

# Visual Usability

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# Outline

- Definitions
- Why usability is important
- How it emerged
- Proper design practices
- Group usability activity
- Touch usability
- Testing Methods
- Usability and the relationship to libraries

# What is Usability?

“An approach to the design of technological interfaces which attempts to make them intuitive and easy to use.

Usability can be applied to any technology but it is specifically associated with web design through the work of Jakob Nielsen (b. 1957), a Danish web-usability theorist.”

- *Dictionary of Media and Communication*

“Web usability is the ease of use of a web site. Some broad goals of usability are the presentation of information and choices in a clear and concise way, a lack of ambiguity and the placement of important items in appropriate areas...”

- *Wikipedia*

# What is User Experience?

“User experience encompasses all aspects of the end-user's interaction with the company, its services, and its products.”

- *Nielson Norman Group*

“The overall experience of a person using a product such as a website or computer application, esp. in terms of how easy or pleasing it is to use.”

- *Google Now*

# Information Architecture

1. The structural design of shared information environments.
2. The combination of organization, labelling, search, and navigation systems within web sites and intranets.
3. The art and science of shaping information products and experiences to support usability and findability
4. **An emerging discipline and community of practice focused on bringing principles of design and architecture to the digital landscape.**

# Lots of Talent Required

- Developers/computer programmers
- Graphic designers
- Architects
- Ergonomics specialists
- Business strategists
- **Information Specialists/Librarians**



# Why is Usability Important?

# Information Seeking

User asks a question



“Black magic”



User gets an answer

# Information Seeking

- “The Perfect Catch”
  - User is looking for a specific answer to a question.
  - Often factual in nature.
- “Lobster Trapping”
  - Hoping find whatever information is useful because the user is not sure what he/she is looking for.
  - Gathering a handful of relevant sources to facilitate further research.
- “Indiscriminate Drifting”
  - Leaving no stone unturned.
  - User wants *all* resources available.
- “I’ve seen you before, Moby Dick”
  - Tagging items that have already been found for later use.

# Usability's Emergence

- Two primary factors
  - The introduction of the Graphic User Interface (or GUI)
  - The Internet

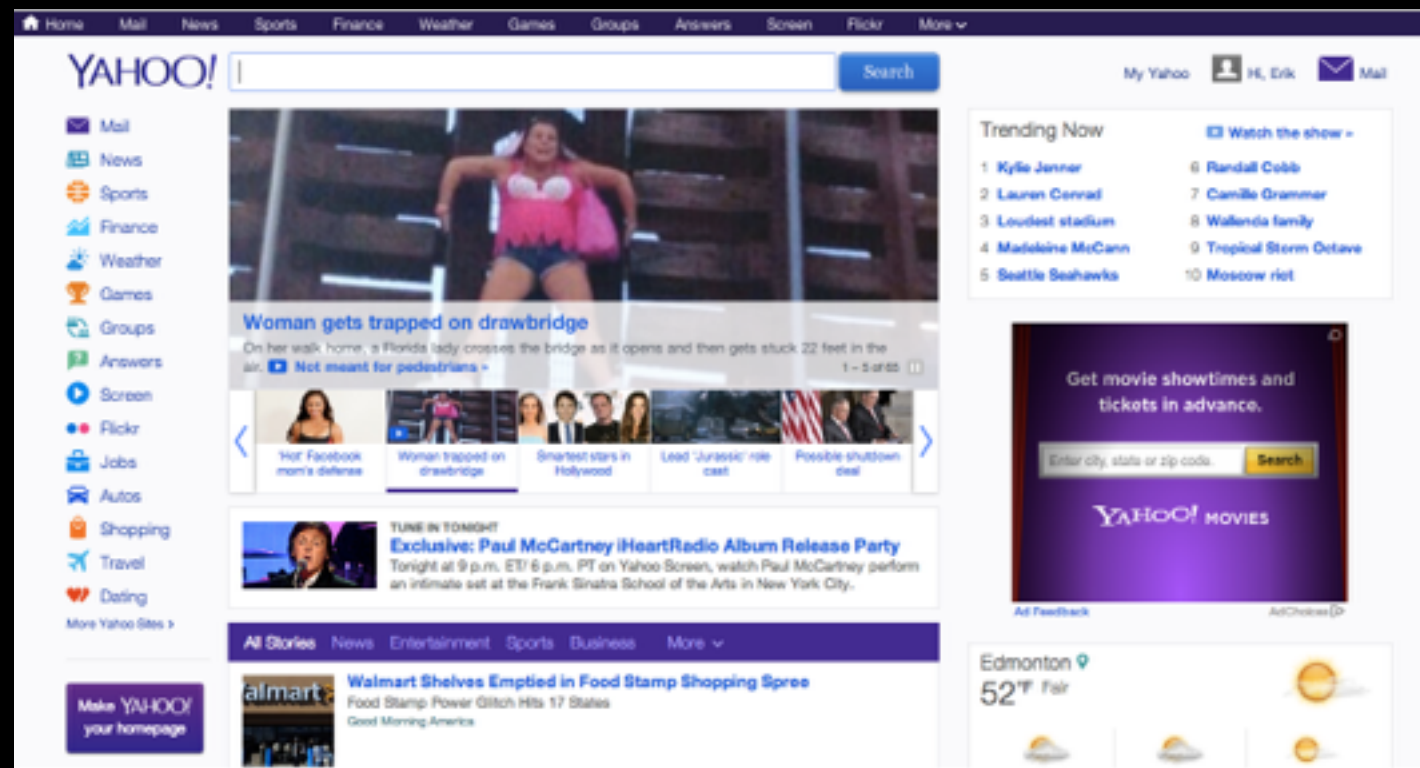
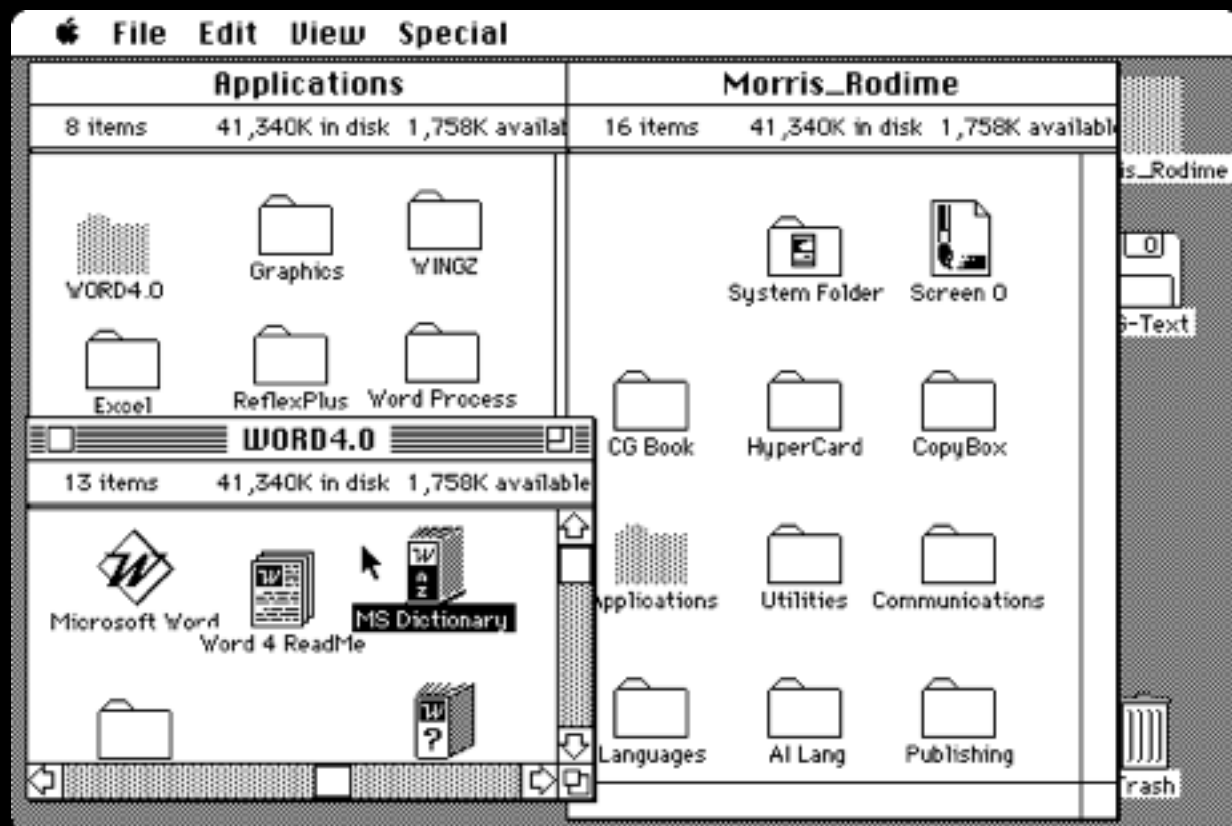


