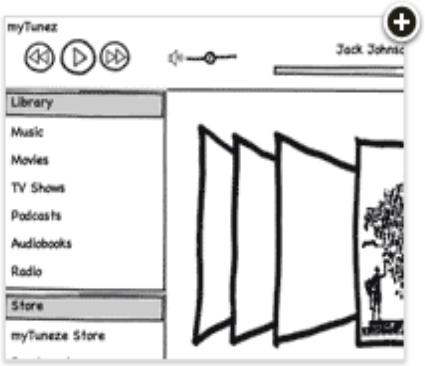
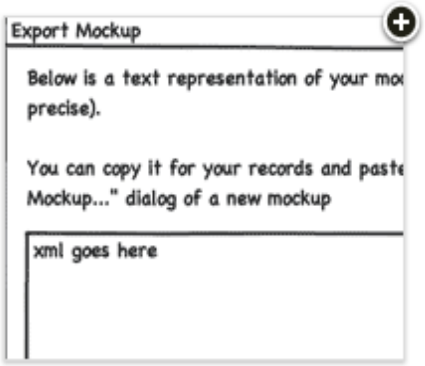
Mockups/Wireframes

See what you can build with Balsamiq Mockups



Desktop Apps



Dialogs

Web Sites

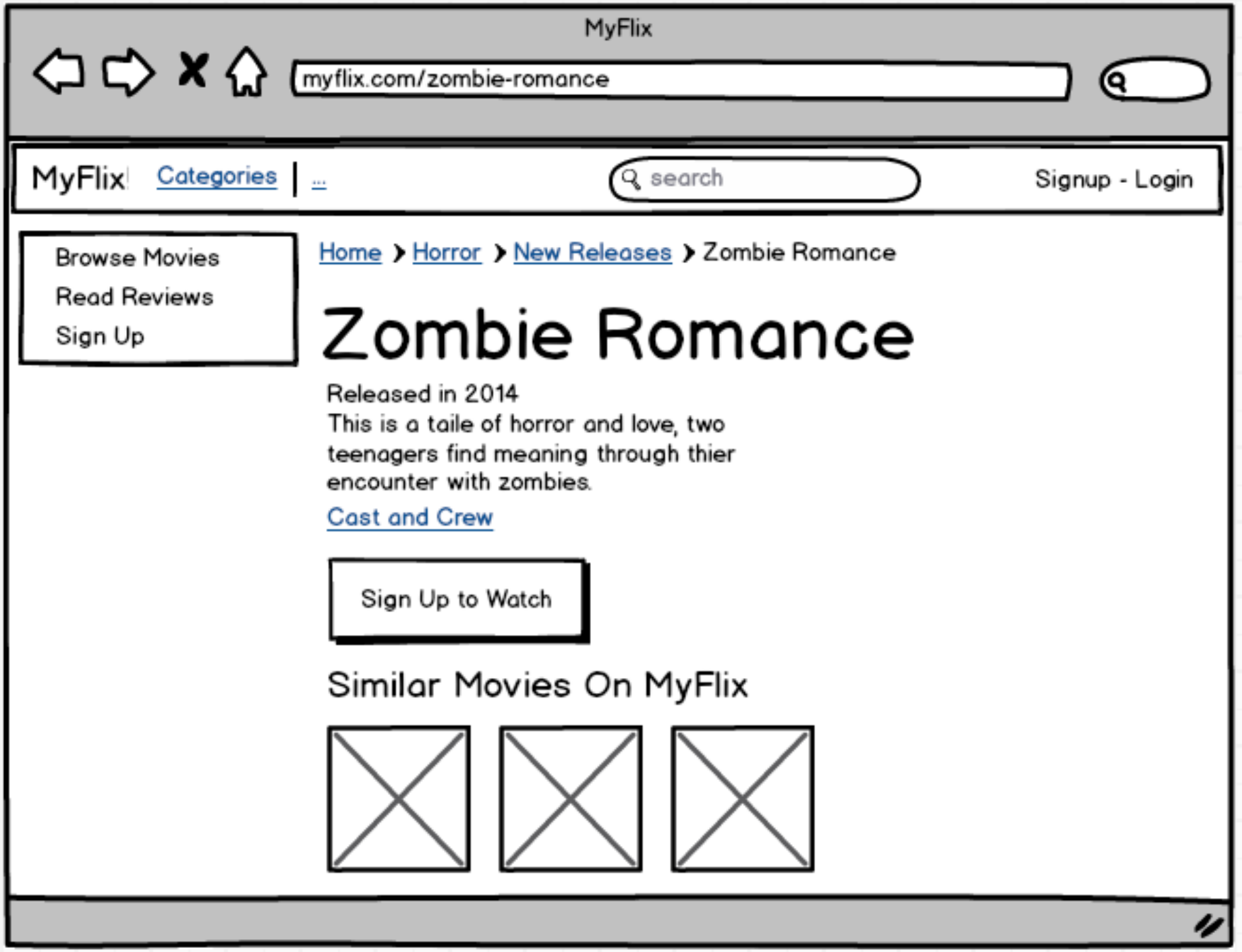
Web Sites

Web Sites

Web Sites

iPhone Apps

Rich Internet Applications


MyFlix
myflix.com/zombie-romance
MyFlix
Categories
...
search
Signup - Login
Browse Movies
Read Reviews
Sign Up
Home
Horror
New Releases
Zombie Romance
Zombie Romance
Released in 2014
This is a taile of horror and love, two teenagers find meaning through thier encounter with zombies.
Cast and Crew
Sign Up to Watch
Similar Movies On MyFlix

