

IDI –Usability & Common Problems

Dep. Computer Science – UPC

Outline

- **Common Design Mistakes**
- Real World Examples
- Other UX errors

Common Design Mistakes

- Store/Market repositories:

- 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

- 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

- Common Design Mistakes

- Repeat and repeat everywhere
- Good to know
- Difficult to evaluate by the designer

Based on Jackov Nielson: 10+mistakes

Common Design Mistakes

1. 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 valorous cognitive efforts on wrong things
- Standard controls are standard because have proven efficacy for long periods

Common Design Mistakes

- Being clever instead of usable: Users might not get it

pepper catsear brussels sprout sweet pepper daikon spring onion aubergine broccoli rabe quandong mustard celery corn groundnut peanut. Mung bean fennel eggplant water spinach bunya nuts sierra leone bologi epazote okra caulié groundnut black-eyed pea parsnip fava bean squash.

Parsnip tomatillo swiss chard garbanzo gourd potato silver beet. Celery swiss chard melon zucchini arugula pea quandong beet greens radish artichoke black-eyed pea endive winter purslane horseradish garlic amaranth collard greens chickpea. Rock melon pumpkin collard greens celery broccoli rabe endive nori brussels sprout gourd courgette sea lettuce artichoke desert raisin coriander chard.

Collard greens ricebean horseradish wattle seed chard epazote potato peanut gram earthnut pea spinach yarrow desert raisin salad mung bean summer purslane fennel. Water spinach celery cucumber grape cauliflower nori daikon sweet pepper endive lentil turnip greens catsear leek beet greens. Melon seakale parsnip soybean bamboo shoot fennel scallion. Collard groundnut squash corn aubergine bitterleaf azuki bean dandelion courgette broccoli rabe. Chickpea + kohlrabi chickweed groundnut nori okra lentil water

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Common Design Mistakes

2. Elements that look like a GUI control but are not:

- Induces mistakes
- Produces confusion



Common Design Mistakes

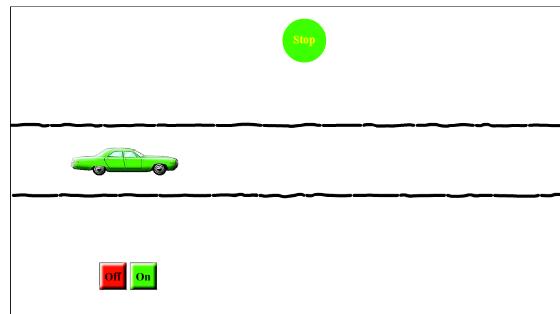
3. Inconsistency:

- Use the same words across the application (save file, save model...)
- Use parallel grammar for parallel elements
 - Menu items, icon labels...

Common Design Mistakes

• Inconsistency:

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



Design Mistakes. Applications

Problems

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



Common Design Mistakes

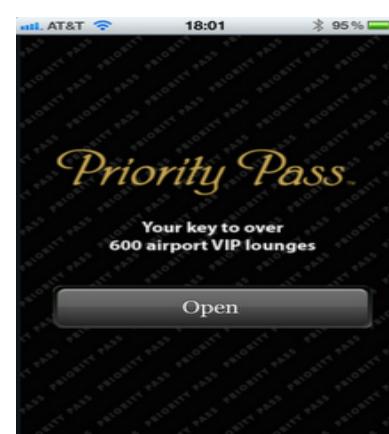
4. No perceived affordance:

- Invisible menus (to save space):
 - Old Word Processors, modern mobiles
- Do not know what to do -initial actions- and/or 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?

Design Mistakes. Applications

Problems

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



Common Design Mistakes

No perceived affordance: GESTURES

- The absence of any signals on the screen (signifiers, affordances) makes gestures undiscoverable
 - Swipe up or down, left or right, use one finger or two or three or four or five, or tap once, twice, or three times, or tap long or short?
- Users must memorize these gestures after first being told, "read the manual" (what manual?) or discovering them by accident.

