

Metaphor, Idiom, Affordance

Lecture 9

INFO 461 Cooperative Software Design

want to work in the software industry as a **developer, tester, manager, or designer?**

you'll implement and deploy 2 versions of a web application in small teams, learning

software architecture	debugging
team coordination	testing
version control	verification
issue tracking	analytics

this is a great chance to put your web development skills into practice!

Info 447 - Computer Supported Cooperative Work CSCW

INFO 447 Explores a range of topics to understand Collaboration and Collaborative Technologies

How do people collaborate using technology?

What is a collaborative technology?

Email, Word, Skype, Twitter, Facebook, Wikipedia?

How do we maintain awareness of the collaborative activity of others?

For Winter 2012 the course will explore CSCW as it happens in Wikipedia through readings, discussion, and concrete exploration of collaborative activity in Wikipedia. As part of the class students will participate in Wikipedia, and explore collaborative activity through logs and dumps of Wikipedia.

Context

- Product Behaviors
 - Principles for designing good behavior
- Affordance
- Metaphor & Idiom

Considerate Products (1)

- Considerate products
 1. Take an interest
 2. Are deferential
 3. Are forthcoming
 4. Use common sense
 5. Anticipate people's needs
 6. Are conscientious

Considerate Products (2)

- Considerate products
 7. Don't burden users with internal problems
 8. Keep users informed
 9. Are perceptive
 10. Are self-confident
 11. Don't ask a lot of questions
 12. Take responsibility
 13. Know when to bend the rules

Considerate Products (3)

- Like any set of design principles
 - Products may not be able to satisfy all at all times
 - Some principles may conflict with others
 - Example?

Smart Products

- Putting idle cycles to work
 - Background processing when possible
- Remembering
 - Settings, preferences, last choice
 - File locations, preferred directories
 - Recent files, recent applications menus
 - Tasks, patterns
 - implicit macros and unlimited undo

Affordance

- Attributed to Don Norman
 - “the perceived and actual properties of the thing, primarily those fundamental properties that determine just how the thing could possibly be used.”
 - How does the artifact tell you what it does?

Affordance

- What does this “say”?



Affordance

- What does this "say"?



Affordance

- How do they say something different?



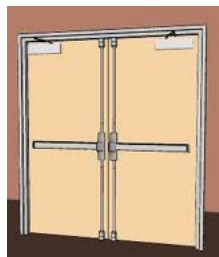
Affordance

- What does this "say"?



Affordance

- What does this "say"?



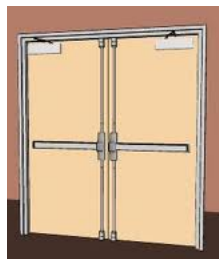
Affordance

- What does this “say”?



Affordance

- How do they say something different?



Affordance

- What does this “say”?



Affordance

- Manual affordances
 - Examples: knobs, handles, dials, push bars
- Affordance in UI Design
 - Make the widget suggest what to do with it
 - Direct manipulation is based around affordances

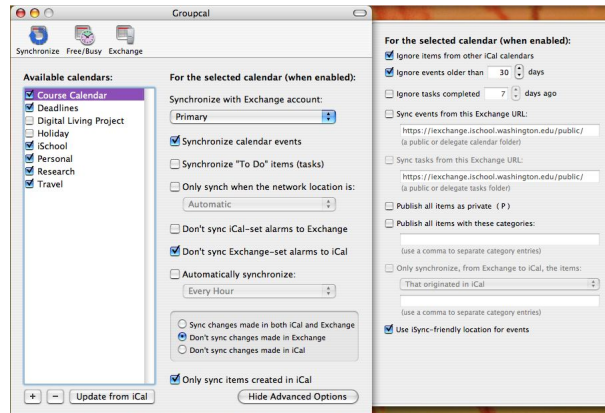
Interface Paradigms

- Implementation-Centric Interfaces
- Idiomatic Interfaces
- Metaphoric Interfaces

Implementation-Centric Interface

- A problematic design
- Implementation-Centric Interfaces
 - Designed around the internals of the system
 - To use the UI well, you must understand the system internals
- Know an example of this?

Implementation-Centric Interface

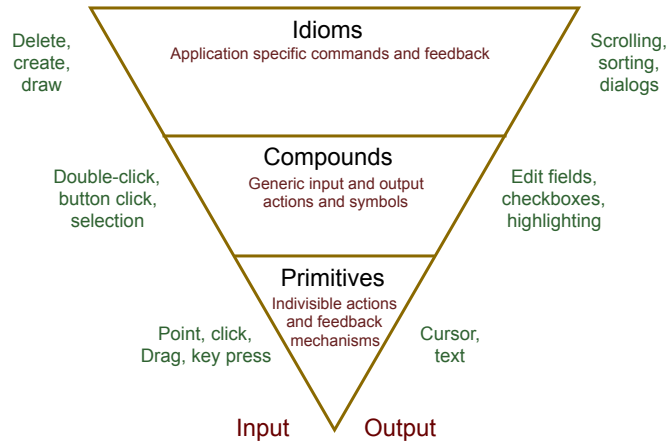


Idiomatic Interfaces

- GUIs are Idiomatic
 - Controls/Widgets are visual idioms that support interaction

- Good Idioms are Learned Once
 - All UI idioms must be learned

GUI Idiomatic Hierarchy



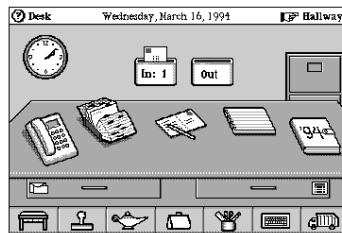
Metaphoric Interfaces

- Limits of Metaphors
 - Metaphors do not scale well
 - They only work when designer and users share the same cultural assumptions
 - Small boost of learnability for novices at the expense of regular users
- Intuition, Instinct and Learning
 - Intuition is a middle ground between instinct and learning something.

Limits to Metaphors

- Finding good metaphors is hard
 - Physical object as metaphor works for some things
 - But not all
 - Some actions have no easy representation in a GUI
- Problems with global metaphors
 - They can constrain actions – limit design options
 - Users can expect consistency with the metaphor

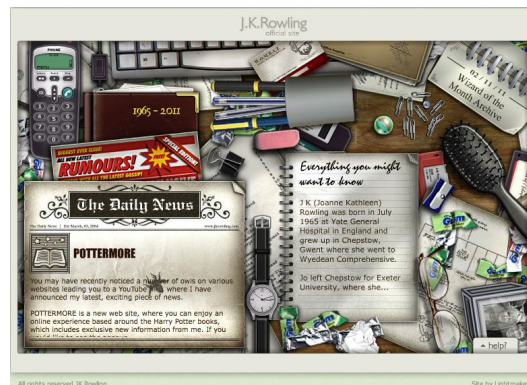
Magic Cap Desktop



MS Bob's Home Office



J.K. Rowling Web



Exercise

- Design a metaphoric interface
 - Briefly outline 1 scenario of use
 - Sketch 1 or 2 examples of what it would look like
 - Be able to explain how the scenario is illustrated in the interface

- PUT YOUR NAMES ON THE PAPER
 - 15-20 minutes