CS 696 Mobile Phone Application Development
Fall Semester, 2009
Doc 18 Design 2
Nov 17, 2009

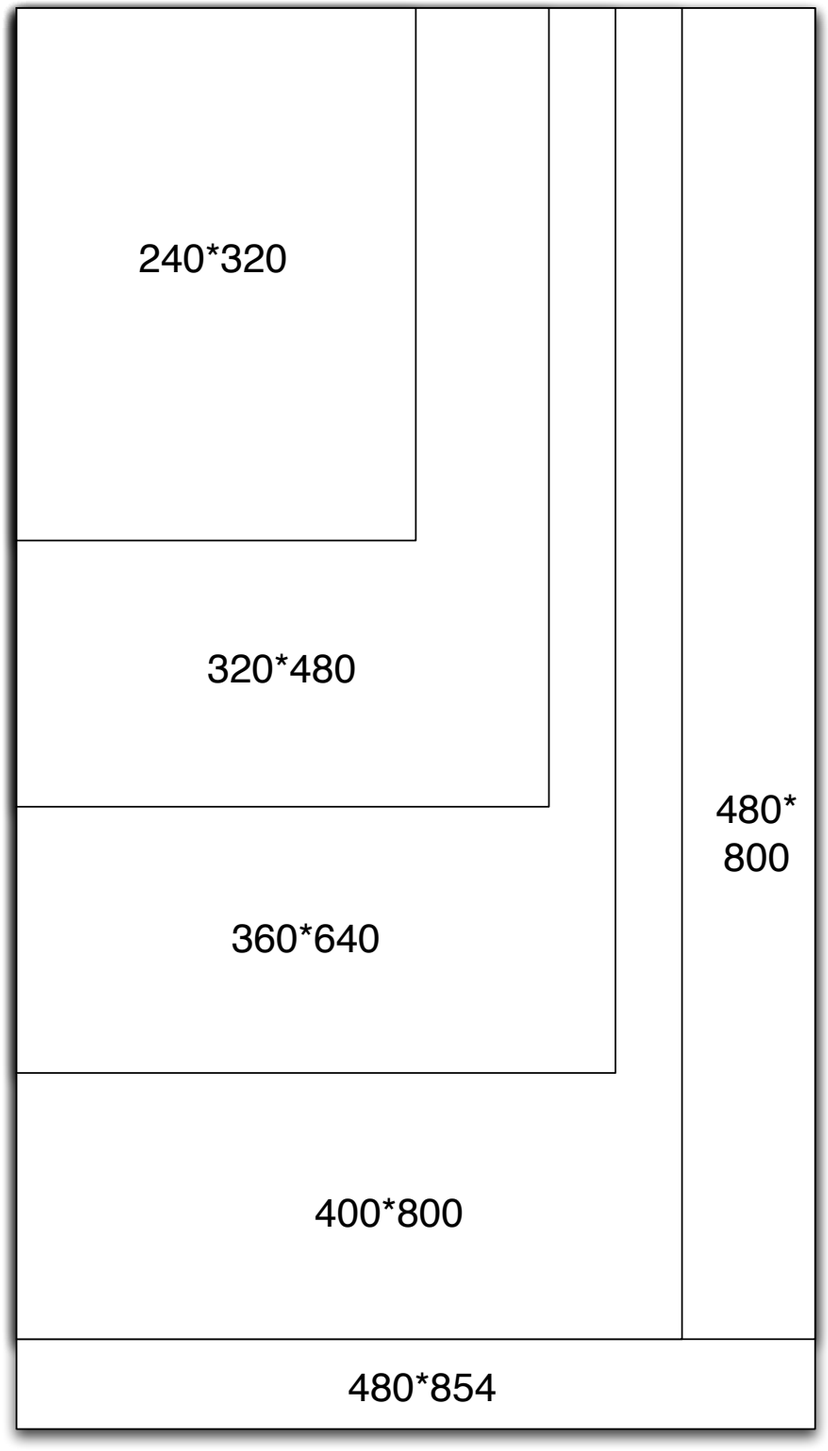
References

User Interface Design For Programmers, Joel Spolsky,
http://www.joelonsoftware.com/uibook/fog0000000249.html