# ]CATALOG

DISK VOLUME 254

A	006	HELLO
I	010	ANIMALS
I	006	APPLESOFT
I	026	APPLEVISION
B	010	BOOT13
A	006	BRIAN'S THEME
B	003	CHAIN
I	000	COLOR DEMO
A	000	COLOR DEMOSOFT
I	000	COPY
B	003	COPY OBJ0
A	000	COPY A
B	020	FID
B	050	FPBASIC
B	050	INTBASIC
A	020	LITTLE BRICK OUT
B	000	MASTER CREATE
B	027	MUFFIN

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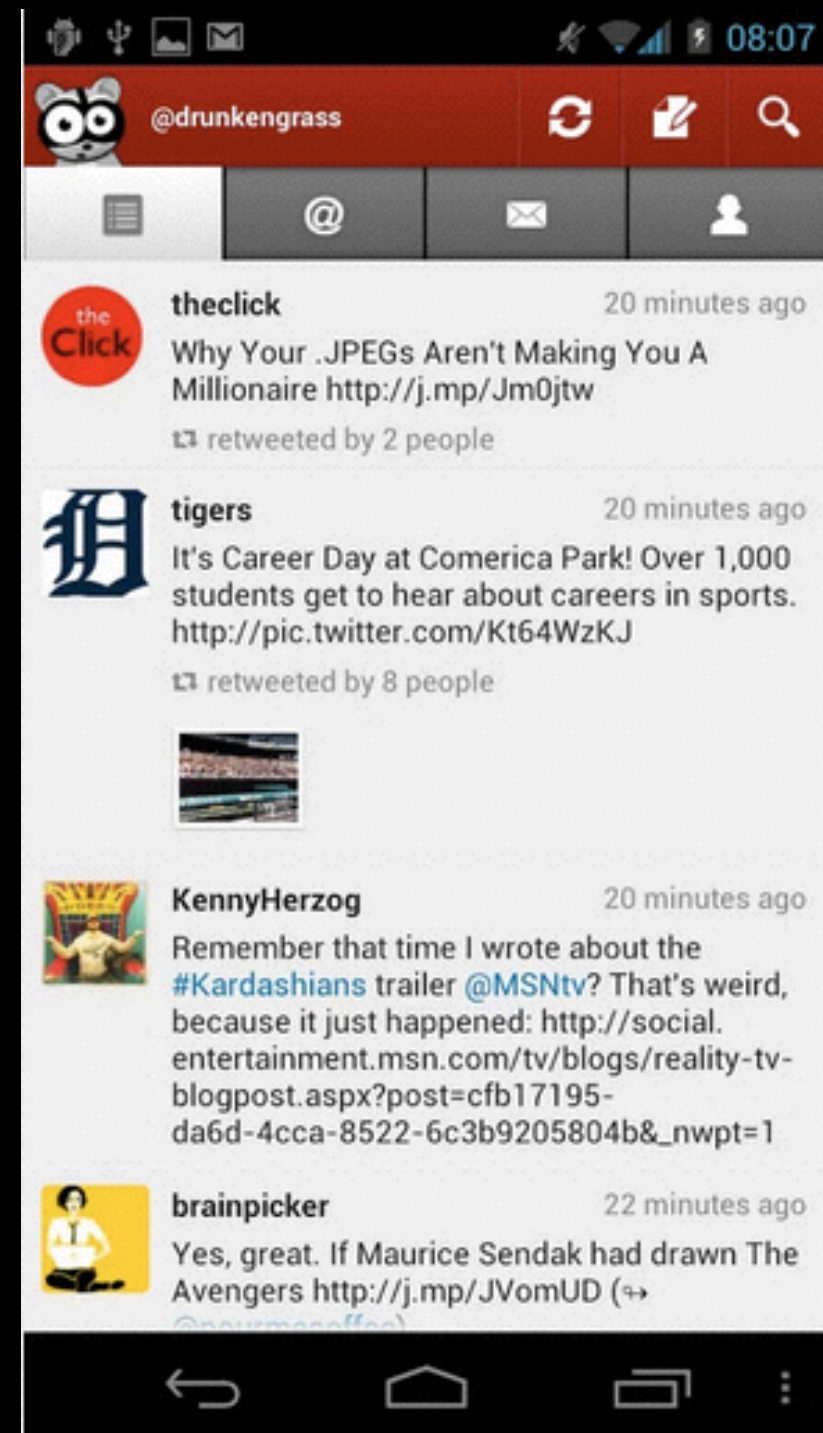
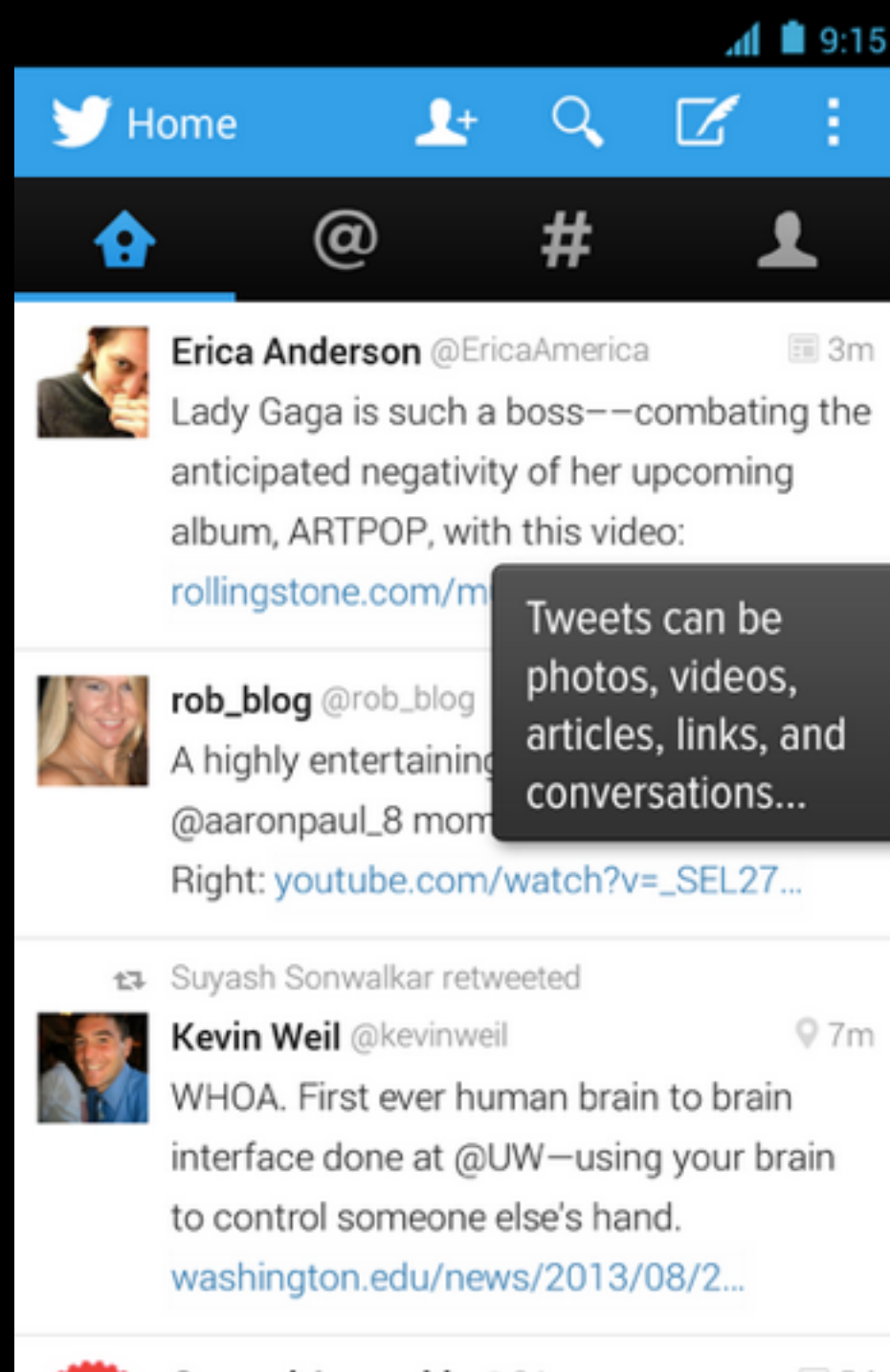
# Proper Design Practices

# Consistency

- External consistency
  - Application or interface design elements and their similarity to other applications.