More info about personas, scenarios, storyboards, and mockups

https://launchschool.com/books/agile_planning/read/introduction

- "The Planning Process"
- "A Cohesive Example

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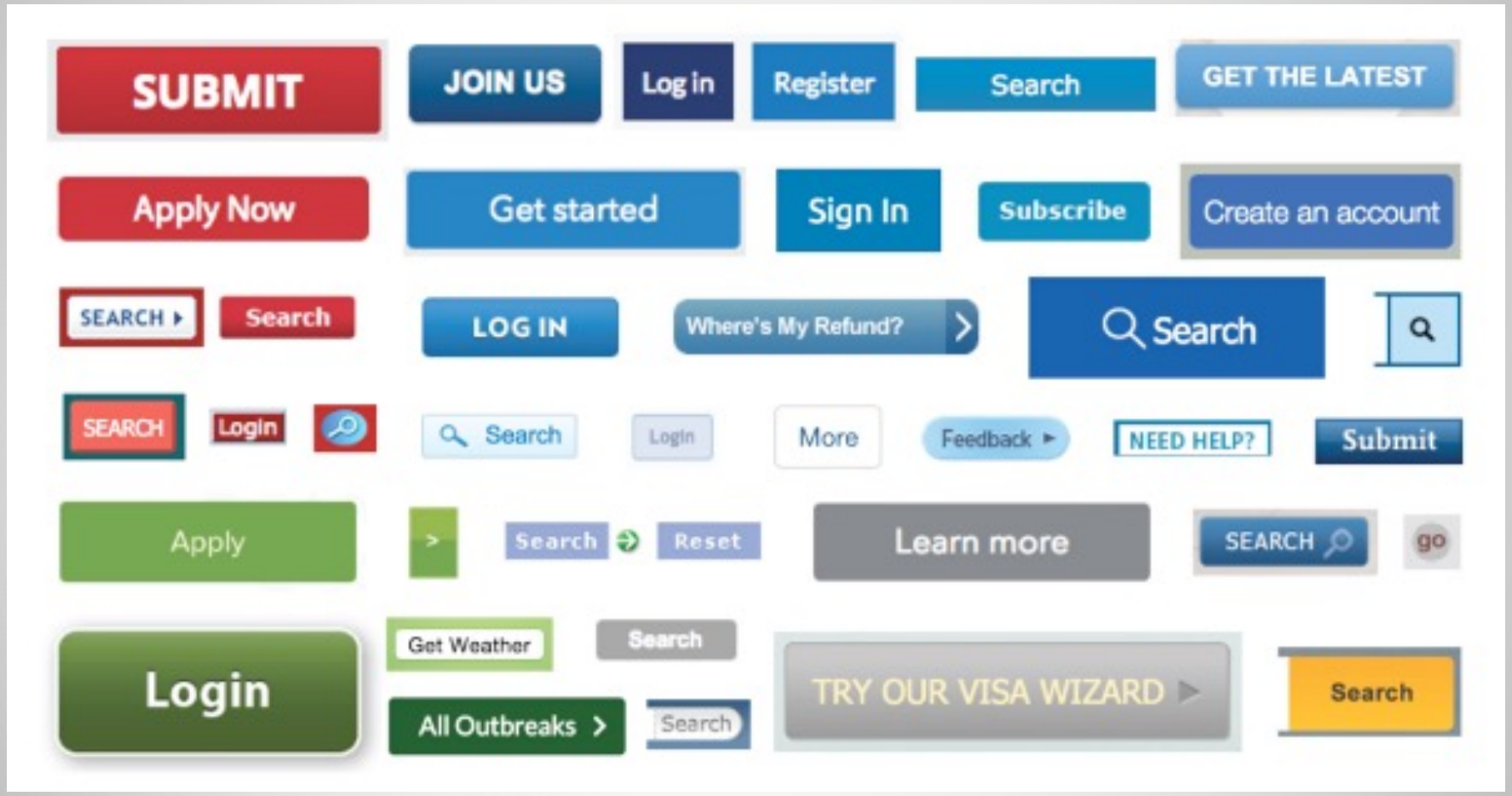
Design Guidelines - Before

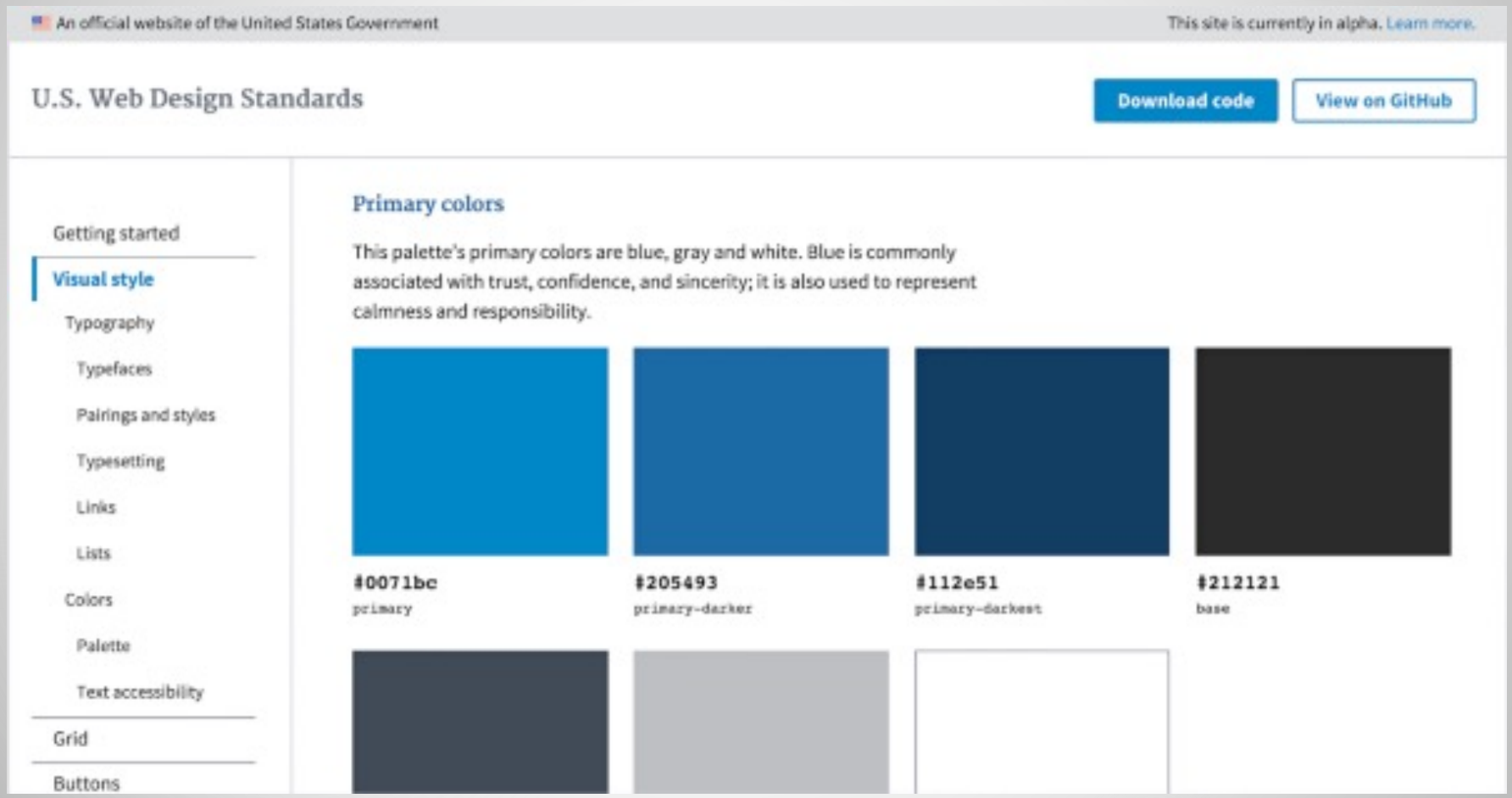


Source: https://medium.com/@USDigitalService/introducing-u-s-web-design-standards-aff21383afd6#.lk46cpatp