Android Screen Sizes in Pixels

240*320
Tattoo
LG Etna*
Lancaster*
Heron*

320*480
G1
Hero
Pulse
Magic
Galaxy
CLIQ
Moment
Belold 2*
Calgary*
Galaxy lite*



360*640
Dell Mini i3

400*800
Sony Xperia X3*

480*800
Acer A1*
Dragon*

480*854
Droid
ARCHOS Tablet

* rumored or not released

http://www.techcrunch.com/2009/10/19/android-galore-a-complete-list-of-the-android-phones-and-their-specs-droid-best/

Classic Software Development Mistakes

People-Related Mistakes
Process-Related Mistakes
Product-Related Mistakes
Technology-Related Mistakes

Classic mistakes by Steven McConnell, http://www.stevemcconnell.com.nyud.net/rdenum.htm

People-Related Mistakes

1. Undermined motivation
2. Weak personnel
3. Uncontrolled problem employees
4. Heroics
5. Adding people to a late project
6. Noisy, crowded offices
7. Friction between developers and customers
8. Unrealistic expectations
9. Lack of effective project sponsorship
10. Lack of stakeholder buy-in
11. Lack of user input
12. Politics placed over substance
13. Wishful thinking

Process-Related Mistakes

14. Overly optimistic schedules
16. Insufficient risk management
17. Contractor failure Insufficient planning
18. Abandonment of planning under pressure
19. Wasted time during the fuzzy front end
20. Shortchanged upstream activities
21. Inadequate design
22. Shortchanged quality assurance
23. Insufficient management controls
24. Premature or too frequent convergence
25. Omitting necessary tasks from estimates
26. Planning to catch up later
27. Code-like-hell programming

Product-Related Mistakes

28. Requirements gold-plating
29. Feature creep
30. Developer gold-plating
31. Push me, pull me negotiation
32. Research-oriented development

Technology-Related Mistakes

33. Silver-bullet syndrome
34. Overestimated savings from new tools or methods
35. Switching tools in the middle of a project
36. Lack of automated source-code control

One Agile Development Practice

Customer ranks features in order of importance

Developer estimates development time per feature

Features implemented per iteration

- Important features first
- Only those features that fit in to the iteration period