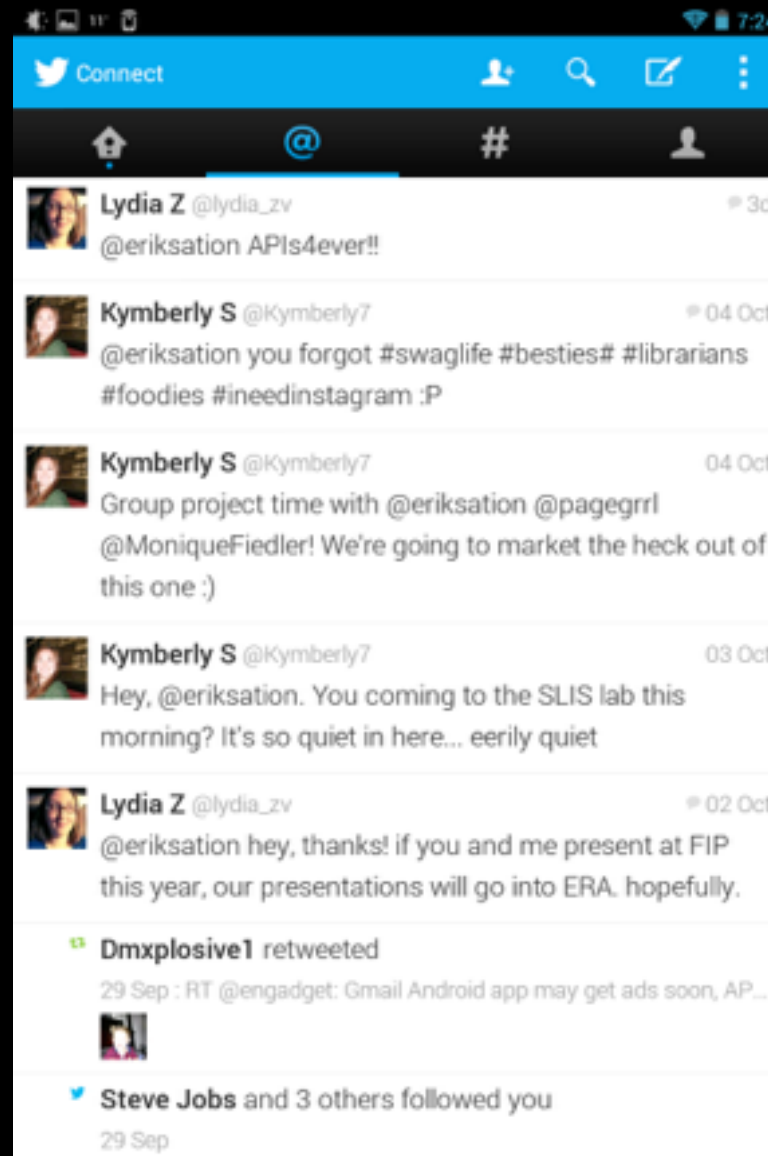
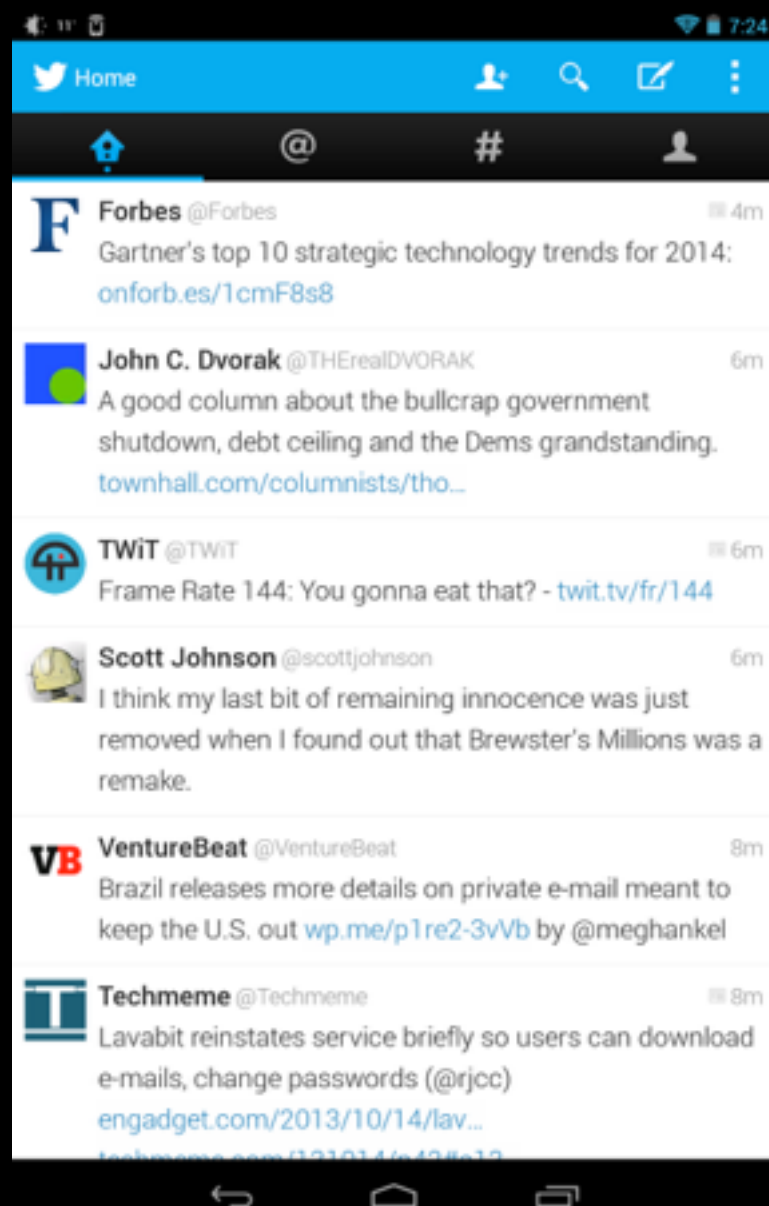
# Twitter for Mobile



# Consistency

- Internal consistency
  - The consistency of design and structure within an application or interface.

# More Twitter!

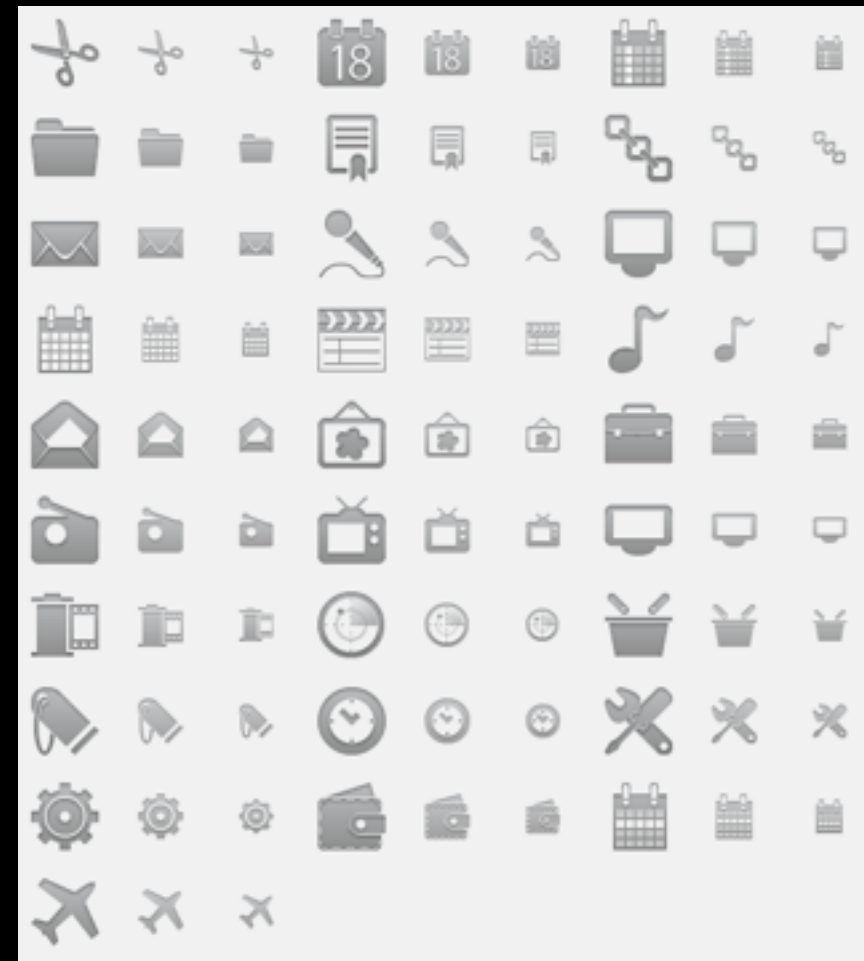


# Consistency in Layout

1. Screens with the same information should have everything placed the same.
2. Different elements that relate to one and other should maintain their spacial relationship no matter where they appear.

