Pere-Pau Vázquez

IDI –Usability & Design: Problems and Principles

Outline

- Learn by example: webs & apps that suck
- Common UX Mistakes
- UX Principles & Laws

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- **Learn by example: webs & apps that suck**
- Common UX Mistakes
- UX Principles & Laws

Learn by example: webs & apps that suck

- Web pages that suck
- Apps that suck
- Common design mistakes

Learn by example: webs & apps that suck

- **Web pages that suck**
- Apps that suck
- Common design mistakes

Learn by example: webs & apps that suck

PROBLEMS

- What the hell is this web about?
- Continuous animation?
- Too much flash!

- http://www.reforms.net

Design Mistakes. Web pages

PROBLEMS

- White space?

Design Mistakes. Web pages

PROBLEMS

- Content layers over text and the animated Gifs…
- Left menu that appears
- http://cavs.mit.edu

Learn by example: webs & apps that suck

- Web pages that suck
- **Apps that suck**
- Common design mistakes

Design Mistakes. Applications

PROBLEMS

- Unnecessary introductory screen:
  - Does not provide information
  - Flash-intro like

Design Mistakes. Applications

PROBLEMS

- Disrupting introductory screen:
  - Put local weather first!
  - On TV vs video?
  - Severe? Alerts!

Outline

- Web pages that suck
- Apps that suck
- **Common design mistakes**

Common Design Mistakes

- Motivation:
  - Most applications available through repositories (iTunes, Google Play…):
    - Available for many form factors (desktop, mobile…)
    - Recommendation systems
    - End up testing an app we do not know: *arbitrary testing*
      - Its features
      - The problem it solves

Common Design Mistakes

- Motivation (ii):
  - iTunes store promotes 25-50 top apps:
    - Everybody knows (i. e. Google)
    - Difficult to explore further
      - Some browsers (such as iPad) turn back to the first page after you visit an app
      - Even without this *feature* they are difficult to reach
    - You can get to the top tier by paying
    - A single bad review may throw you back to the *almost-forgotten-and-difficult-to-reach >2 wagon* of the app store

Common Design Mistakes

- Main reasons for an application to fail:
  - It does not solve the right problem
  - It has the wrong features for the right problem
  - It makes the right features too complicated for users to understand

Common Design Mistakes

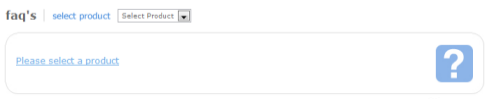
- Common Design Mistakes:
  - Repeat and repeat everywhere
  - Good to know
  - Difficult to evaluate by the designer

Common Design Mistakes

- Non-standard GUI controls:
  - User knows **standard** controls
    - He/she spends more time on **other apps and webs**
    - Using non-standard makes him/her to spend valuous cognitive efforts on wrong things
  - Standard controls are standard because have proven efficacy for long periods

Common Design Mistakes

- Elements that look like a GUI control but are not:
  - Induces mistakes
  - Produces confusion

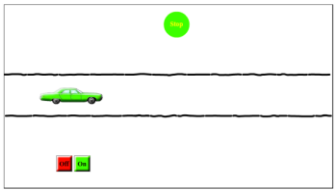


Common Design Mistakes

- Inconsistency:
  - Use the same words across the application
  - Use parallel grammar for parallel elements
    - Menu items, icon labels…

Common Design Mistakes

- Inconsistency:
  - Experiment: Even with no errors, reaction time is longer



Common Design Mistakes

- No perceived affordance:
  - Do not know what to do/where to go
  - Drag-and-drop action without knowledge of the result
    - Eject a disk in old Macintosh machines was done by throwing it to the dustbin
      - Will it be erased?
  - Invisible menus (to save space):
    - Old Word Processors, modern mobiles

Common Design Mistakes

- No perceived affordance

Common Design Mistakes

- Too small click targets:
  - Sometimes buttons or checkboxes are visible but difficult to reach:
    - More common with mobile devices
  - UIs not designed for the proper resolution/size
  - Webpages designed for desktop
    - Mobile browsing is horrible

Common Design Mistakes

- Lack of feedback:
  - Users must know the state of the application
  - What happened to my last command?
  - No feedback means I will guess
    - Maybe/Often wrong

Common Design Mistakes

- Lack of progress indicator:
  - Tasks that require enough time should show progress indicator
    - Indicate the computer is busy
    - Should estimate time
    - Tell users what's happening
    - Let the user do another thing

Common Design Mistakes

- Bad error messages:
  - Do not provide information on the reason for the error
  - Do not provide a clue on how to act
  - Too fast to be read

Common Design Mistakes

Common Design Mistakes

- Bad error messages:
  - Too many error/confirmation windows
    - People confirm without previous reading
  - Buried inside web pages
    - People overlook

Common Design Mistakes

- Asking for the same information twice:
  - Very annoying
    - Telephone companies asking for telephone number/name multiple times…
  - Gather the information intelligently
    - Make it available to other parts of the application
  - Often due to programmers laziness

Common Design Mistakes

- Lack of default values:
  - Default values may accelerate interaction
    - Help novice users
      - Valid values, formatting…
    - Provide convenient answers valid in multiple cases
      - Possible directories for program installing

Common Design Mistakes

- Missing information on how application works:
  - Missing help
  - Prepare for arbitrary app testing:
    - Mobile apps stores
  - Missing features that do exist:
    - iOS: Preferences of the application outside the app
      - Close the application to search in the Preferences menu???
    - Bad evaluations in mobile markets!!!