Design Guidelines - After

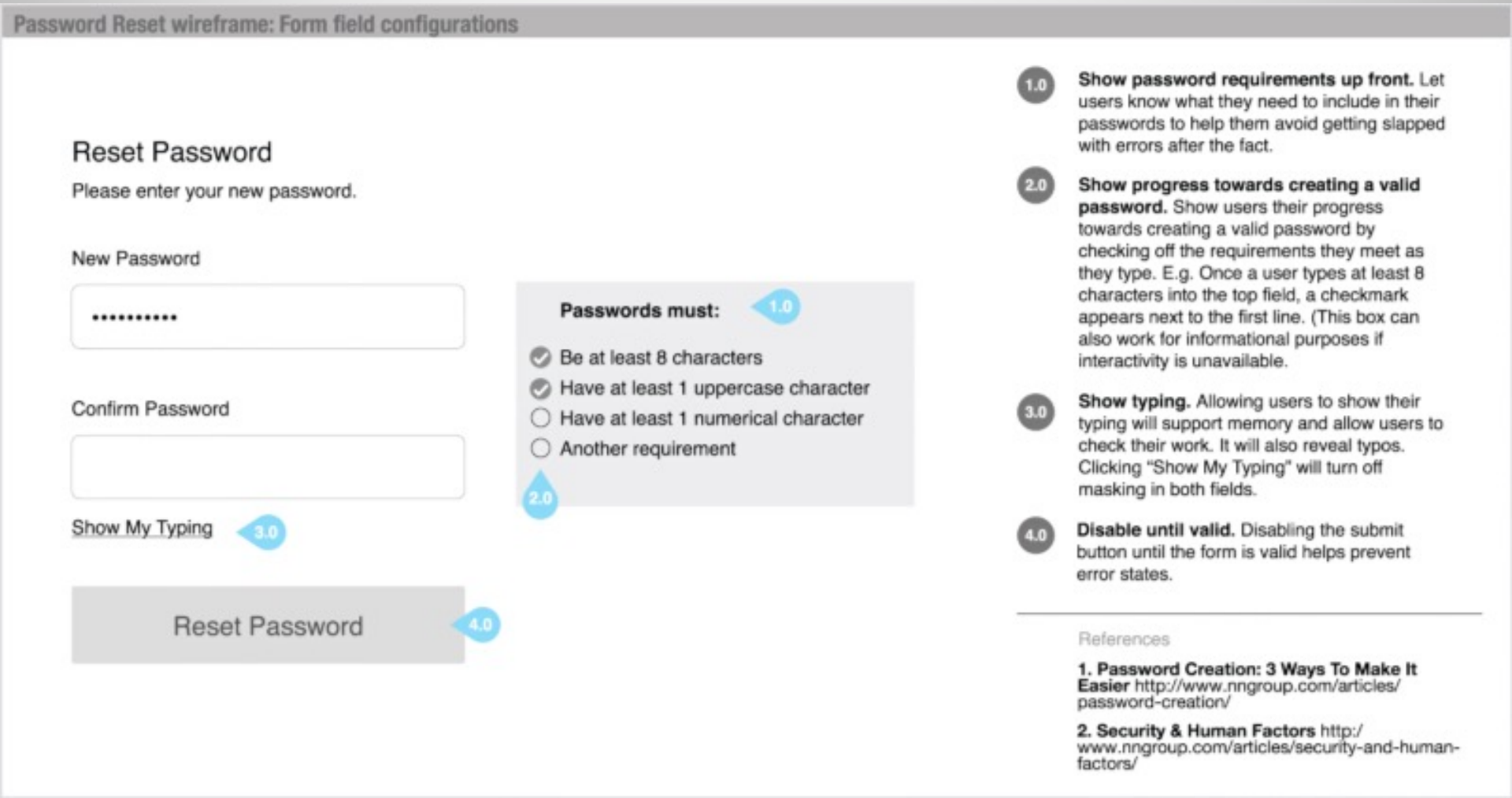
Source: https://medium.com/@USDigitalService/introducing-u-s-web-design-standards-aff21383afd6#.lk46cpatp

Design Guidelines – Color Palette



Source: https://medium.com/@USDigitalService/introducing-u-s-web-design-standards-aff21383afd6#.lk46cpatp