# Points of Consistency

- Color
- Typography
- Icons
- Logos and placement
- Charts
  - Element placement/headers, labels, keys, headlines.
- Controls
  - Scrolling, buttons (back and home), search bars.
- Motion
  - Clicking a button, highlighting links, fades and flips, menu transitions, loading visualizations (hour glass), swipe in side bars.



Android Menu icons & buttons

# My Website!



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 Search



Google  
highlighting tablet  
apps

ABOUT 3 DAYS AGO

iPad 5 to put  
pressure on PC  
market

ABOUT 5 DAYS AGO



## Feature Articles



The new technology age: unified hardware & software

ABOUT A WEEK AGO

Every major technology company is moving toward the "Apple" model - integrating their hardware, software, and web services. The astounding second act that Apple has experienced has single handedly fueled interest in this business model, and has proved to the world that a high degree of market share and profit can be achieved...



## Latest Trends (Bytes From the Web)

Google highlighting tablet apps

ABOUT 3 DAYS AGO

iPad 5 to put pressure on PC market

ABOUT 5 DAYS AGO

Behold: iBeacon

ABOUT A WEEK AGO

Android tablet revenue surpasses iPad

ABOUT A WEEK AGO

Pandora down 10% since iTunes Radio launch

ABOUT 2 WEEKS AGO

Blackberry going private

ABOUT 3 WEEKS AGO

Google Acquires Bump



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Google  
highlighting tablet  
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Google highlighting tablet apps

Next month, the Google Play Store will receive some notable changes. Google will start to highlight apps that are built for certain devices.

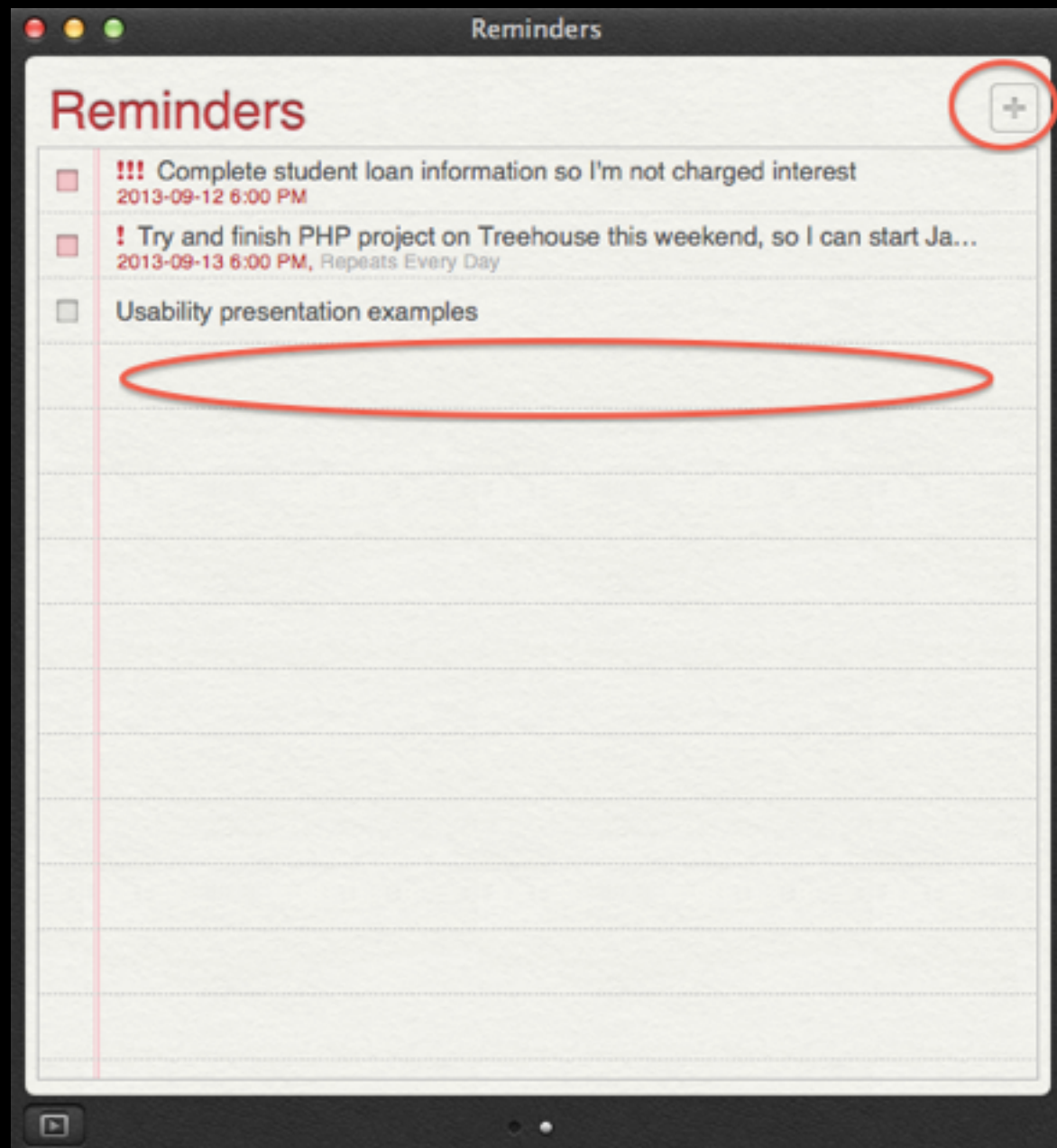


# Choosing the Correct Paradigm

- There is often more than one method of accomplishing any given task.
  - Ex. deleting a file.
- Design choices *must* be justified.
- When faced with difficult decisions, usability experts will often refer to the implementations and designs of similar websites and applications.



# Paradigm Examples



Reminders OSX & iOS



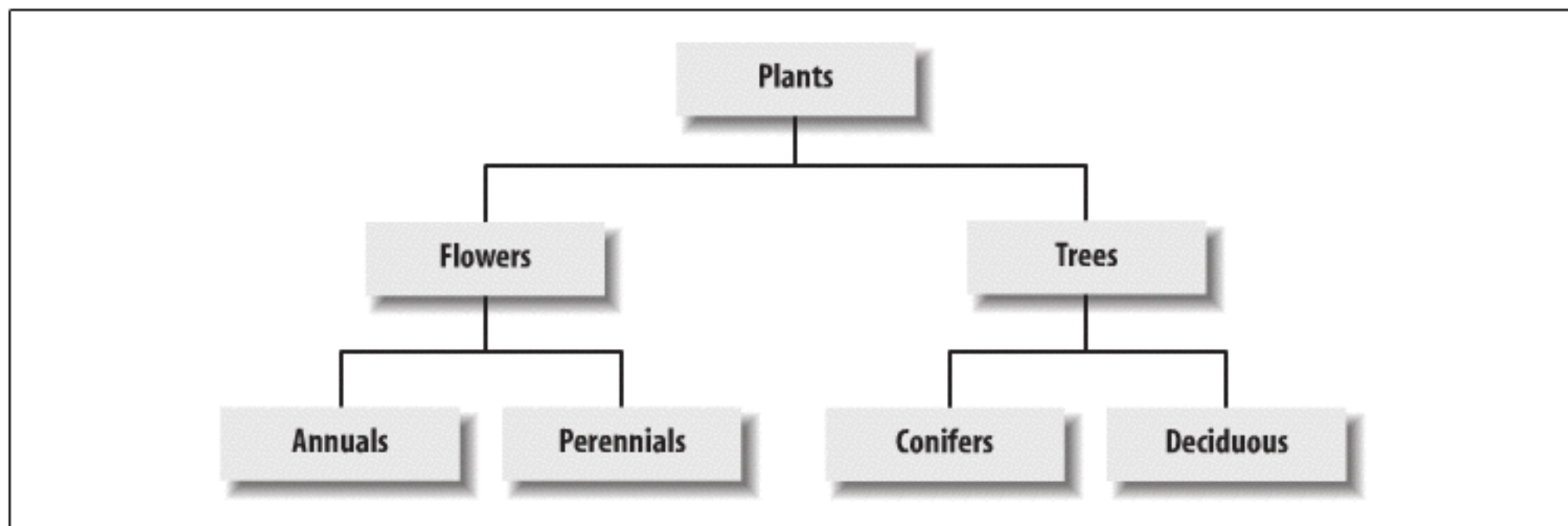
Deleting files

# Hierarchy

- The second most important factor following consistency.
- Hierarchy helps people know what to do, how to do it, and what to expect.
- Visual systems help create hierarchy.
- Is much like a ranking system.
  - Ex. Rank in the military defines everything and everyone's role. In this regard, hierarchy is like visual ranking.

