


Direct Manipulation GUIs with Java Swing



Kyle Cordes

Oasis Digital Solutions Inc.

St. Louis Java UG

Sep. 8, 2005



I Hate “About Me” Slides



- ⌘ I've worked on “enterprise” apps in Java and other languages, mostly as a consultant or contractor.
- ⌘ I give talks and teach classes occasionally.
- ⌘ Oasis Digital builds custom applications for our clients – both enterprise apps and shrinkwrap.
- ⌘ We also build and sell a Java / Swing / wireless-mobile based app.

Direct Manipulation



- ⌘ User arranges on-screen representations of domain data
 - ☑ Not “indirectly” by entering data in fields
- ⌘ Swing “Drag-and-Drop” is about data format negotiation and transfer.
- ⌘ “Naked Objects” is about not writing much GUI code.

Example: Calendar



- ⌘ Many Calendar applications let you visually move/modify events...
- ⌘ ... it is not all that hard to write with Swing.
- ⌘ (Code for this is not in the sample source, it is not all mine to offer.)

Example: Ordering



⌘ Your users need to arrange what order some domain objects are in.

Example: Hierarchy



- ⌘ Your users need to see and adjust a containment hierarchy of some kind (an Org chart)
- ⌘ Often a JTree works well
 - ☑ With some effort to get drag/drop to work
- ⌘ Here is an alternative

Large Data Volume



- ⌘ It's often practical to display thousands of data points on a screen.
- ⌘ You have a lot of pixels – use them to convey information
 - ☐ Web apps are often weak in this area

Time is Money



- ⌘ Common objection: GUIs like this take too long to write and test

 - ☑ It's only hard if you don't know how to do it.

- ⌘ Consider the value of User time vs. Developer time

 - ☑ How many users?

- ⌘ The “Wow” factor – commercial apps

Key Points



- ⌘ Immediate feedback
- ⌘ Smooth motion
- ⌘ Use your pixels
- ⌘ Spatial thinking
- ⌘ Minimize scrolling
- ⌘ Color
- ⌘ Stability

We're Hiring



- ⌘ We need a Java developer to help build apps like this, as well as do a lot of other development.
- ⌘ This work is at an affiliated company, MWM LLC, that sells a product, it is not consulting work.
- ⌘ We use ideas like those in this talk.

THE END



⌘ Kyle Cordes
kyle@kylecordes.com

⌘ Slides and code will be on my site:
<http://kylecordes.com>

⌘ And also on the user group site, most likely