Design Guidelines - Wireframe



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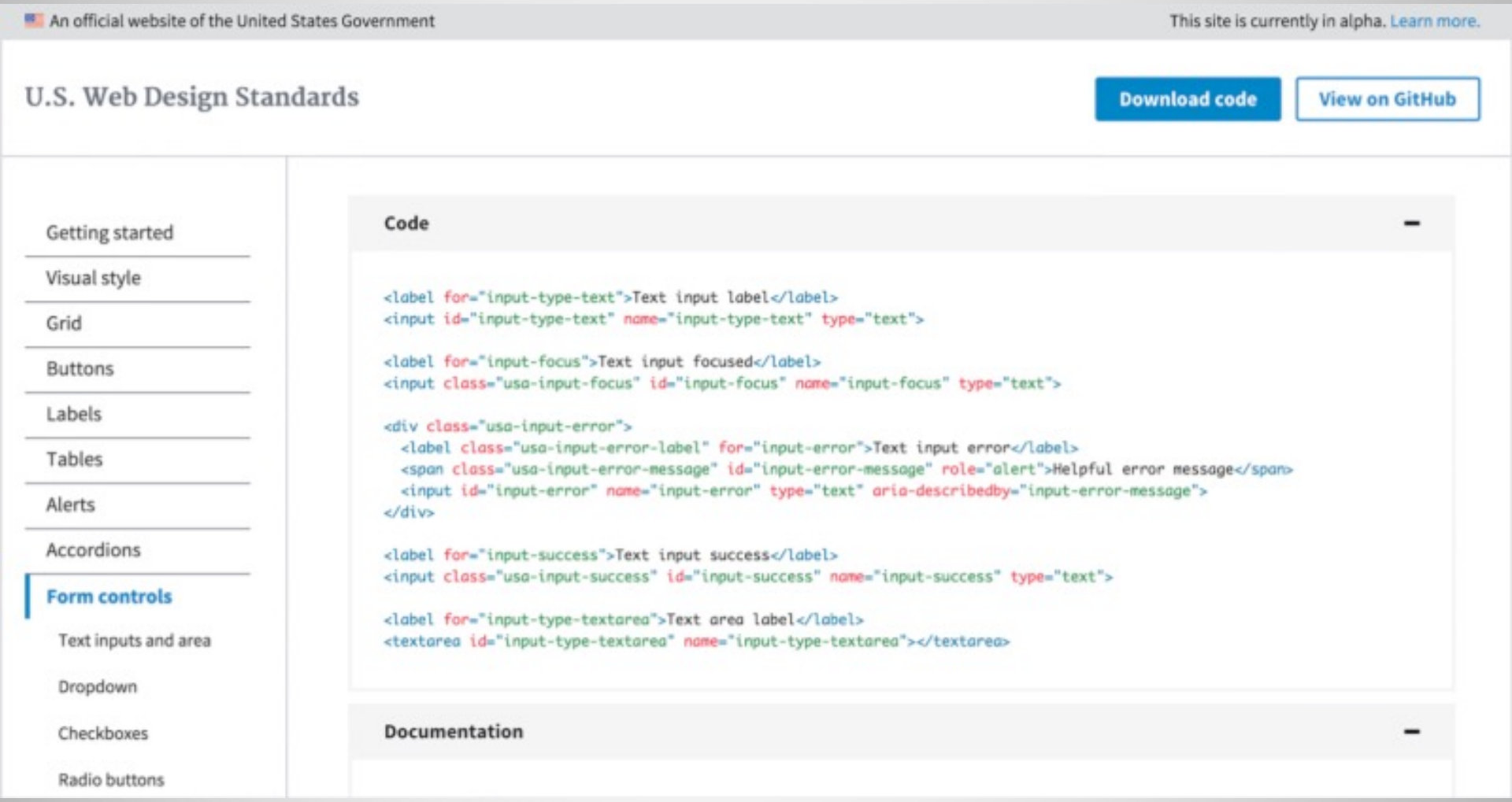
Design Guidelines - Code



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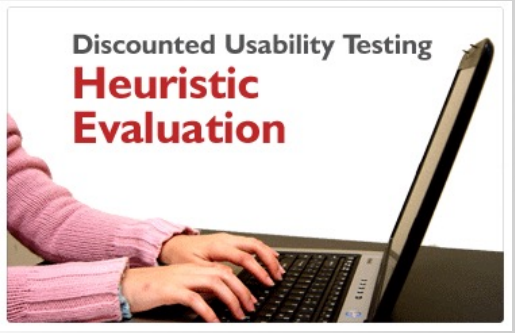
Heuristic Evaluation

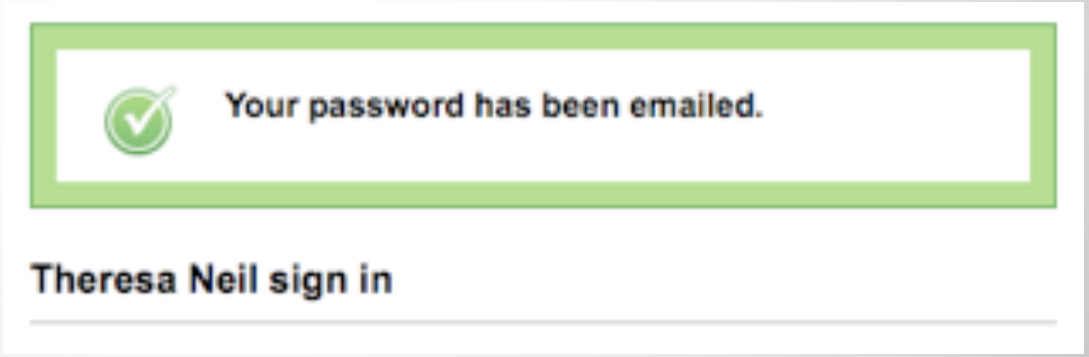
- Using principles based on research to evaluate and improve the usability of a system
- Process:
  - Select tasks
  - Someone plays the user
  - Evaluators focus on an aspect
  - Someone takes notes

Heuristic Evaluation (Nielsen)

