
JavaOne℠
Sun's Worldwide Java Developer Conference
Designing Your Own Class Libraries

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Designing Your Own Class Libraries

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Dimension X and Java™

- Our background and experience
- Our interest in Java™-based technology

Overview

- Using packages
- Packages and scope rules
- Using native extensions
- Applications vs. Applets
- Case study – Liquid Motion

Design Issues – Using Packages

- Why use packages?
- How much goes into a package?
- Package naming

Why Use Packages?

- To reduce namespace clutter
- For design clarity
- For project sharing
- For authoring vs. publishing distinctions

How Much Goes Into a Package?

- Design scope of a package
- Sub-packages and misc packages

Package Naming

- Corporate root names
- Standard package naming
- Versions and naming

Packages and Scope

- Scope support in the Java™ language
- Cross-package scope challenges – when you need a friend
- Interfaces vs. callbacks

Scope Support in Java™

- Public, and what it is good for
- Protected, and why it should be pervasive
- Private, and when to use it.
- Default (package) scope – it's utility (and dangers)

Cross-Package Scope Challenges

- Breaking encapsulation
- Efficiency considerations
- Sub-packages and scope
- Alternatives to friends in Java™

Interfaces vs. Callbacks

- Using interfaces in design
- Update wrapper objects

Using Native Extensions

- The temptations and the pitfalls
- Platform issues
- Architecture and design of extension classes

Applications vs. Applets in Design

- Applet class design issues
- Application class design issues
- Extensible architectures
- Delivery mechanisms, licensing issues

Applet Design Issues

- Size matters!
- Class count and zip loaders
- ID stamping and caching

Application Design Issues

- User interface complexity
- Platform dependence
- Debug and release versions
- Integration with an applet

Extensible Architectures

- Dynamic loading
- Using the Class class
- Cross-package plug-in sets.

Delivery Mechanisms, Licensing Issues

- Applications and the runtime of the Java™ language
- Java™ in the OS is coming!
- Application vs. Applet licenses.

Case Study – Liquid Motion

- The class hierarchy
- The applet and the application
- Lessons learned