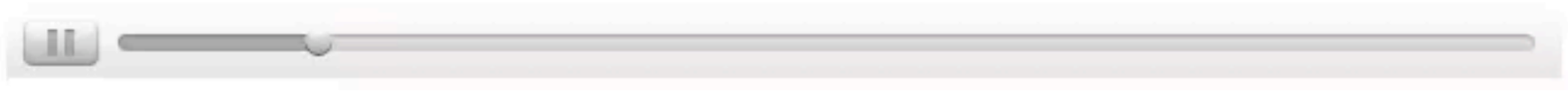
Another Agile Development Practice

Always have a working program

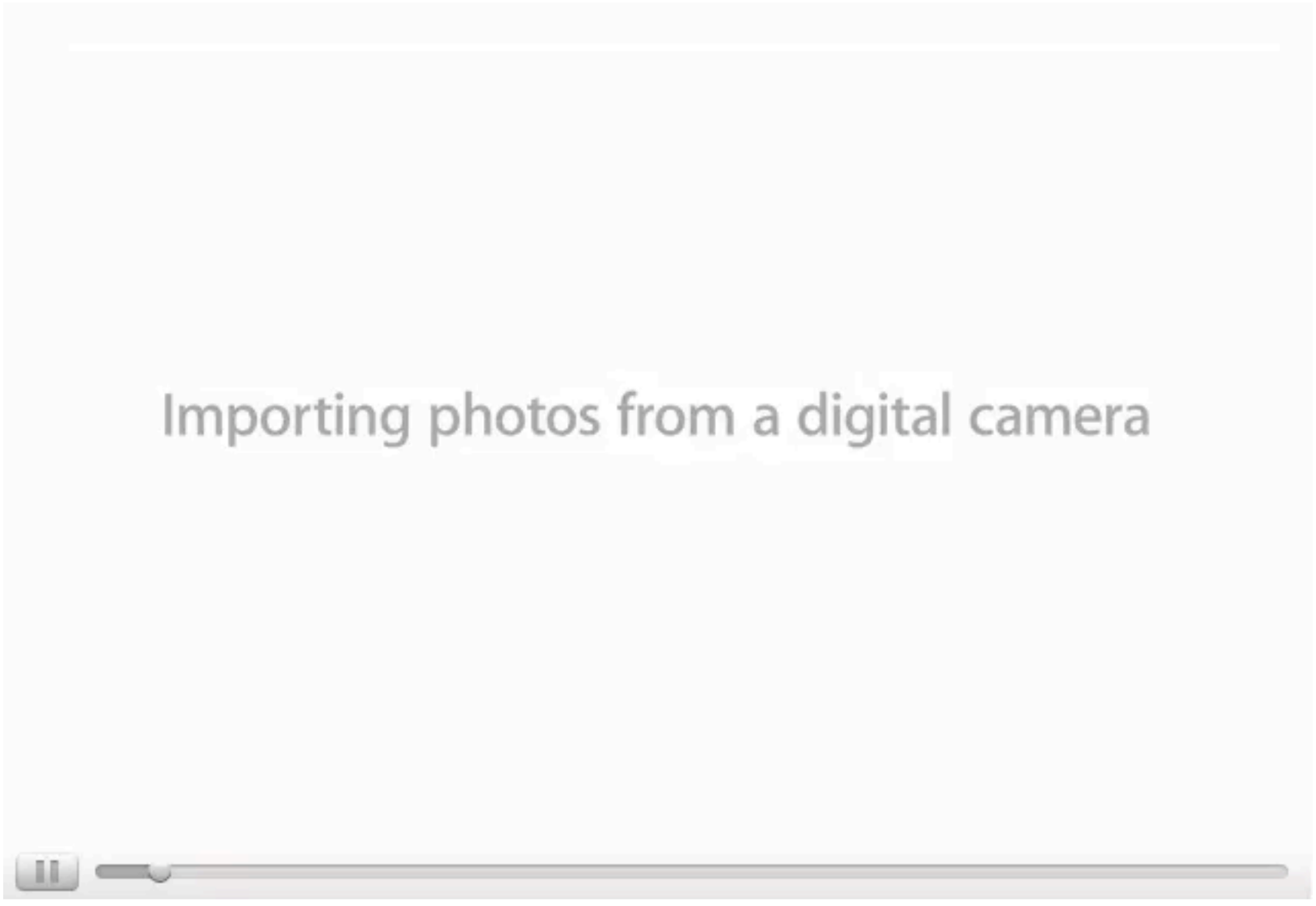
Paper Prototype

User Interface Design For Programmers

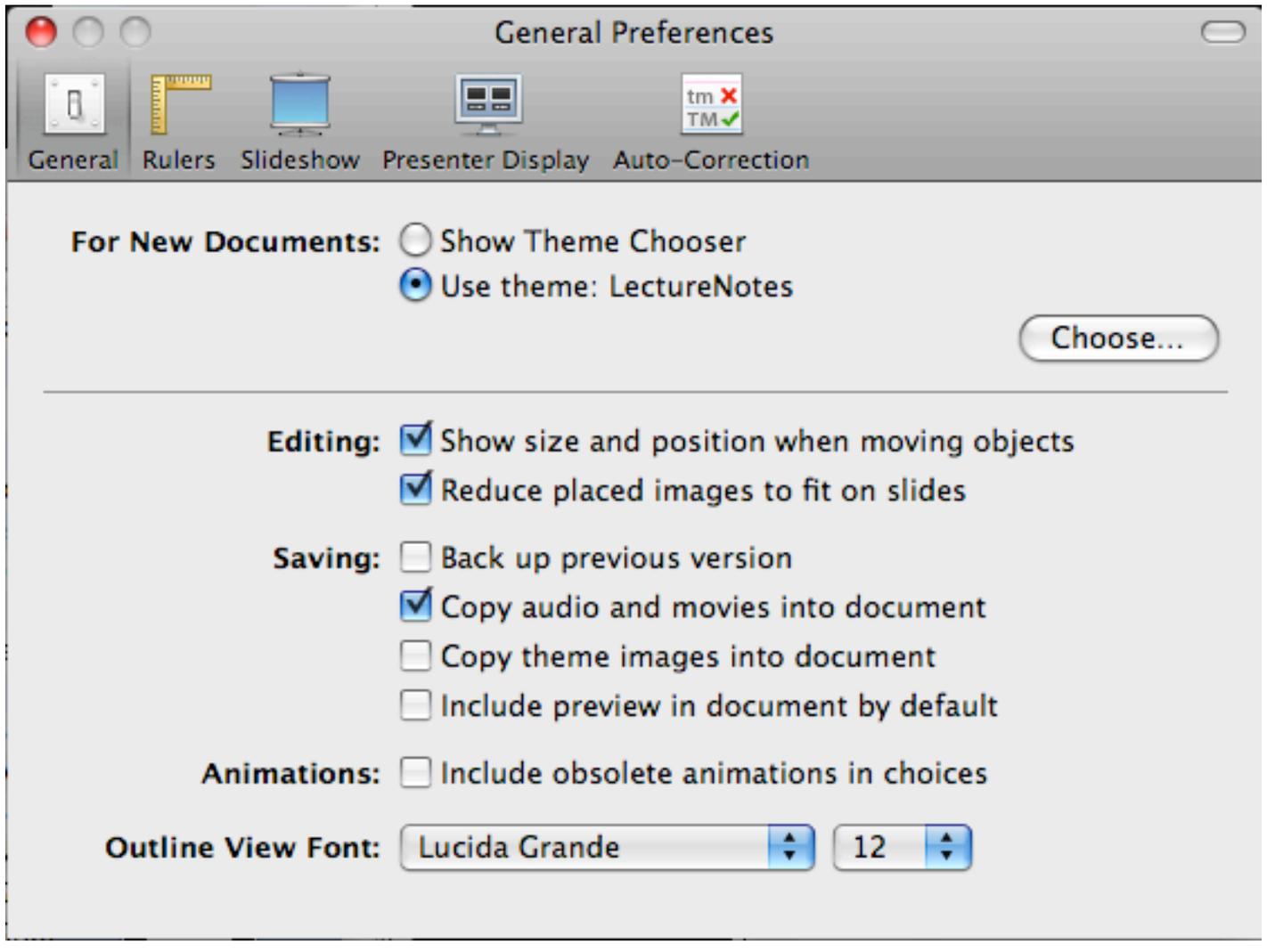
A user interface is well-designed when the program behaves exactly how the user thought it would.



From http://www.apple.com/ilife/tutorials/#iphoto-intro



From http://www.apple.com/ilife/tutorials/#iphoto-import


General Preferences
General
Rulers
Slideshow
Presenter Display
Auto-Correction
For New Documents:
Show Theme Chooser
Use theme: LectureNotes
Choose...
Editing:
Show size and position when moving objects
Reduce placed images to fit on slides
Saving:
Back up previous version
Copy audio and movies into document
Copy theme images into document
Include preview in document by default
Animations:
Include obsolete animations in choices
Outline View Font:
Lucida Grande
12

Who is your user?

Patricia is an English professor who has written several well-received books of poetry. She has been using computers for word processing since 1980, although the only two programs she ever used are Nota Bene (an ancient academic word processor) and Microsoft Word. She doesn't want to spend time learning the theory of how the computer works, and she tends to store all her documents in whatever directory they would go in if you didn't know about directories.

http://www.joelonsoftware.com/uibook/fog0000000249.html

What does the user expect?