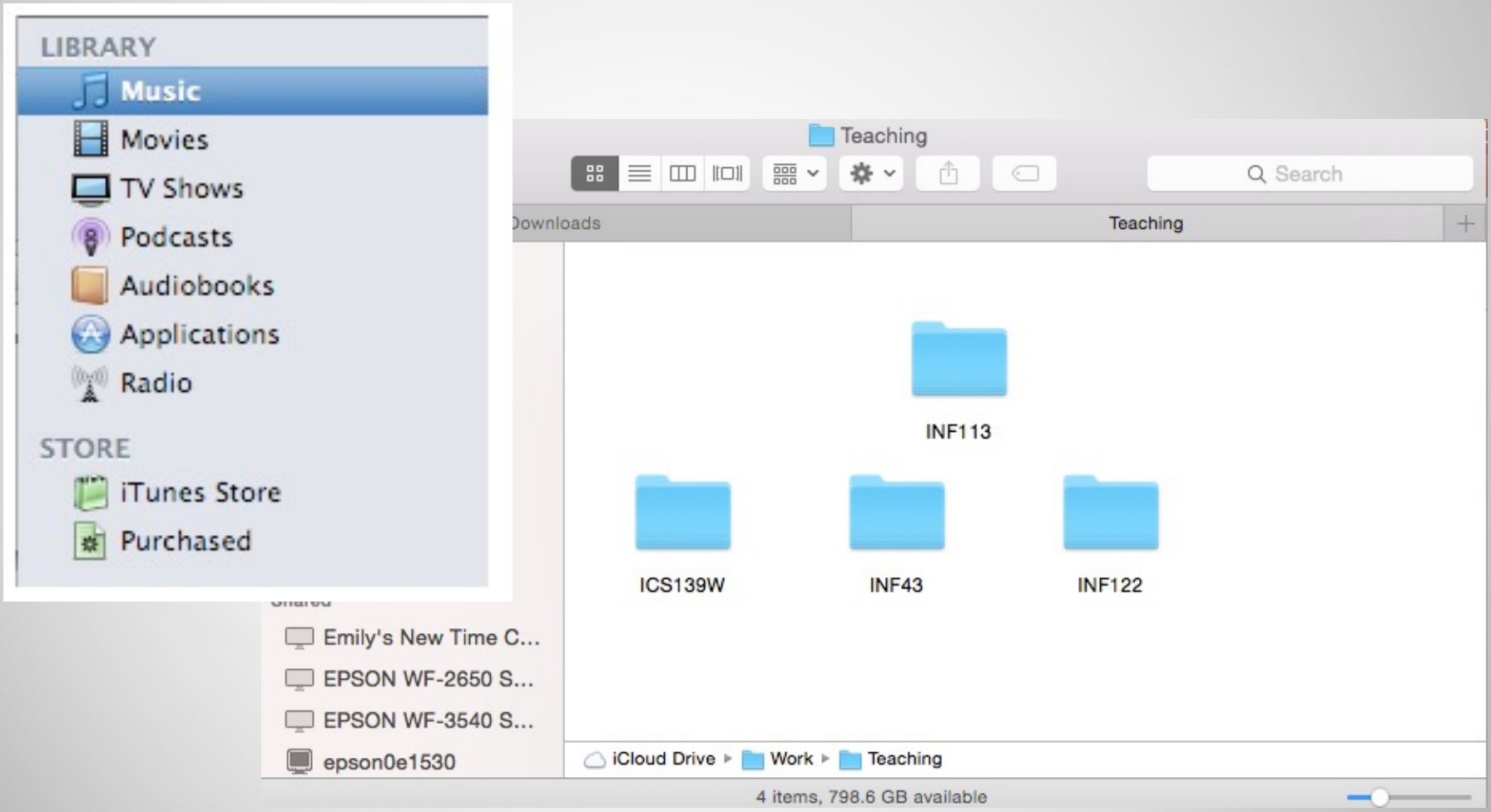
- Visibility of system status
- Match system words to the real world
- User control and freedom
- Consistency and standards
- Error prevention
- Recognition rather than recall
- Accelerators
- Minimalist design
- Help users recognize and recover from errors
- Help and documentation