“Hierarchy in complex interfaces is seldom straight forward. Designers and developers manipulate tools - layout, type, imagery, color, and controls - and their characteristics to express an application’s purpose and convey use. Making decisions about what elements should appear with, and how it should appear is part of defining a visual system.”

- Levinson, *Visual Usability*.



*Figure 5-11. A simple hierarchical model*

- Morevill & Rosenfeld,  
*Information Architecture* p.70

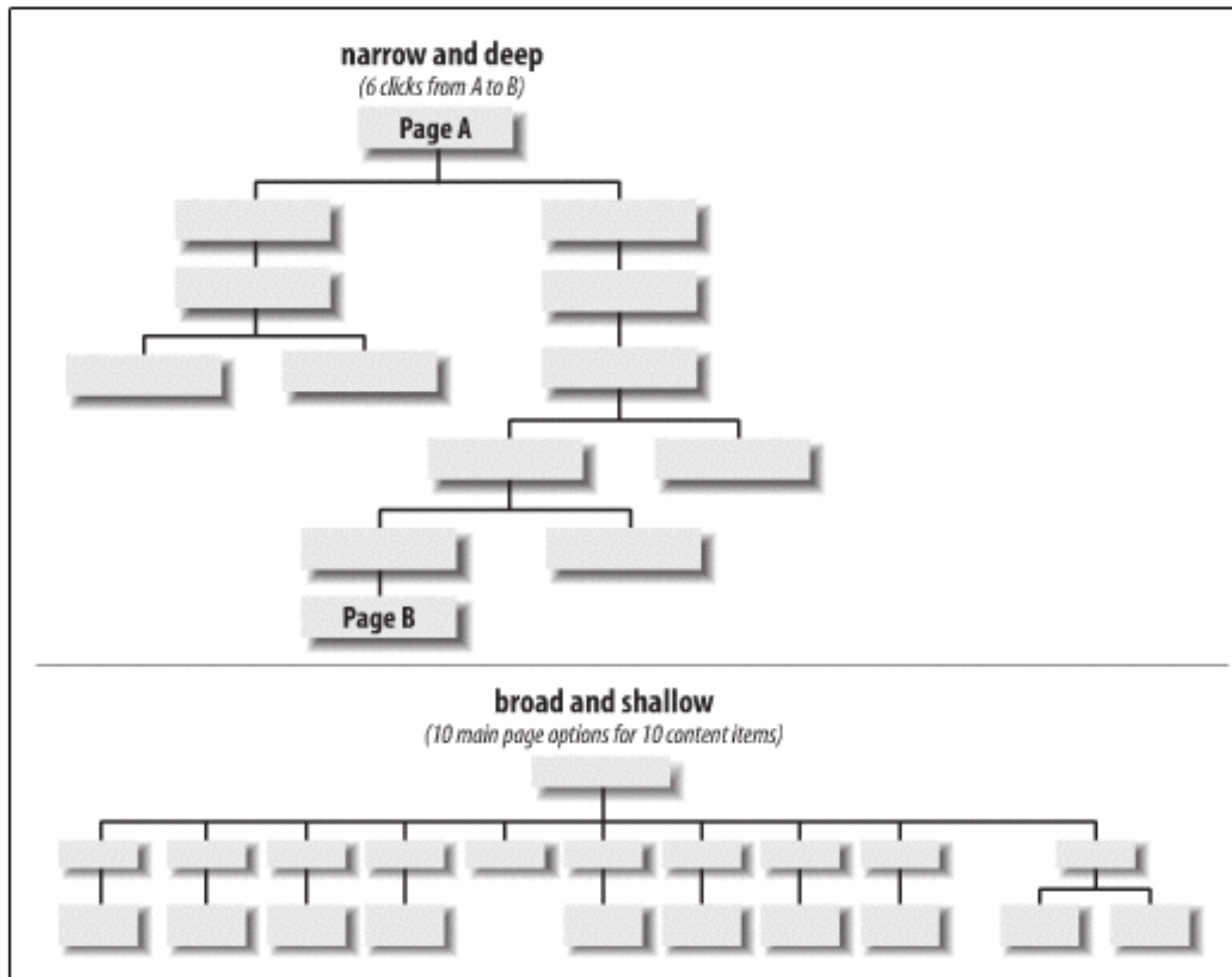


Figure 5-12. Balancing depth and breadth

Moreville & Rosenfeld, *Information Architecture* p.71

# Contrast

“... if you want to make something easy to find, make it different from its surroundings.”

- Colin Ware, *Visual Thinking for Design*

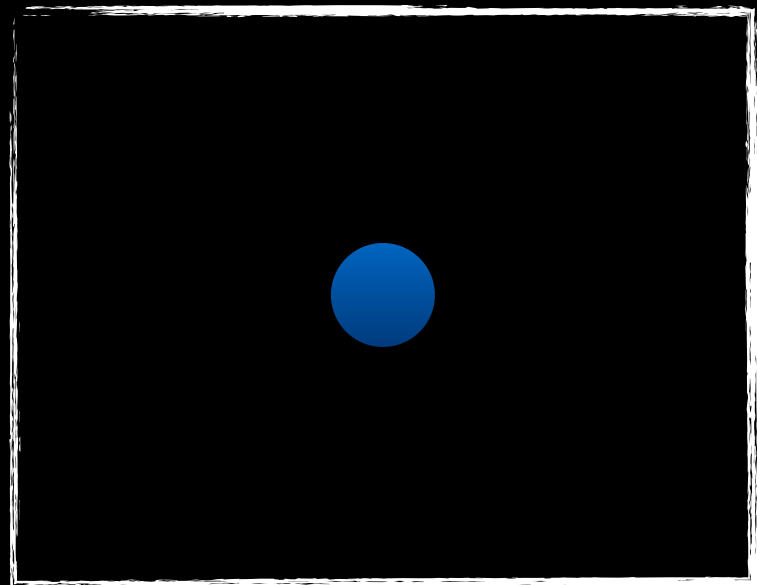
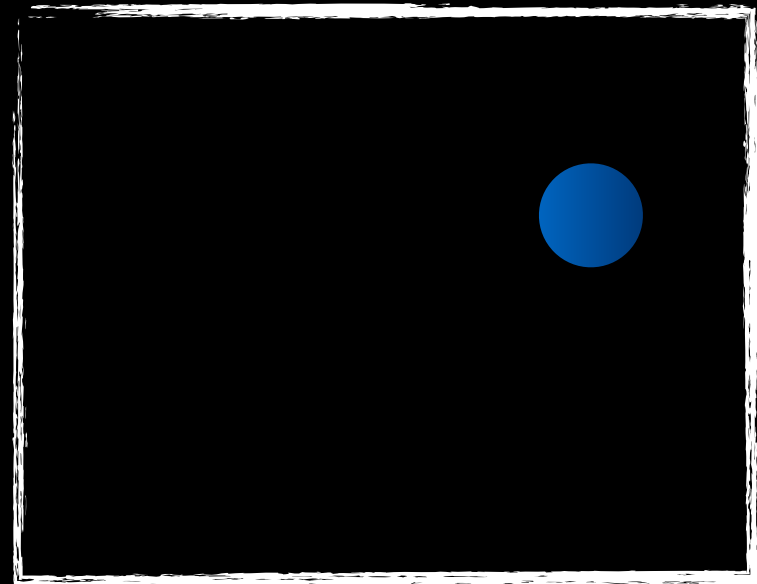
Placement

# Placement & Proximity

Placement and proximity to frame: “Basic principles about placement apply no matter what’s onscreen.

Even the simplest possible placement, such as a dot in a frame creates a relationship between the element and its background.”

- Levinson, *Visual Usability* p.38





# Placement of Elements

**STRONGEST HEAD** (16pt all caps, bold, with 50px letterspacing to visually soften)

**SIDEBAR HEAD OR CATEGORY HEAD** (11pt all caps, bold, 50px letterspacing)

**Third Strongest Head** (14pt, bold)

*Slightly Strong Head* (13pt, bold italic)

Text (13pt roman)

*Weak Text for Bylines, Help, etc.* (11pt, italic)

Figure 5.18 Typeface: Georgia.

**Strongest Head** (18pt black)

**SIDEBAR OR CATEGORY HEAD** (11pt all caps, semibold 100px letterspacing)

**Third Strongest Head** (14pt, black)

**Slightly Strong Head** (13pt, all caps, semibold, 50px letterspacing)  
or *Slightly Strong Head* (13pt semibold italic)

Text (13pt roman)

*Weak Text for Bylines, Help, etc.* (12pt, italic)

Figure 5.19 Typeface: Myriad.

