CSCU9A2
Usability and Accessibility

- Motivation for good design
- Overview of Usability and Accessibility

Resources

Module Web Site

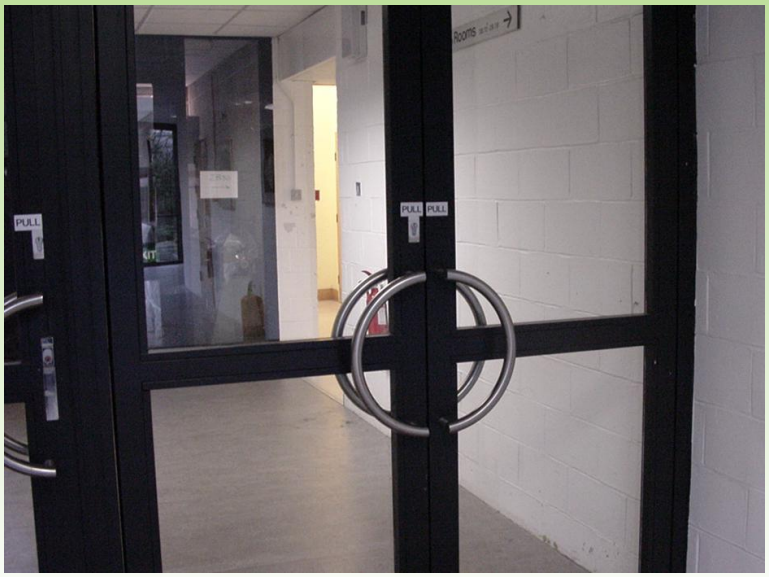
- http://www.cs.stir.ac.uk/courses/CSCU9A2/resources.php
  - Many links to information on the whole range of topics

Textbooks (background reading)

- *About Face: The Essentials of Interaction Design* (4th edition, 2014), Cooper *et al*, Wiley, ISBN 1118766571.

- *Don't Make Me Think: A Common Sense Approach to Web Usability* (3rd ed. 2014), S Krug, New Riders, ISBN 0321965515.

  Both are available in ebook format from the University library.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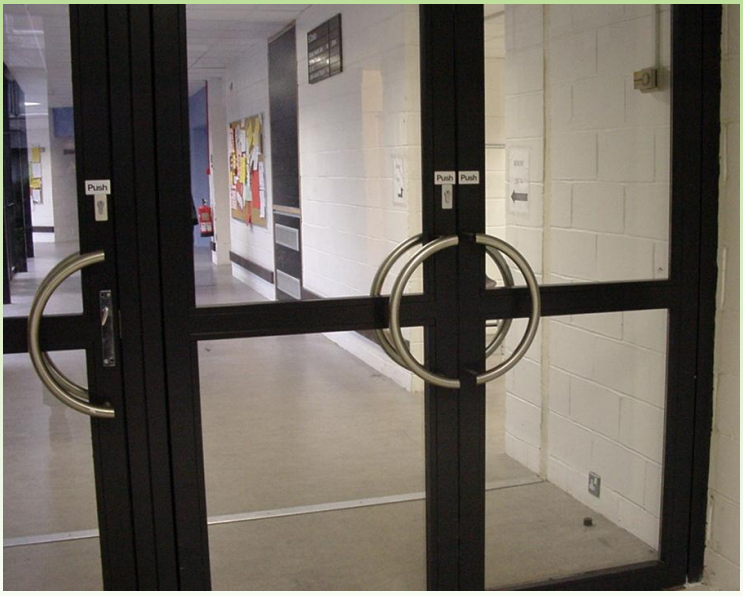
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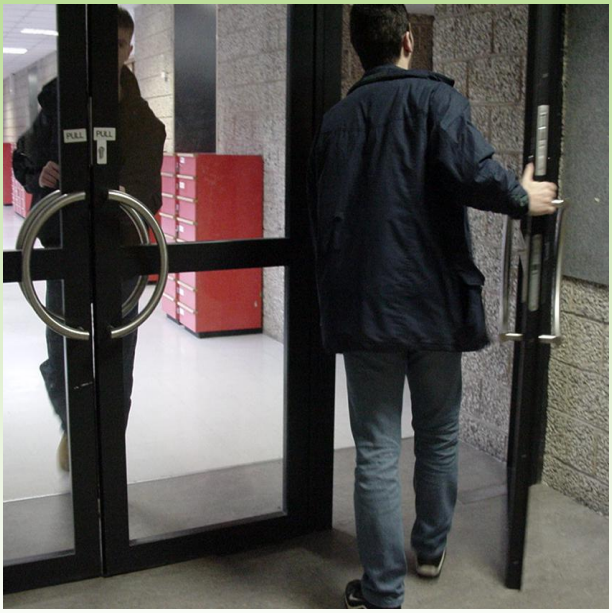
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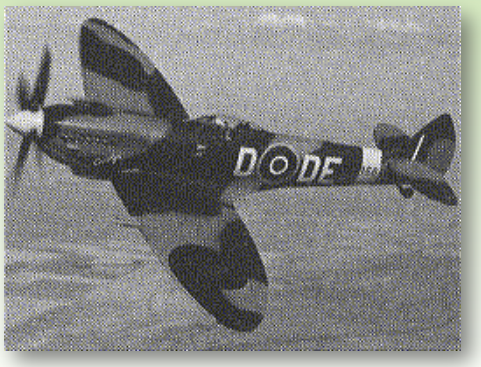
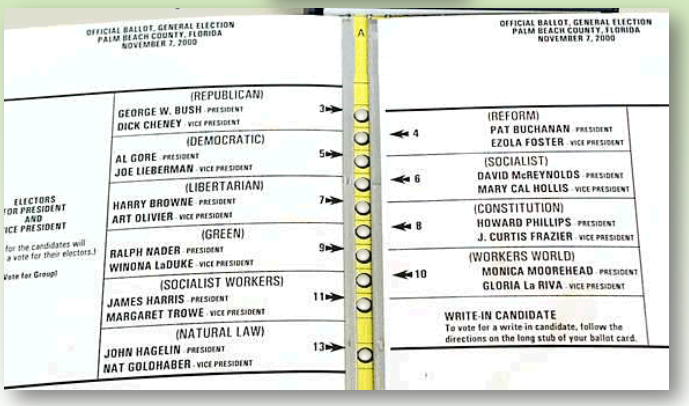
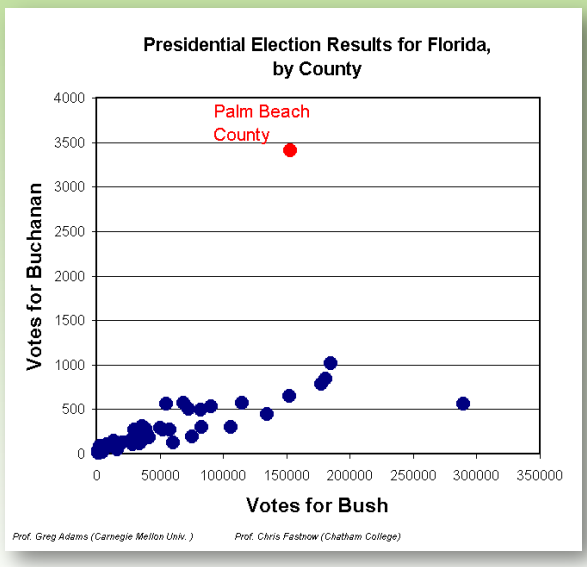
Human error….or bad design?

