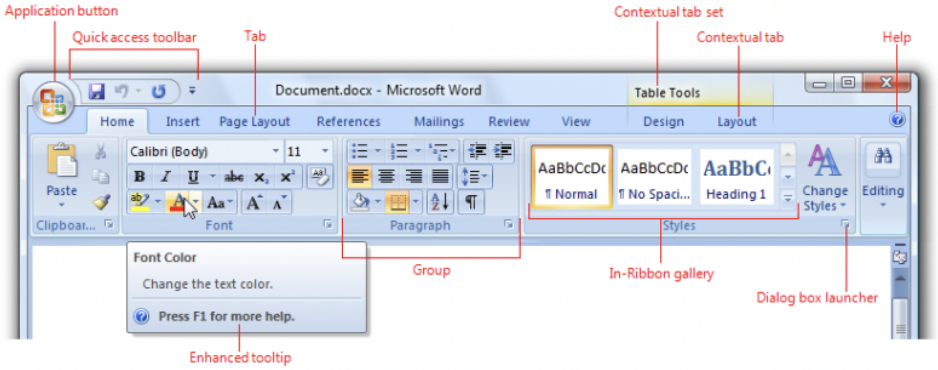
CAS CS 411
Lec 17

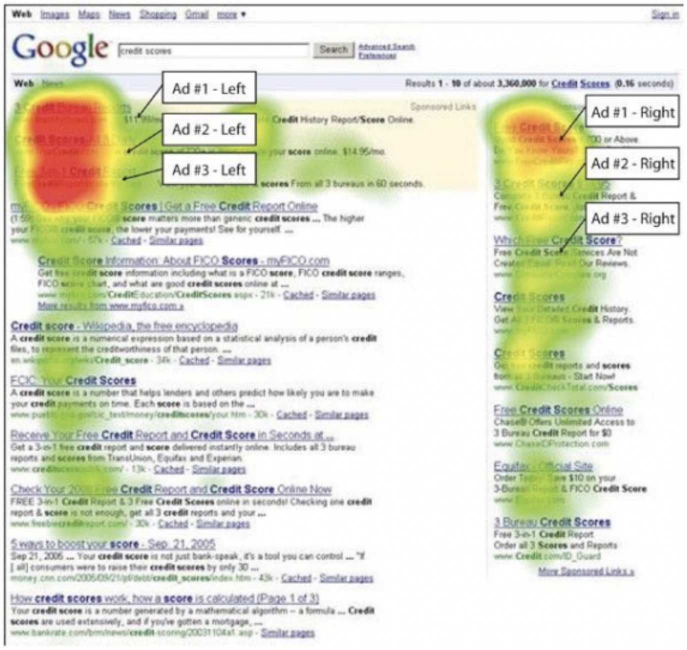
UI/UX

1. A Few Guidelines
    a. Keep it simple
    b. When you think the UI is as minimal as it can possibly be, trim it again
    c. Ask Steve Jobs about remotes…
2. Keep It Consistent
    a. Users ‘learn’ to use a page or app
    b. Part of that learning is consistent placement of design elements
    c. Menus should appear on every page in exactly the same place, same order
    d. Creativity in the UI is constrained by usability
3. No Surprises
    a. One of the core UI design rules is that there should be no surprises
    b. Unexpected results, or having to hunt for a menu item or other functionality causes a disconnect
    c. The UI should just ‘work’ without much thought
4. Contextual UI
    a. When possible, hide functionality that isn’t necessary for the current task
    b. Your app should understand or learn what features are used when, and use that knowledge to simply the interface
    c. Additional functionality should be one click (max 2) away when needed



    d.
5. Multiple Paths
    a. The temptation is to provide nine different ways to accomplish a task
    b. Don’t fall for it…choose one way (hopefully the best way) and be consistent with it
    c. Find out what users expect the path to be with focus groups
    d. Don’t be afraid to change the UI based on user feedback

6. Develop a Design Language
    a. Part of being consistent is to create a language for your app based in design
    b. For example
        i. Bold text might always mean a tip or hint
        ii. A yellow box in the upper right might mean caution
    c. Carry the language elements throughout not only the app, but its packaging, marketing and so on
7. What Goes Where
    a. Important information should be placed in an area where the eye naturally rests
    b. Ditto oft-used functionality…things the user is going to do a lot
    c. This is most often in the upper left (for web-based apps)
    d. There's a reason Google puts ads upper-left
    e.



8. Testing
    a. Testing UI should involve untouched users
    b. Rather than testing scripted actions (click here, then here…), present tasks
        i. Copy this paragraph into a new document and make it italic
    c. Capture video of over-the-shoulder, face, and screen and time-sync the feeds
9. What About Templates & Bootstrap?
    a. Bootstrap came out of Twitter several years ago
    b. It's a standard set of CSS styles and layouts using a 12-column grid
    c. You've seen this everywhere…it's become quite popular
        i. http://trydevkit.com/blog-post/30-inspiring-twitter-bootstrap-examples/8d952b12-1511-bb1c-91d5-5339ad288891
        ii. http://v4-alpha.getbootstrap.com/examples/
    d. It's responsive library that adjusts layouts to desktop and mobile display sizes

e. Some pros:
   i. It’s very easy to learn and to use
   ii. It’s fast; the libraries are precompiled and available on CDNs
   iii. It lets you stand up a fairly decent looking site without a lot of effort

f. Some cons:
   i. Everyone is using it
   ii. It uses jQuery
   iii. It isn’t all that easy to modify

10. Other Templates
    a. An entire industry has built up around web and app templates
    b. These tend to be pretty mature…they came around early in the web as ways to rapidly deploy sites
    c. They tend to be back-end heavy and are often platform-specific
    d. Here’s some Drupal themes
       i. https://themeforest.net/category/cms-themes/drupal
11. Programming UI
    a. While Bootstrap and platform-specific libraries and templates aim for visual uniformity, there’s another set of tools that take a programmatic approach
    b. For example
       i. Google Angular.js
          1. Uses Typescript, and extension to Javascript
       ii. Facebooks ReactJS
          1. Uses JSX, an extension to Javascript
    c. Both provide a programming platform for UI…they provide both HTML rendering and Javascript MVC
12. Bottom Line
    a. Good UI is herd to define - we know it when we see it
    b. That said, there are some habits we can develop and general guidelines to follow to arrive at good UI
    c. It’s important to get UI right the first time … people hate it when you start messing with an interface
    d. Things change pretty rapidly; it wasn’t that long ago that software training included instructions on how to use a mouse
    e. I think the most important thing is consistency in the design language… get that right and everything else flows from it