**STRONGEST HEAD** (16pt all caps, bold, with 50px letterspacing to visually soften)

**SIDEBAR HEAD or CATEGORY HEAD** (11pt all caps, bold, 50px letterspacing)

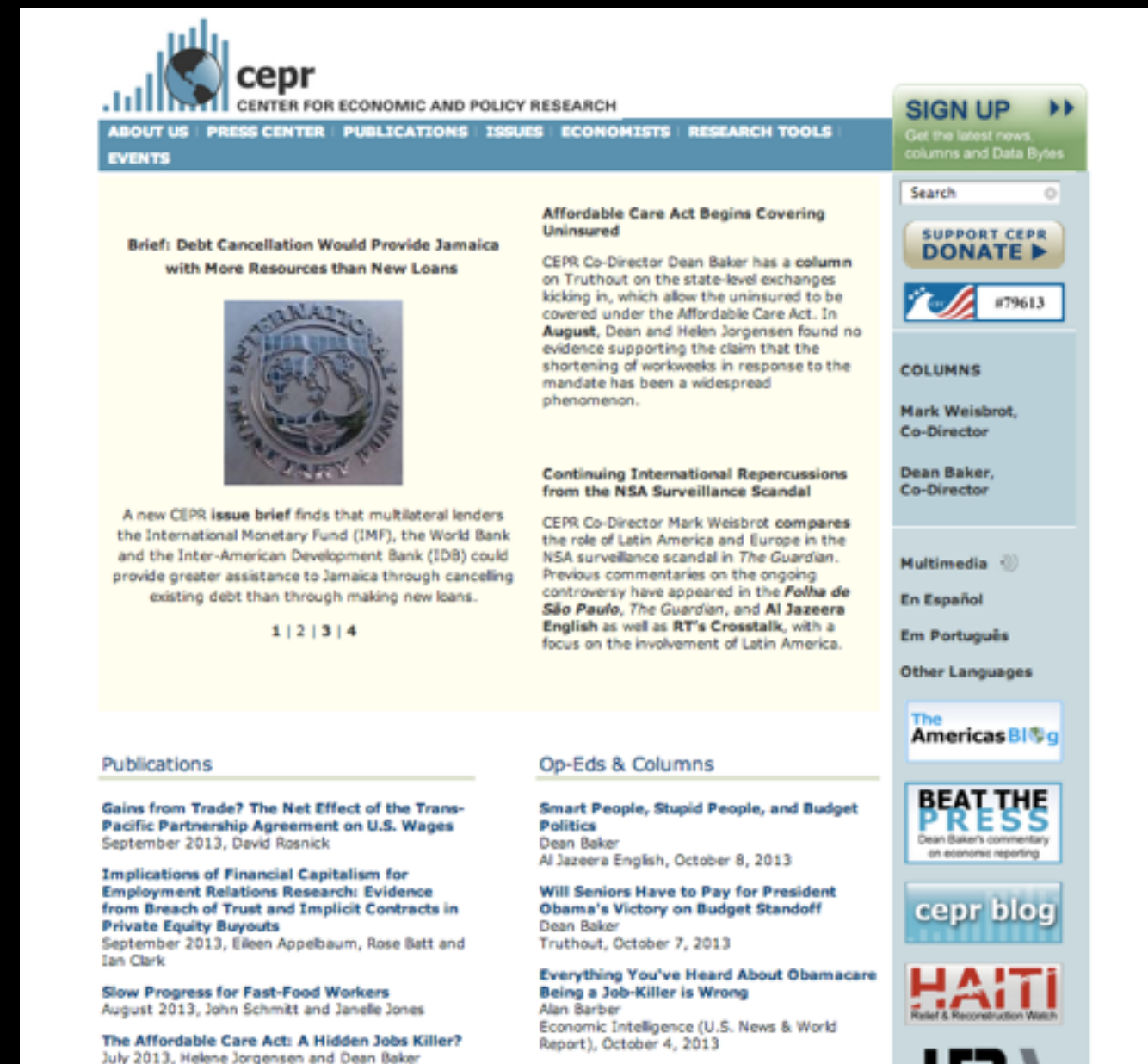
**Third Strongest Head** (12pt, bold)

SLIGHTLY STRONG HEAD (12pt, all caps, 50px letterspacing)

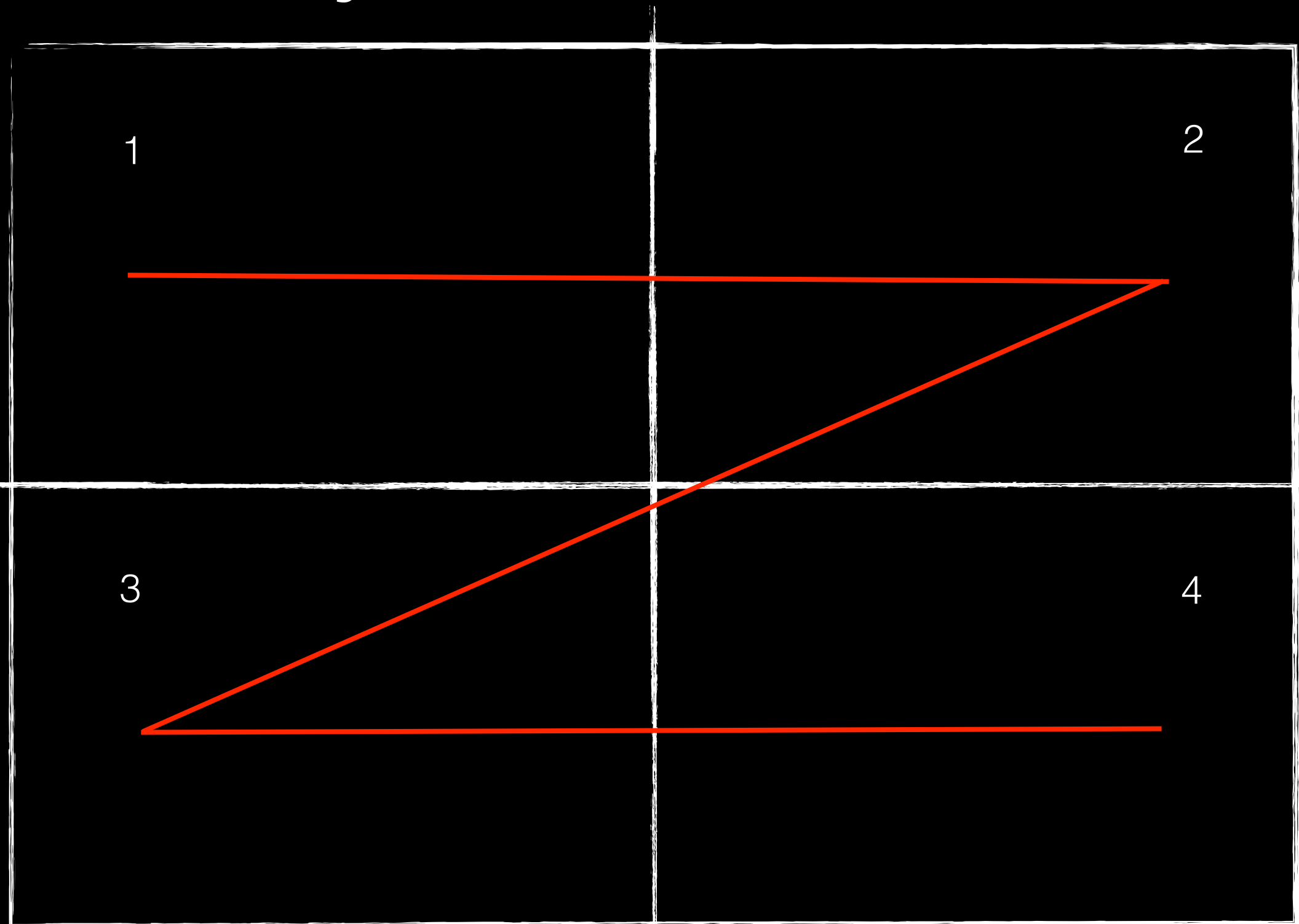
Text (13pt regular)

*Weak Text for Bylines, Help, etc.* (12pt, gray)

Figure 5.20 Typeface: Tahoma.