- During World War II, a new cockpit design was introduced for Spitfires




OFFICIAL BALLOT, GENERAL ELECTION
PALM BEACH COUNTY, FLORIDA
NOVEMBER 7, 2000
(REPUBLICAN)
GEORGE W. BUSH - PRESIDENT
DICK CHENEY - VICE PRESIDENT
(DEMOCRATIC)
AL GORE - PRESIDENT
JOE LIEBERMAN - VICE PRESIDENT
(LIBERTARIAN)
HARRY BROWNE - PRESIDENT
ART OLIVIER - VICE PRESIDENT
(GREEN)
RALPH NADER - PRESIDENT
WINONA LaDUKE - VICE PRESIDENT
(SOCIALIST WORKERS)
JAMES HARRIS - PRESIDENT
MARGARET TROWE - VICE PRESIDENT
(NATURAL LAW)
JOHN HAGELIN - PRESIDENT
NAT GOLDHABER - VICE PRESIDENT
3
5
7
9
11
13
(REFORM)
PAT BUCHANAN - PRESIDENT
EZOLA FOSTER - VICE PRESIDENT
(SOCIALIST)
DAVID McREYNOLDS - PRESIDENT
MARY CAL HOLLIS - VICE PRESIDENT
(CONSTITUTION)
HOWARD PHILLIPS - PRESIDENT
J. CURTIS FRAZIER - VICE PRESIDENT
(WORKERS WORLD)
MONICA MOOREHEAD - PRESIDENT
GLORIA La RIVA - VICE PRESIDENT
WRITE-IN CANDIDATE
To vote for a write-in candidate, follow the directions on the long stub of your ballot card.
4
6
8
10


Presidential Election Results for Florida, by County
Palm Beach County
Votes for Buchanan
Votes for Bush
4000
3500
3000
2500
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1500
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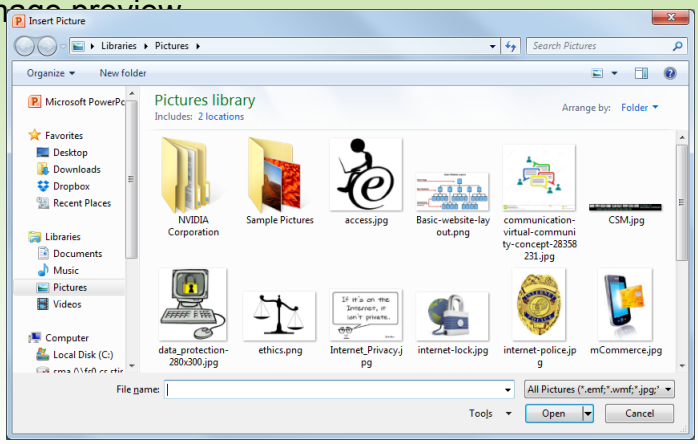
0
0
50000
100000
150000
200000
250000
300000
350000
Prof. Greg Adams (Carnegie Mellon Univ.)
Prof. Chris Fastnow (Chatham College)