Common Design Mistakes

- Organising the app according to data design
  - The user is not the guilty of your laziness
  - You should adapt on how user would *normally* (i. e. without a Computer Scientist intervention) would do the work

Common Design Mistakes

- Organising the data according to app design. Example: Research information system
  - Stores the publications of the researchers
    - Adding publications is a regularly used task
      - You publish several papers/teach several courses/review several papers/participate in several tribunals/conferences/conference programs a year
  - Generates CVs in certain formats:
    - Rarely used
      - You ask for a project once a year
      - You apply for something else every 3-5,6 years

Common Design Mistakes

- Organising the data according to app design. Example: Research information system
  - Adding a publication working flow:
    1. Select the appropriate option
    2. Search for the publication in the system!!!
    3. If it is not found, proceed to introduce the remainder of the information

Common Design Mistakes

- Organising the data according to app design. Example: Research information system
  - Fails to pardon the user, fails to recover from users' errors
  - Exposes programming limitations:
    - Work on a duplicates detection system!
    - Perform checks transparently!

Common Design Mistakes

- Reset buttons on web forms:
  - Destroys information
    - Apps should respect and preserve users' information at almost any cost
    - Destroying tasks should warn the user
    - Take care of not producing too many confirmation dialogs!
  - It may be right on information entry systems

Common Design Mistakes

- Mobile problems:
  - Screen and size resolution limitations
  - Web browsers
    - Small elements (not readable)
    - Small elements (not clickable)
    - Small…
  - Download delays (WAP vs 3G)

Outline

- Learn by example: webs & apps that suck
- **Common UX Mistakes**
- UX Principles & Laws

Common UX Mistakes

- Leave the UX for too late:
  - Maximum benefits are achieved when UX introduced early in the development process
- Leave the user feedback for too late:
  - Unfinished versions or prototypes of the product can be tested

Common UX Mistakes

- Spread the UX effort in too many places:
  - Use the 80/20 principle: Improve deeply the most important/relevant places
- Create a UX fiefdom:
  - Let people outside the group to know your work

Common UX Mistakes

- Rating the severity of usability problems:
  - Some thoughts on severity and frequency
  - Local evaluation: Jeff Rubin, Jakob Nielsen…
  - Global evaluation: Dumas and Redish
- Conclusions

Common UX Mistakes

- Frequency: Number of users that find a problem divided by the number of users testing the app or web
  - Easy (objective) to evaluate
- Severity: Importance of the problem
  - Might be completely catastrophic or simply cosmetic
  - Difficult (more subjective) to evaluate

Common UX Mistakes

- **Jeff Rubin:** Local evaluation
  - **4: Unusable:** The user is not able to or will not want to use a particular part of the product because of the way that the product has been designed and implemented.
  - **3: Severe**: The user will probably use or attempt to use the product here, but will be severely limited in his or her ability to do so.
  - **2: Moderate**: The user will be able to use the product in most cases, but will have to undertake some moderate effort in getting around the problem.
  - **1: Irritant**: The problem occurs only intermittently, can be circumvented easily, or is dependent on a standard that is outside the product's boundaries. Could also be a cosmetic problem.

Common UX Mistakes

- **Dumas and Redish:** Global evaluation
  - **Level 1**: Prevents Task Completion
  - **Level 2**: Creates significant delay and frustration
  - **Level 3**: Problems have a minor effect on usability
  - **Level 4**: Subtle and possible enhancements/suggestions

Common UX Mistakes

- Conclusions
  - Do not use a large number of categories
    - Do not get obsessed by the number of categories either
  - Different evaluators may disagree on some problems' severity
  - Treat frequency separately from severity
  - Do not forget to point out positive findings

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- **UX Principles**

Usability Principles

- Principles:
  - Fundamental statements that are widely applicable
    - May require the adaptation to the concrete application
- Theories:
  - Try to explain user behaviour, user performance, perception…

Usability Principles

- Principles:
  - Design for the people (user profiles)
  - Avoid limiting the target set (accessibility, internationalization…)
  - Application context (language, metaphors…)
  - Strive for consistency
  - Keep the user informed
  - Strive for simplicity
  - System under control

Usability Principles

- **Eight golden rules:**
  1. Strive for consistency.
  2. Enable frequent users to use shortcuts.
  3. Offer informative feedback.
  4. Design dialog to yield closure.
  5. Offer simple error handling.
  6. Permit easy reversal of actions.
  7. Provide the sense of control. ~~Support internal locus of control.~~
  8. Reduce short-term memory load.

Principles and theories

- Principles [Krug]:
  - DON'T MAKE ME THINK!!!

Principles and theories

- Guidelines:
  - More concrete than rules
  - Less specific as design rules
  - Usually a series of do and not-to-do rules

Principles and theories

- Guidelines. Example of navigation guidelines:
  - Standardize task sequences: Similar tasks should be performed by following similar steps
  - Ensure that embedded links are descriptive
  - Use unique and descriptive headings: Headings must be consistent and clear
  - Use check boxes for binary choices
  - For web pages, develop them so that they print properly
  - Use thumbnail images for previewing large images: If full-size image viewing is not critical

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