What is their mental model of the computer/application

Ask them

Perform usability studies

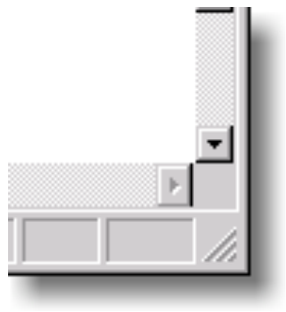
Choices

Every time you provide an option, you're asking the user to make a decision.

Image from http://www.joelonsoftware.com/uibook/fog0000000249.html

Metaphors

Affordance

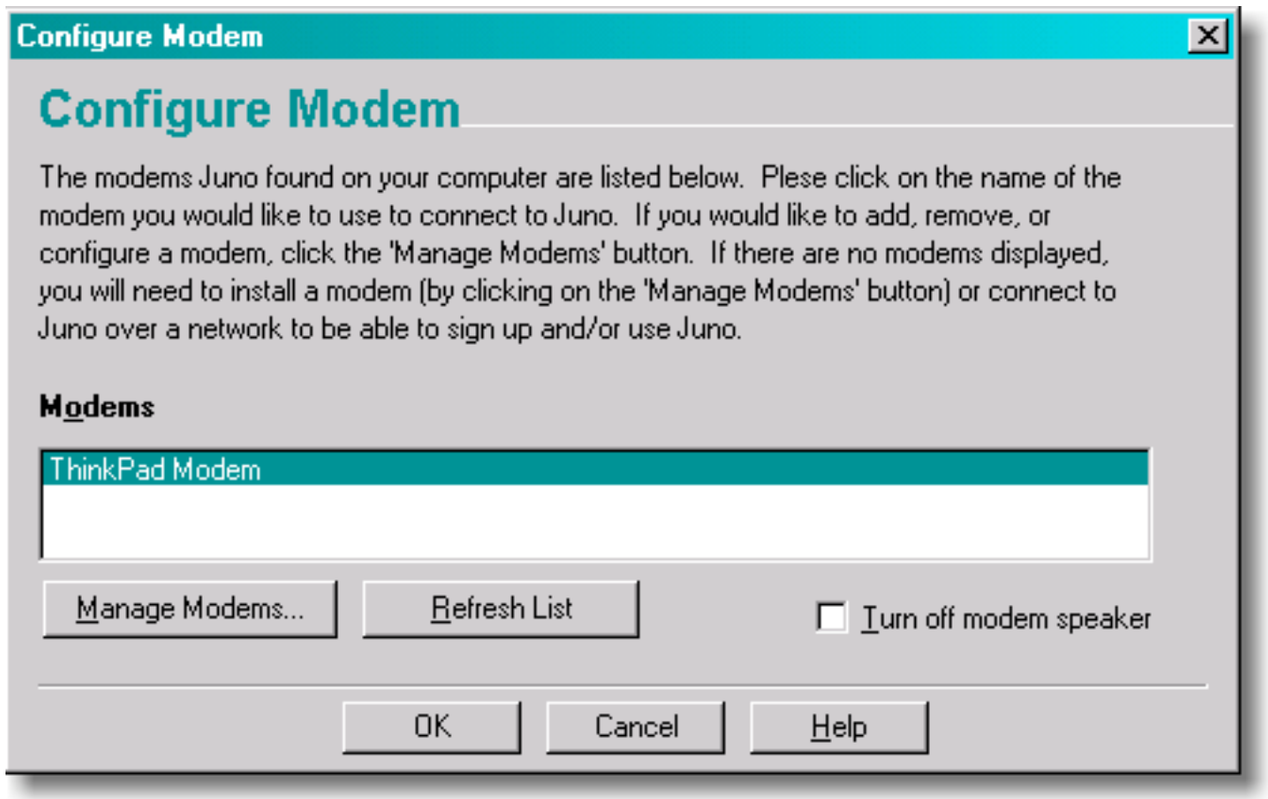


Consistency

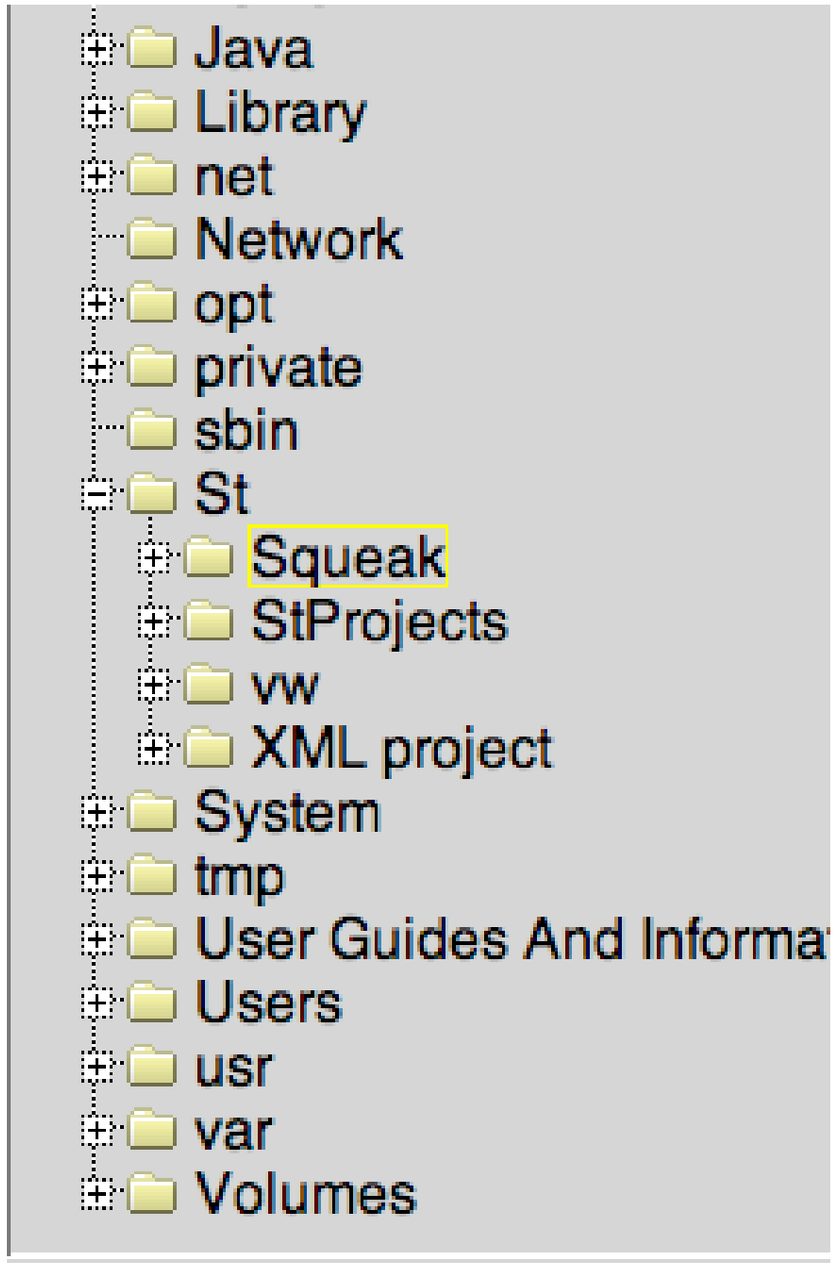
Designing for People Who Have Better Things To Do With Their Lives

Users Don't Read the Manual

Users don't read anything


Configure Modem
Configure Modem
The modems Juno found on your computer are listed below. Plese click on the name of the modem you would like to use to connect to Juno. If you would like to add, remove, or configure a modem, click the 'Manage Modems' button. If there are no modems displayed, you will need to install a modem (by clicking on the 'Manage Modems' button) or connect to Juno over a network to be able to sign up and/or use Juno.
Modems
ThinkPad Modem
Manage Modems...
Refresh List
Turn off modem speaker
OK
Cancel
Help

Users can't use the mouse



Six steps for designing good software

Invent some users

Figure out the important activities

Figure out the user model

Sketch out the first draft of the design

Iterate over your design again and again

Watch real humans trying to use your software.