Common Design Mistakes

5. 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
- Testing with users would solve most of them

Common Design Mistakes

6. 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

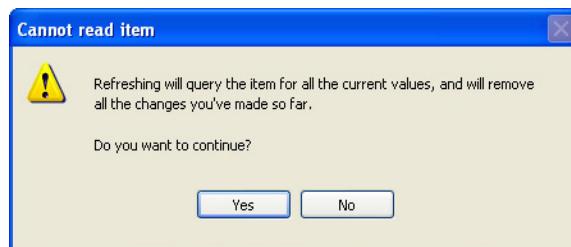
7. Lack of progress indicator:

- Tasks that require >1seg => cursor busy
- Tasks that require enough time (>10seg) should show progress indicator
 - Indicate the computer is busy
 - Should estimate time or % of task
 - Tell users what's happening
 - Let the user do another thing

Common Design Mistakes

8. Bad error messages₁:

- Do not provide information on the reason for the error
- Do not provide a clue on how to act
- Too fast to be read (e.g. thunderbird)



Common Design Mistakes

9. 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

10. 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

11. Missing information on how application works:

- Missing help
- Prepare for arbitrary app testing
 - Mobile apps stores
- Missing features that do exist
 - Bad evaluations in mobile markets!!!

Common Design Mistakes

12. Organising the data according to app design

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

Common Design Mistakes

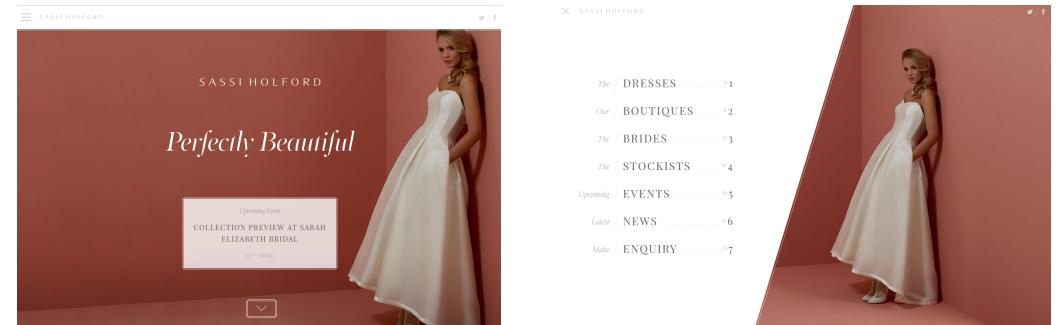
13. Reset buttons on web forms:

- 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

14. Creating overly enthusiastic designs

- 69% users spend most time top-left
- Do not hide navigation



Learn by example: webs & apps that suck

- <http://www.reforms.net>

Problems

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



Outline

- Common Design Mistakes
- **Real World Examples**
- Other UX errors

Real world examples

- Johnatan Ive (Apple's Chief Design Officer) is a fan of Bauhaus school's Dieter Rams minimalistic design
- Dieter Rams worked for many years for the German company Braun
 - Responsible of many of its simple-to-use and aesthetically pleasant product designs

Real world examples

Dieter Rams' principles of good design

1. Innovative
2. Makes a product useful: **usefulness is essential**
3. Aesthetic but well-executed
4. Makes a product understandable
5. Unobtrusive
6. Honest
7. Long-lasting
8. Thorough down to the last detail
9. Environmentally friendly
10. **As little design as possible**

Real world examples

- “**As little design as possible**” is the 10th principle!!!
 - Can be applied **after** the other ones
- Apple has sacrificed most of the qualities of its well-known usable design to this 10th principle

Real world examples

- Apple has **sacrificed usability to aesthetical simplicity:**
- ➡ from “easy-to-use, easy-to-understand” to “no manual included but it is necessary”
 - Tiny unreadable fonts
 - Lack of undo
 - Hiding/removing fundamental features
 - Lack of consistency in mouse/trackpad behavior
 - ...
- Read:
<https://www.fastcodesign.com/3053406/how-apple-is-giving-design-a-bad-name>

Common Design Mistakes

- E.g. Today's iPhones and iPads are a study in visual simplicity.

- Beautiful fonts (helvetica)
- A clean appearance, uncluttered by extraneous words, symbols, or menus
 - Thin fonts with little contrast

1/2 iOS 7 preview: horrible type. Low foreground/background contrast & lighter weight Helvetica trending illegible.

— Thomas Phinney (@ThomasPhinney) June 13, 2013

2/2 Existing iOS Helvetica UI font was already anti-legibility. iOS 7 choices could make me run for the hills.

— Thomas Phinney (@ThomasPhinney) June 13, 2013

Common Design Mistakes

• E.g. Today's iPhones and iPads are a study in visual simplicity.