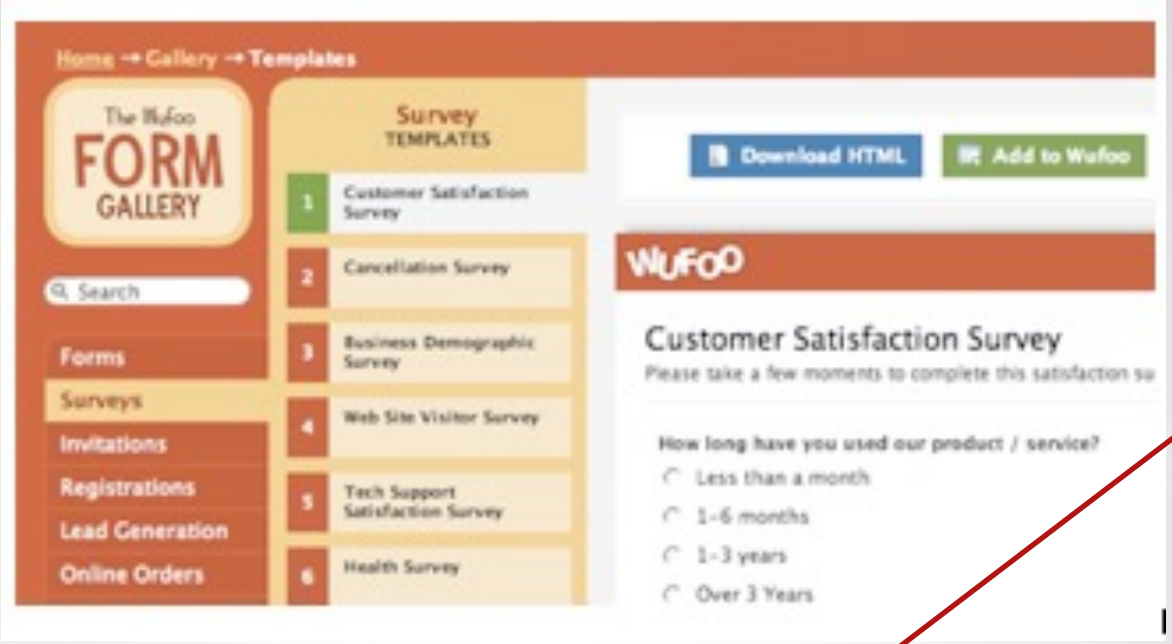
Visibility of System Status

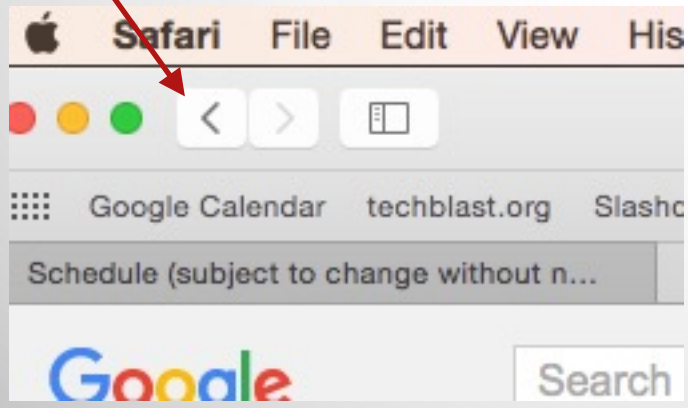


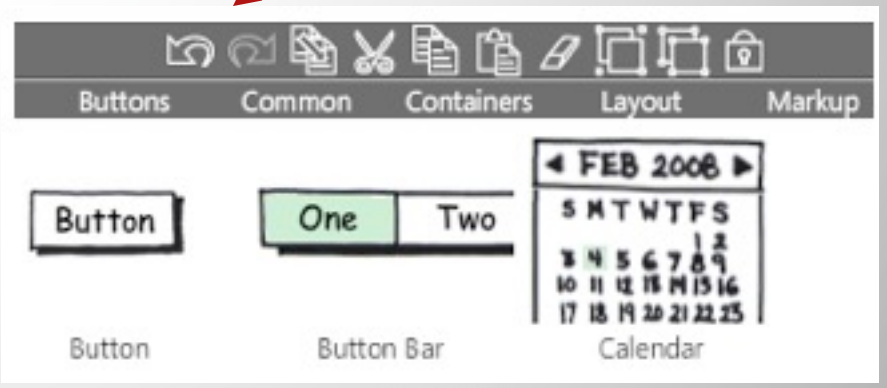
Match Between System and Real World



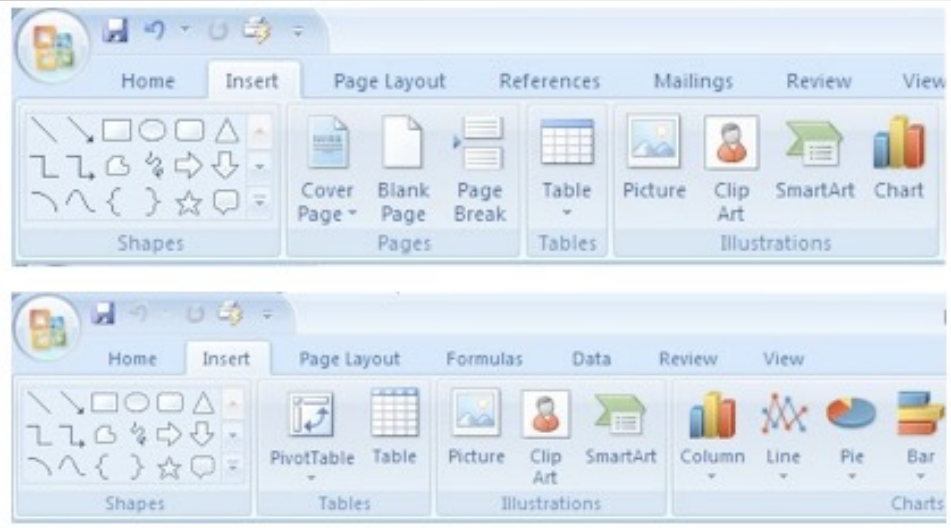
User Control and Freedom

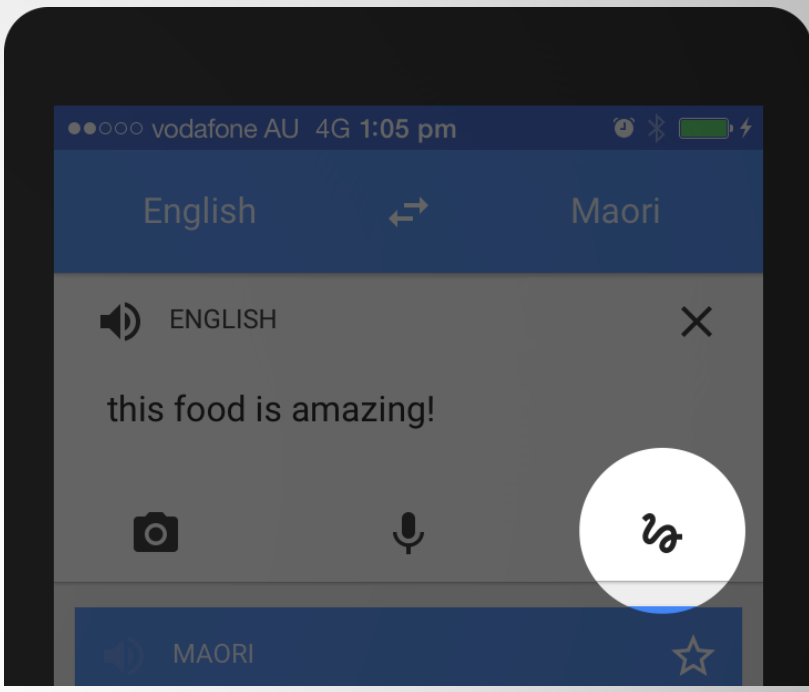




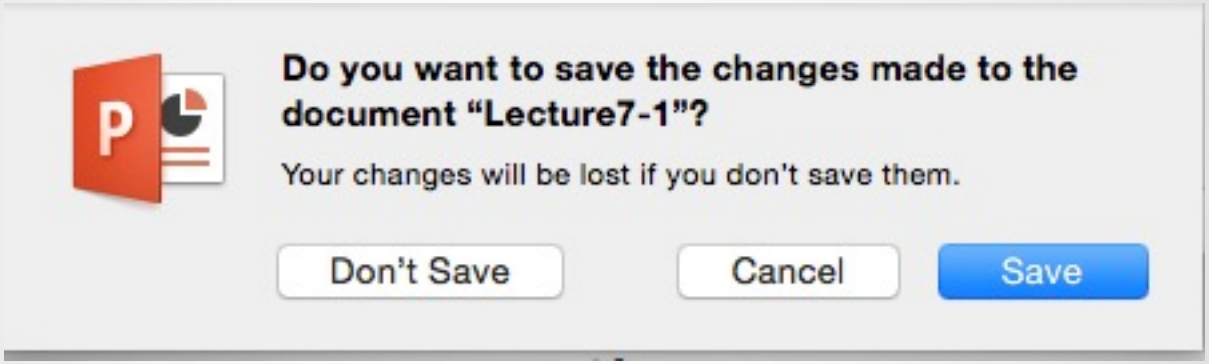