Motivation for Good Design

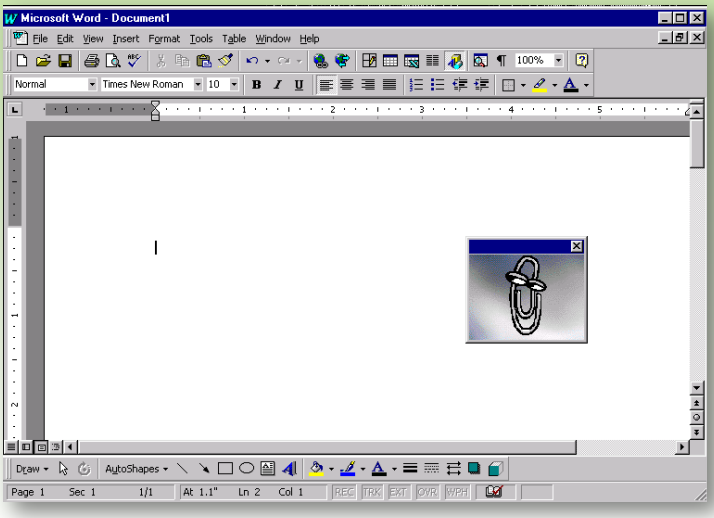
- Good design makes things easier to use.
  - if something is easy to use, it has good usability
  - "user-friendly" is also a term frequently used
- Good design
  - prevents errors
  - allows tasks to be accomplished faster
  - requires less training, and less memory load
  - is comfortable to use, and lets the user feel more in control
  - is commercially more profitable
- This all applies just as much to the world of computing!

Good Design Examples in Computing

1) Floppy disks
2) Image preview

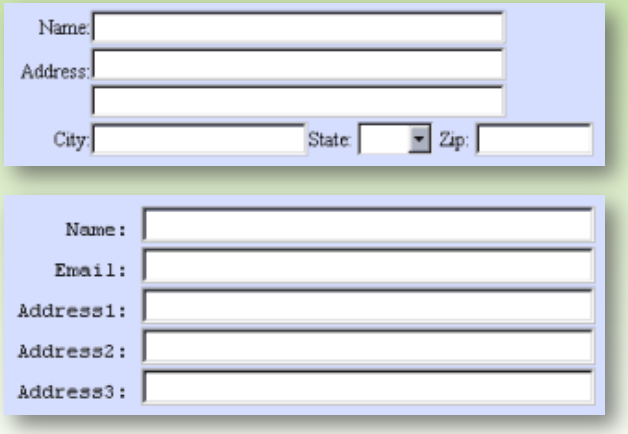


Not so good design...



Not so good design...

A small change can make a big difference!



Design in CSCU9A2

- This course aims to give you an understanding of basic design principles, in particular as applied to computing.
- The focus will be on designing web pages and software applications.
- Design principles are relevant to you, whether you end up being someone who:
  - programs computers
  - designs web pages
  - designs products for a company
  - produces printed materials
  - in any way, has a hand in producing things that people will use!

Inclusive Design

- In particular, good design means inclusive design.
- Definition: Inclusive design means designing products which as many people as possible can use.
  - In particular inclusive design aims to meet the needs of people who have been unable to use mainstream products because of age or disability.
- A product may not have a design that will work for 100% of people, but that should not prevent it being designed to be easily usable by as many people as possible.
- Seems simple and common sense!
  - If so, why is there no shortage of products which have been badly designed?

Battery charger with red/green indicator lights

www.bbc.co.uk
www.myatt.co.uk

Inclusive Design

- Inclusive design is usually
  - practical, achievable
- Inclusive design does not mean
  - uniform, utilitarian or boring products!
- Most people can be catered for with relatively small changes to design
  - most of these are cheap
  - more costly changes usually result in net savings through increased use/sales

Accessibility

- Accessibility is the term used for inclusive (or universal) design in the world of technology.
- It means good usability for everyone, including those who have disabilities or who are using old, alternative or emerging technologies.
- Computers offer many opportunities to everyone, in particular some disabled people may be able to do things they could not do before.
- Examples of accessibility:
  - A blind person may read a daily newspaper online with the aid of screen-reading software (provided the newspaper website has been designed to accommodate this).
  - The same website may be viewed on a large desktop screen or a tiny smartphone screen.

Overview of lectures in this section

- The importance of good design (this lecture)
- Desiging for good usability
  - General design principles
  - Computing-specific design principles
  - Testing for usability
- Getting to "Know Thy User"
- Disabilities and Accessibility
  - Accessibility standards and guidelines
  - Assistive technologies
  - Testing for accessibility
  - Legislation (see slides on module website)

End of Lecture