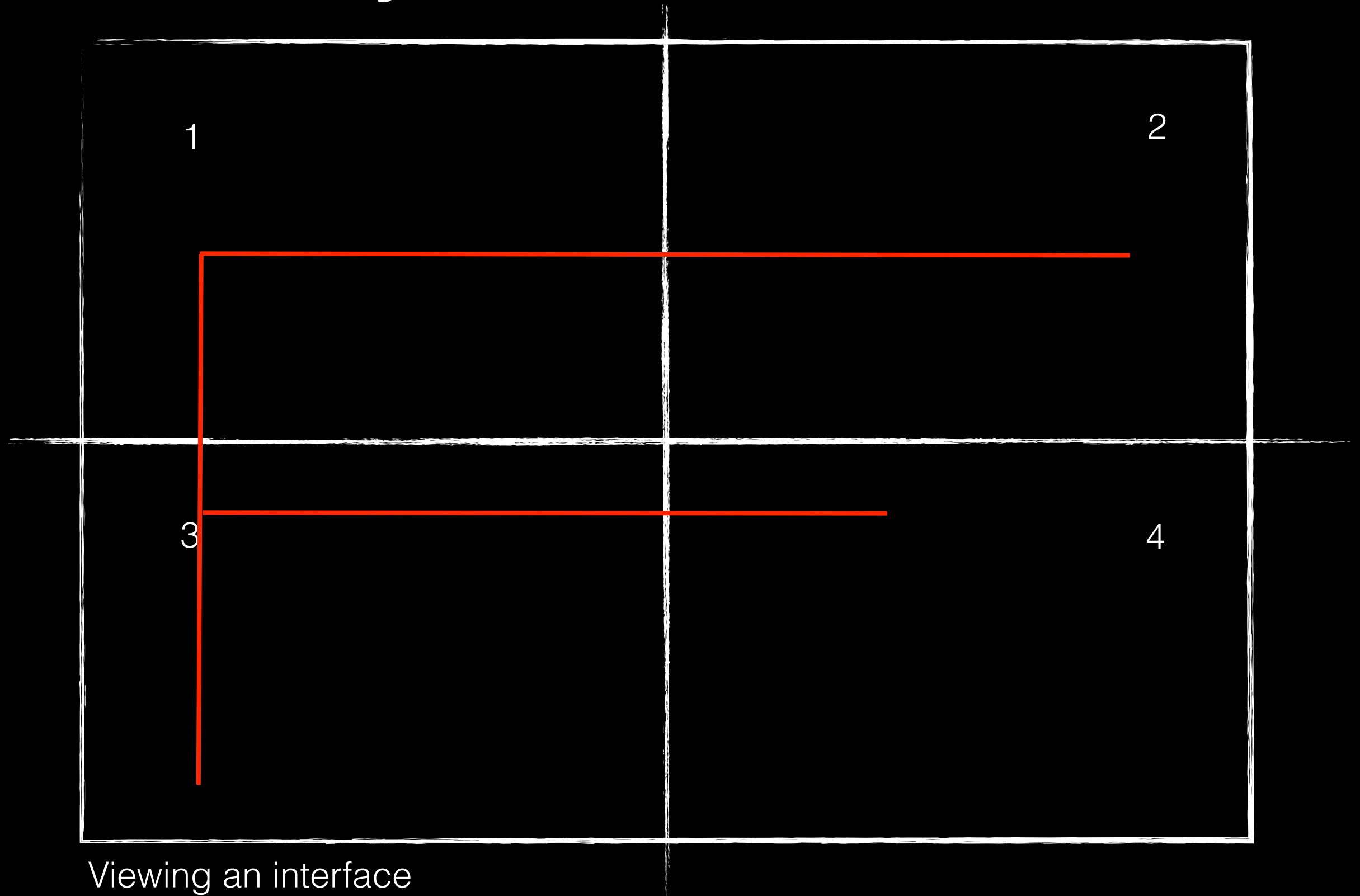


# Eye Behaviour



Viewing Content

# Eye Behaviour



# Nesting

This is the practice of “placing elements within others [to make] ‘parent’ elements seem to exist at a higher, more important level.”

- Levinson, *Visual Usability* p.39

Query

If applicable, choose one of these options

☒ You found a bug or error on the site

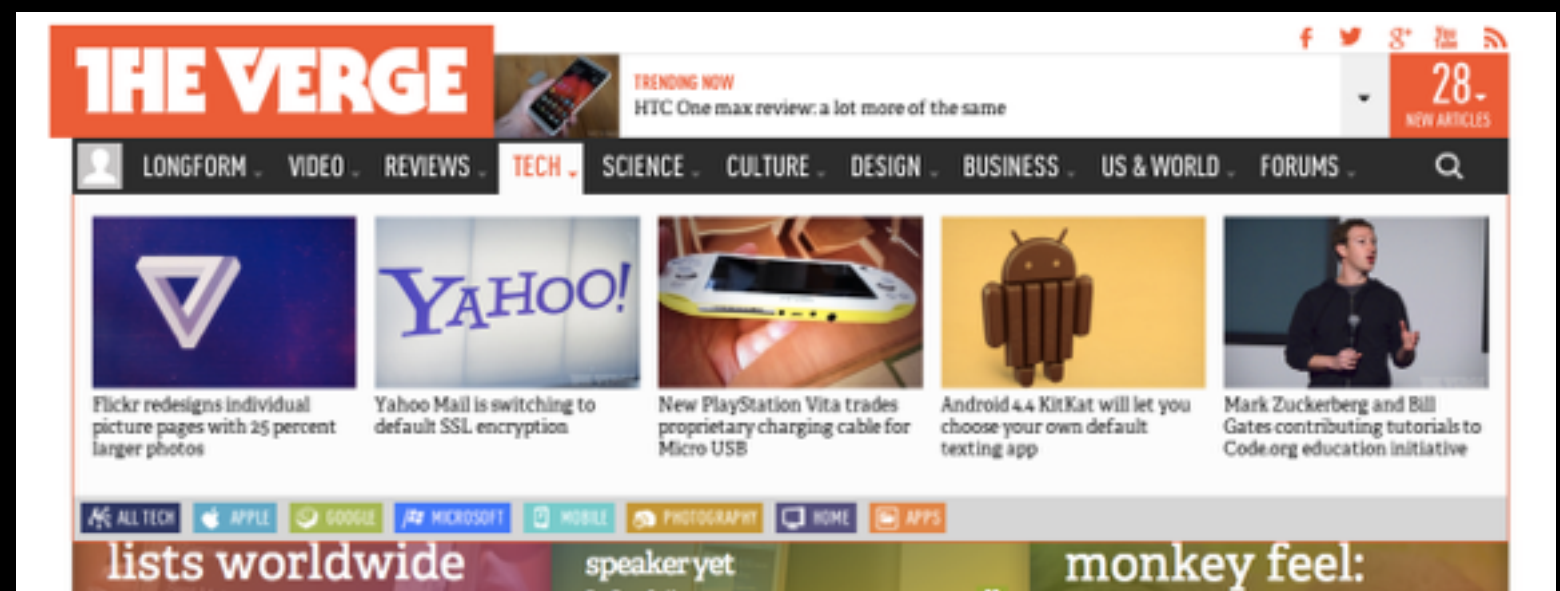
☐ You have an article idea

☐ You have a question about the site

☐ You just want to rant (we understand)

☐ You want us to follow you online (totally legit)

Message \*



# Overlap

- Similar to nesting, but instead you are placing items *on top* of elements, rather than within.
- Examples include lightboxes and popups.



# Treatment

- Size: Big elements or large groups of elements appear more important.
- Color: On light backgrounds, darker elements have more visual impact. Warm colors (red, yellow, orange) tend to come forward when compared to blues or greens.
- Ornament: Elements with ornament create contrast with elements without ornament, indicating that they are significant or of greater importance.



# Class activity

Evaluation of two Websites:

- [www.nytimes.com](http://www.nytimes.com)
- [www.epicurious.com](http://www.epicurious.com)

How do these  
practices apply to  
touchscreens?

touchscreens?



# Alterations for Touch

- Larger touch targets.
- If one is creating a cross platform application, there should be no question what application is being used.
- Be clear about what users can do, as not all functionality is the same on all platforms.
- Use the same tools as much as possible, including color, typography, iconography etc.
- **Responsive design.**

# Usability Testing Methods

## **Three Categories:**

### **Explorative:**

- “Useful early in product development to assess the effectiveness and usability of a preliminary design or prototype, as well as users’ thought processes and conceptual understanding.”

### **Assessment:**

- “Used midway in product development or as an overall usability test for technology evaluation. Evaluates real-time trials of the technology to determine the satisfaction, effectiveness, and overall usability.”

### **Comparative:**

- “Compares two or more instructional technology products or designs and distinguishes the strengths and weaknesses of each.”

(Thomas Churm, *An Introduction to Website Usability Testing*, in UsabilityGeek)

# Testing Methods Continued

## **Hallway Testing:**

- Using random people to test a website rather than those who are trained or experienced in usability and design.
- Especially effective for new websites.

## **Remote Testing:**

- Testers are in several countries and time zones.
- Is sometimes conducted via video conferencing.
- Software can auto-record user behaviour, and specifically measure how long it takes to complete each task.

## **Expert Review:**

- When an “expert” comes to test the site.
- Tests are typically not as detailed, but the assumption is made that the expert will comprehend the site and task instructions quickly.