Consistency and Standards





Error Prevention



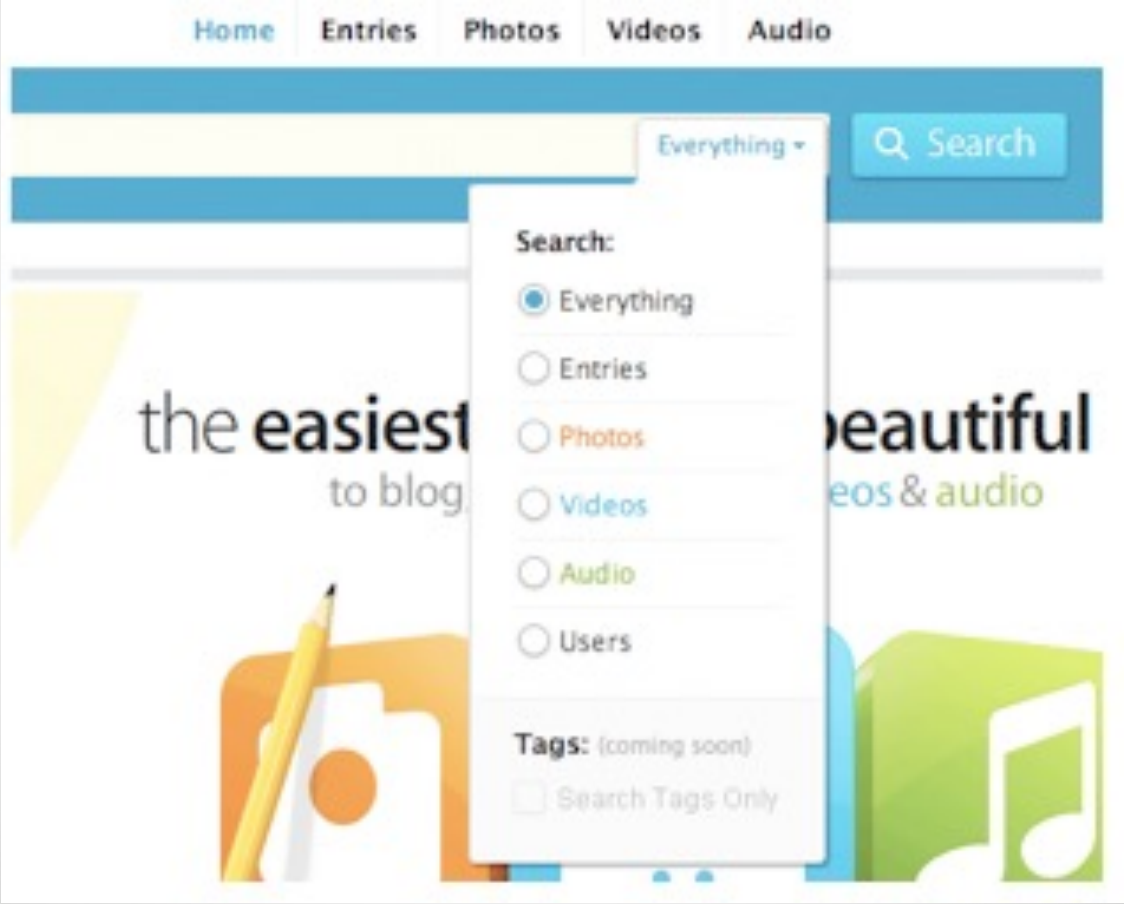
”A GUI should provide GUIdance!”

Recognition Rather than Recall

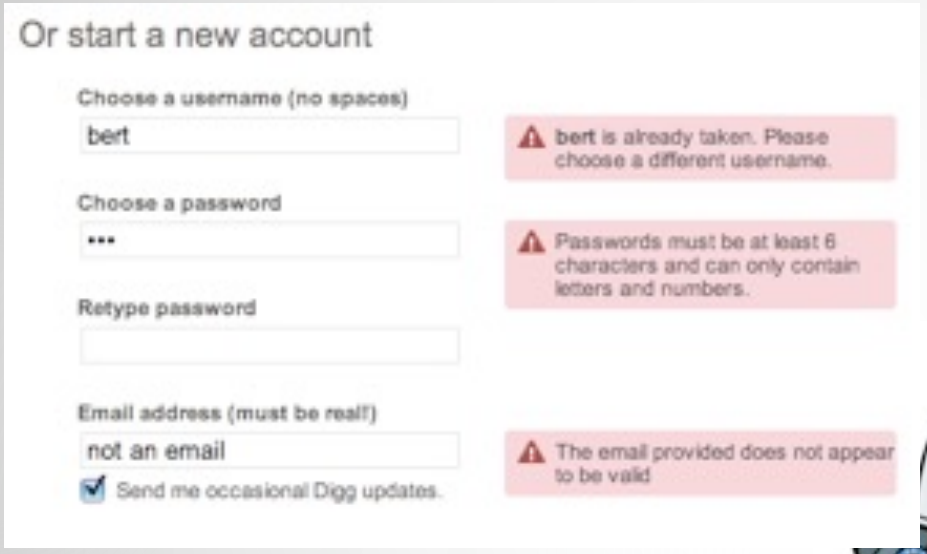
Accelerators

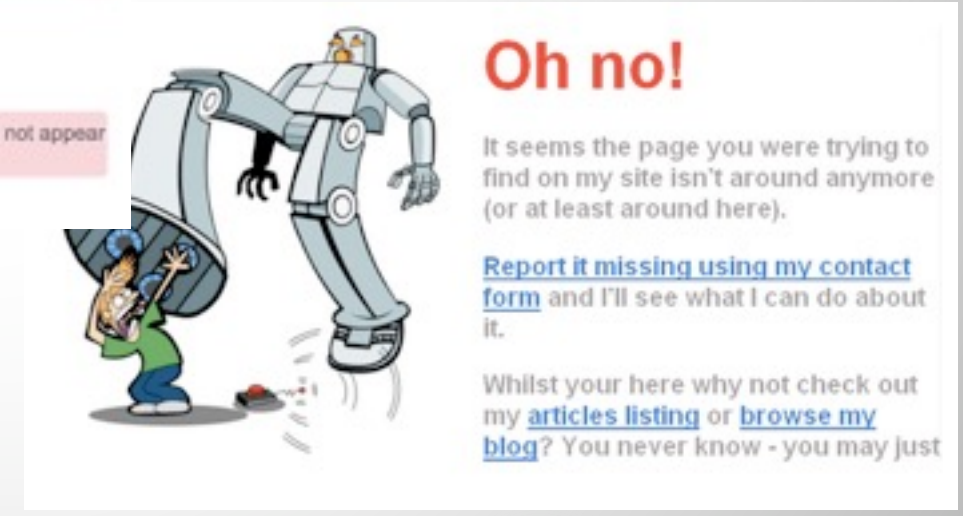
Minimalist Design

Principles: contrast, repetition, alignment, and proximity.