- Beautiful fonts
- A clean appearance, uncluttered by extraneous words, symbols, or menus
 - Thin fonts with little contrast
- So what if many people can't read the text? It's beautiful.
 - People require to use Apple's assistive tool even if they do not have defective vision
 - Turns out that then the fonts are too big in many apps

Common Design Mistakes

E.g. No perceived affordance. iOS examples: UNDO

- Disappeared!
- People complained
 - Then, put undo back in...
 - ... if you violently shake your phone or tablet
 - But undo is not universally implemented, and there is no way to know except by shaking
 - Even then, you don't know if you didn't shake properly or undo is not implemented for that particular situation

Common Design Mistakes

No perceived affordance. iOS examples: UNDO

- Disappeared!
 - Sort of now by only shaking the device !!!???
 - Tablet shaking? WTF?
 - Not universally implemented!
- Touch-sensitive screens, especially on relatively small devices, offer multiple opportunities for things to go wrong when an active link or button is accidentally touched
- Back button should be universally available

Common Design Mistakes

• Use of modes:

- The ultimate in simplicity is a **one-button controller**: very simple, but because it has only a single button, its power is very limited unless the system has modes, e.g.:
 - One click → selection
 - Double click → erase
 - Triple click → undo
 - Long click → redo



Real world examples

- E.g. mouse in different devices and situations

...zooming on a trackpad involves putting pulling your thumb and one finger together in a pinching motion to make things smaller, or pushing them apart to make things larger.

Double-tapping on the trackpad with two fingers will also *zoom within some apps*, and *repeating the tap will zoom out again*.

This double tap feature also works on the Magic Mouse, just **remember** not to click the top, just tap the middle of the device instead....”

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Real world examples

E.g. Hiding fundamental features

- E.g. the lock rotating screen is difficult to understand:
 - It is grayed or not, but difficult to interpret its meaning
 - Turns out that Apple uses text to say which, but in tiny little letters somewhat removed from the icon itself
- Frequent operations should not require so long to be learnt

Real world examples

• Other examples:

- iOS keyboard not showing capitalization
 - The design decision that when a keyboard is in uppercase mode, it should display uppercase letters and, when in lowercase mode, it should display lowercase letters, is so obvious that the failure to provide this simple feedback on the current mode defies all credibility
 - It took Apple 9 versions of the OS to fix it!!!

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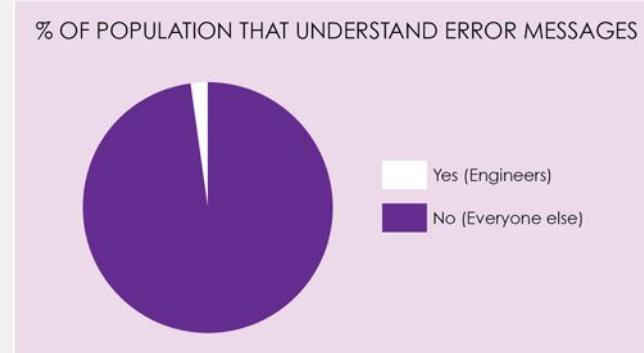
Other UX errors

- **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

Other UX errors



Other UX errors



Bonus track: Real-world Examples

- Products that *inspired* Apple



Bonus track: Real-world Examples

- Braun products that inspired Apple products

BRAUN T3 POCKET RADIO
(1958)



APPLE IPOD
(2001)



VS

Bonus track: Real-world Examples

- Braun products that inspired Apple products

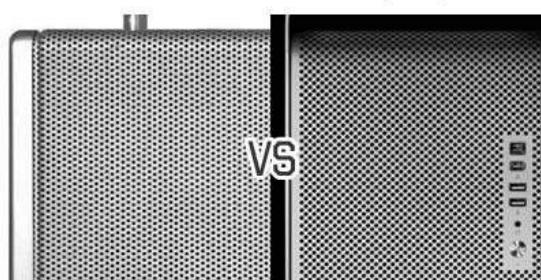


Bonus track: Real-world Examples

- Braun products that inspired Apple products

BRAUN T1000 RADIO (1967)

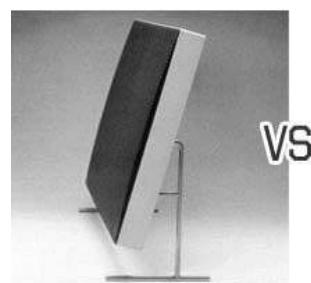
POWERMAC G5/MAC PRO.
(2003)



Bonus track: Real-world Examples

- Braun products that inspired Apple products

BRAUN LE1 SPEAKER
(1959)



APPLE IMAC
(2007)



VS

Bonus track: Real-world Examples

- Braun products that inspired Apple products

BRAUN T1000 RADIO
(1967)



POWERMAC G5/MAC PRO
(2003)



VS

Bonus track: Real-world Examples

- Braun products that inspired Apple products



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