# Testing Methods Continued

## **Paper Prototyping:**

- Drawing and creating rough, hand-made, sketches and paper mockups to imitate a user interface.
- Very low cost and effective.
- Hard to overlook initial design flaws.

## **Questionnaires and Interviews:**

- Observer can ask direct questions.
- More structured data collection.

## **Do it Yourself Walkthrough:**

- Setting up a usability experiment and conducting it yourself, without outside users.

## **Controlled Experiments:**

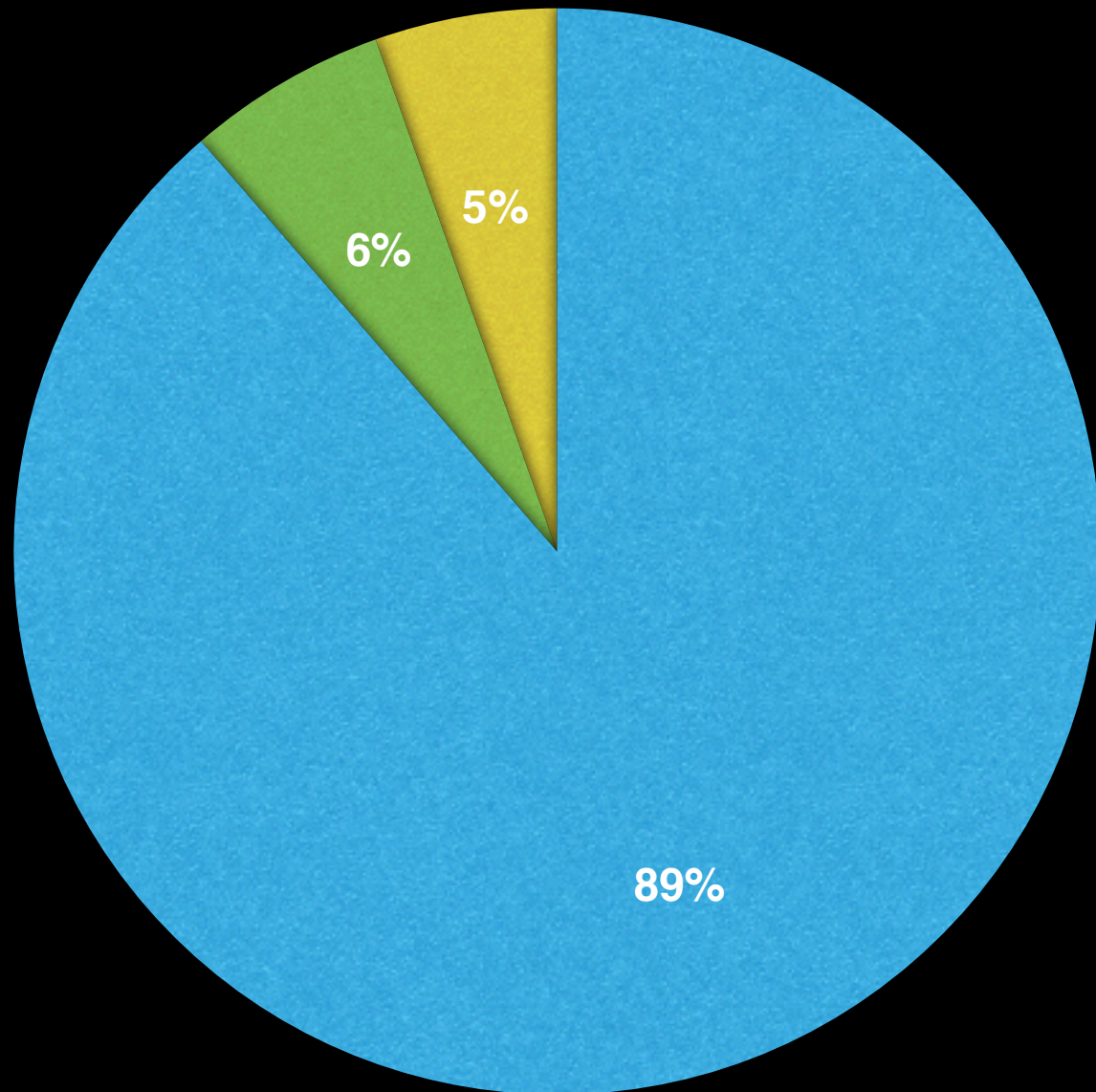
- Usually involved comparison of two products, with careful statistical balancing in a lab.
- Not a “real world” test, but due to the scientific approach, this yields *very* accurate results that are publishable.

# Usability's Importance in Libraries

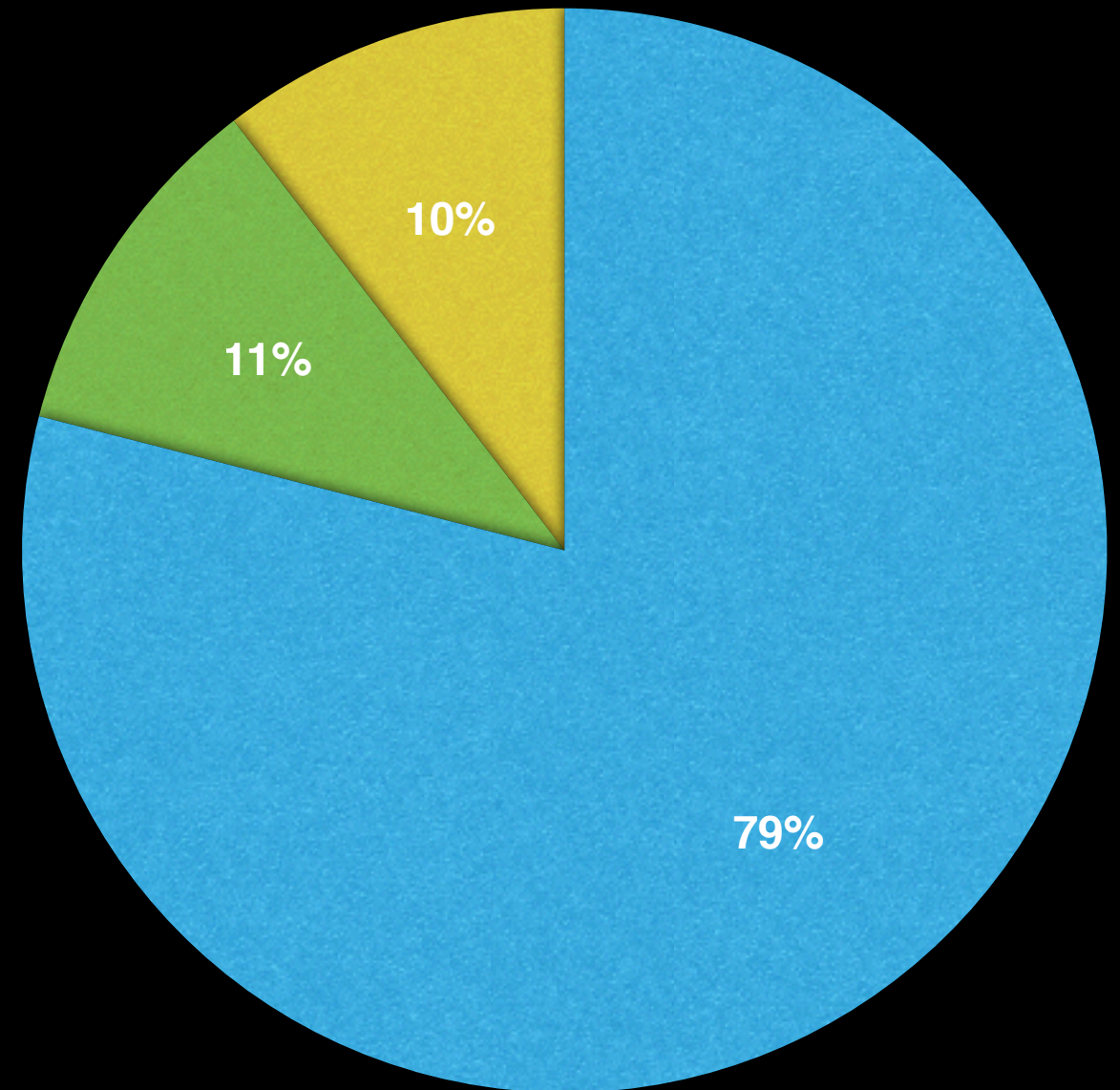
- Libraries compete with brick & mortar *and* online book resellers.
- Increasingly, tablet owners expect more from their local libraries.
  - Want technology tutorials and easy digital borrowing solutions.
- Mobile devices' share of web traffic continues to grow year-over-year.
- An increasing percentage of people own mobile devices.

# Usability's Importance in Libraries

2012 World Web Traffic



2013 World Web Traffic



● Traditional ● Tablet ● Smartphone

Thank you!

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