Help Users Recognize/Recover from Errors





Help and Documentation

Attendance Quiz

Usability Fail/Success, part 2

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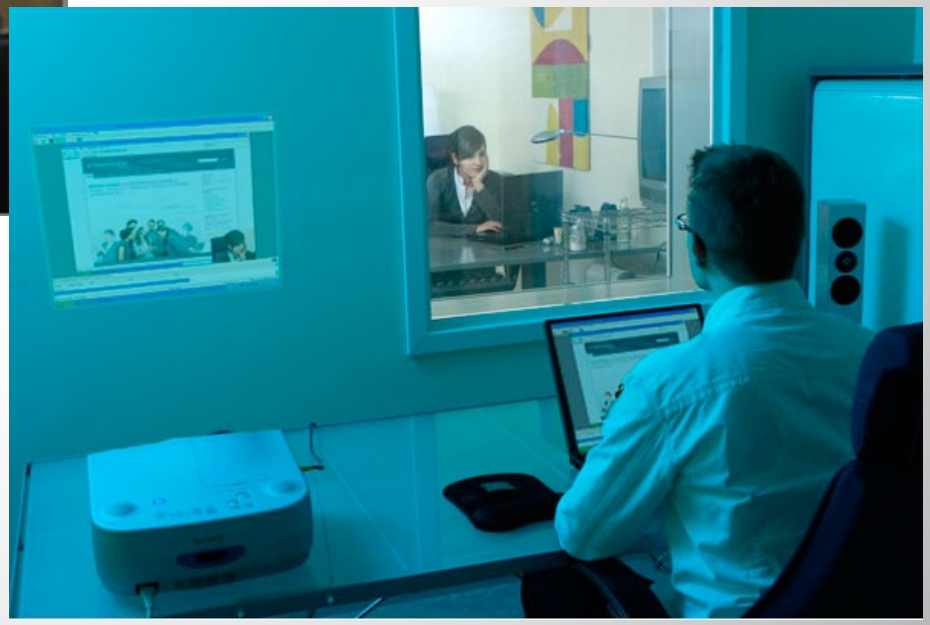
User Testing

https://www.youtube.com/watch?v=dNbh21-G_cQ

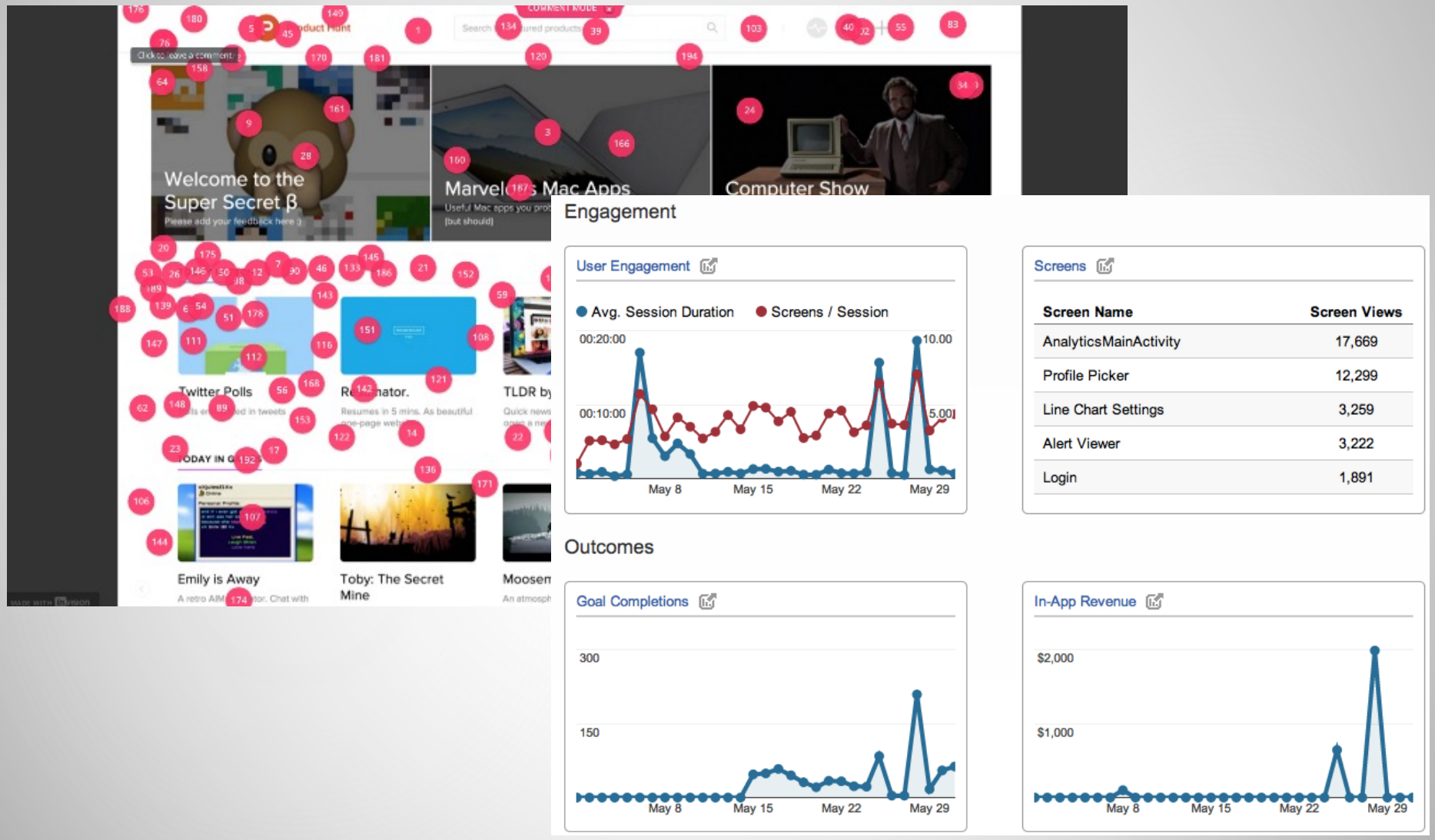
User Testing

- Improve designs and interfaces before showing to users!
  - Checklists, heuristic evaluation
  - Cognitive walkthrough
- Planning the user testing
  - Subjects
  - The system
  - Tasks
  - The session
  - Measures taken

User Testing Facilities – Professional Usability Labs



(Less Formal) User Testing



https://medium.com/@Jackrometty/implementing-massive-change-ff86b333d9e2#.rngsoskzx

If you're interested in UI/UX

https://www.nngroup.com

Summary

- We use HCI/UCD methods…
  - Interviews/observations, personas, scenarios, storyboards, mockups, design guidelines, heuristic evaluation, user testing
- …for good reasons
  - Sales increase
  - Performance increase
  - Traffic counts increase
- It's all about the user!

Quiz 5 Study Guide

- User orientation
  - Know and understand the 8 user-centered design methods
  - Know and understand all the Nielsen heuristics
- Main ideas of online readings

Next Time

- Testing