

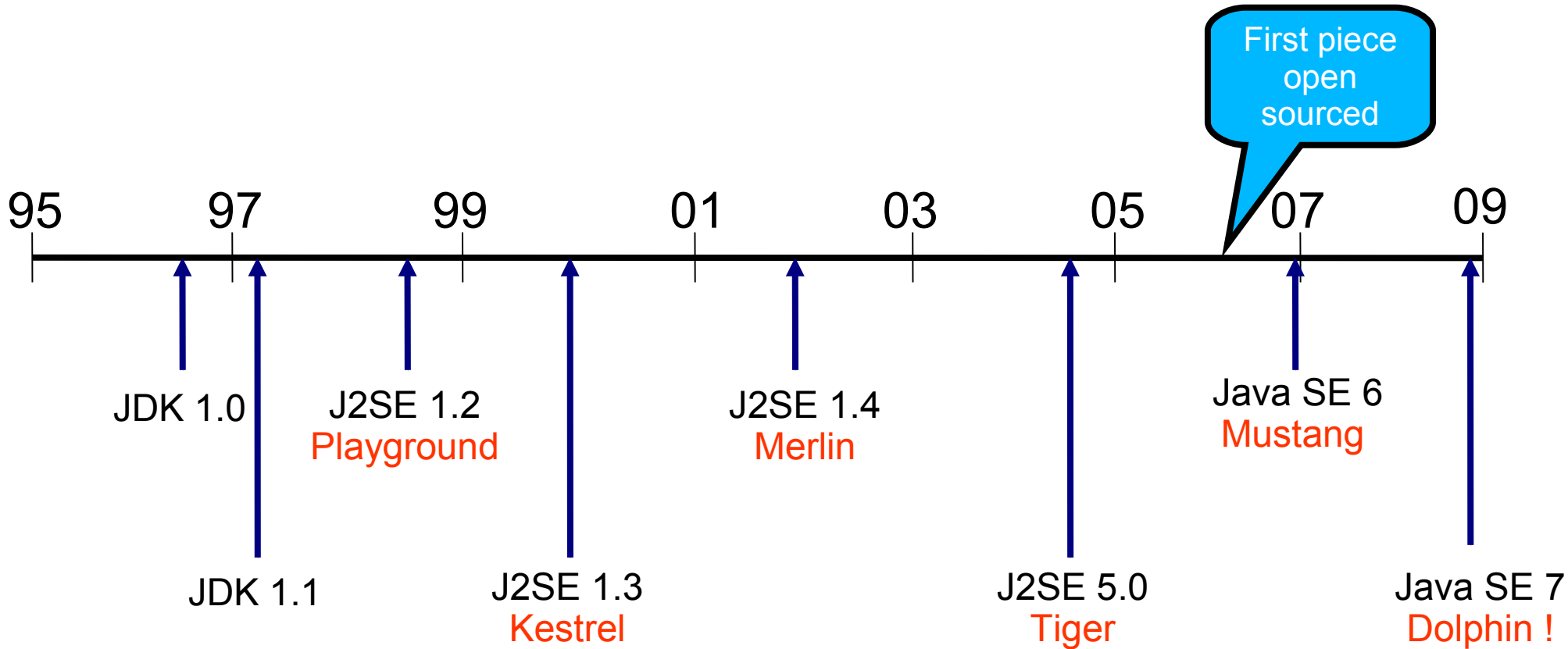


# JDK 6 - Mustang

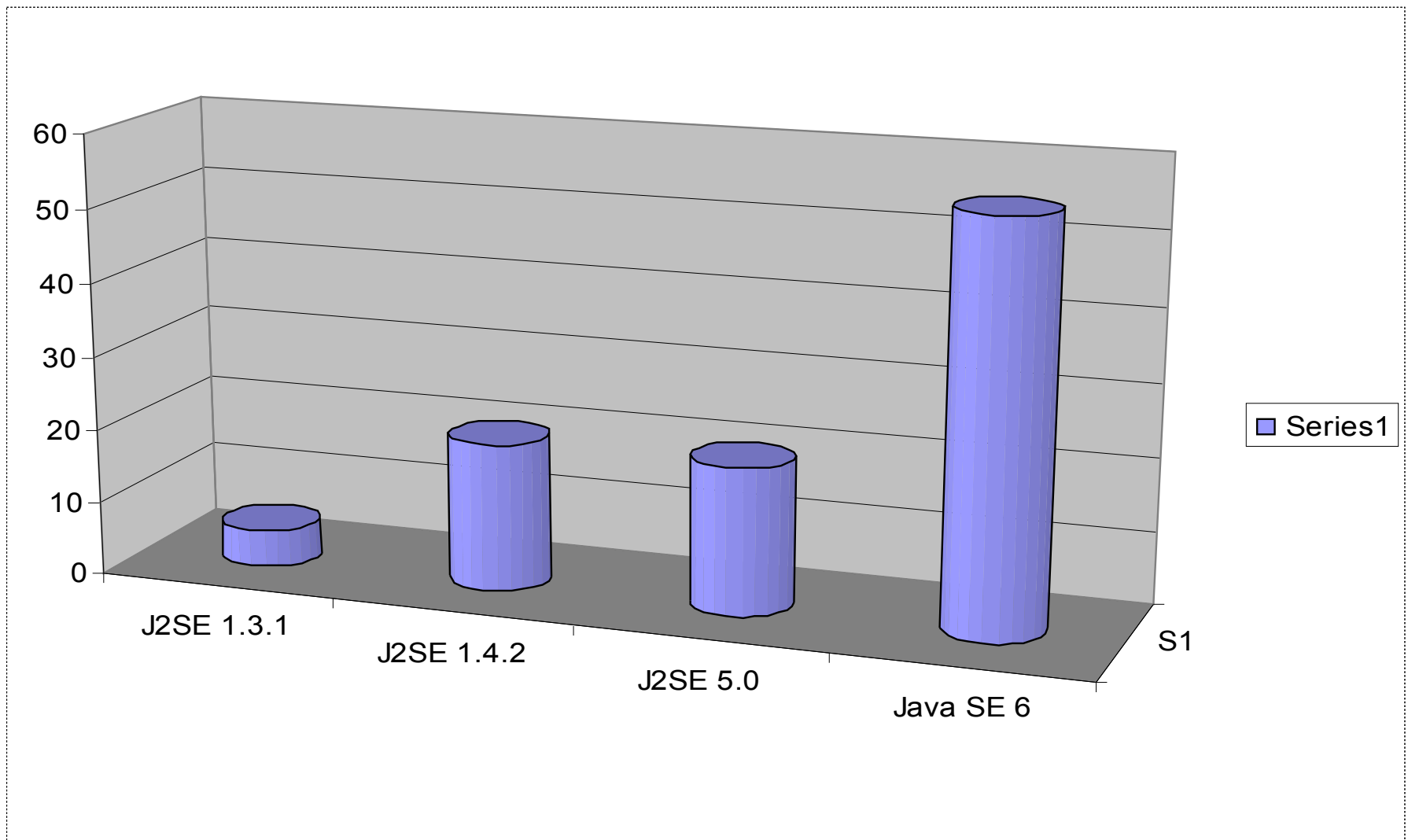
Vaibhav Choudhary  
Vaibhav.Choudhary@sun.com



# Platform Evolution



# JDK 6 Adoption



# JDK 6 new features

- Scripting Language Support
- Desktop API
- Compiler Access
- Web Services
- Rendering in AWT/Swing component
- JDK Tools
- Consumer JRE
- Console Class
- Performance
- Free Disk Space

# Scripting Language Support

- Scripting for Java Platform – JSR 223
- Java Script Engine is included in J2SE6
  - > Mozilla Rhino Engine
- [scripting.java.net](http://scripting.java.net)
- `import javax.script.*`
  - > `javax.script.ScriptEngineFactory`
  - > `javax.script.ScriptEngineManager`
  - > `javax.script.ScriptEngine`
  - > `javax.script.ScriptException`
  - > ...
  - > ...
- Demo

# Desktop API

- Desktop Class
- Tray Icon
- Splash Screen
- Text Printing
- JTable filtering and Sorting
- Group Layout

# < java.awt.Desktop >

- Email
  - > Sending mail with default client
- Browsing
  - > Opening a URL with default browser
- File processing
  - > Handling files with applications registered in native system
- Can work on different platform
  - > Desktop.isDesktopSupported()
- Demo

# Tray Icon

- Add Tray Icon in System Tray
- Import Statements
  - > `java.awt.SystemTray`
  - > `Java.awt.TrayIcon`
- Ability to add graphics, pop-up and tip functionality to the system tray.
- Construct Tray Icon, Add event Listener, Add Icon to System Tray
- Demo

# Splash Screen

- Display a splash screen instantly
- Used for ?
- Command Line
  - > java -splash:image ClassName
- Display from MANIFEST.MF
  - > Splashscreen-Image: image.gif
- Control painting from application – Java 2D

```
SplashScreen sp =  
SplashScreen.getSplashScreen();  
Graphics2D g = sp.createGraphics();  
// your painting code here  
sp.update();
```

- Demo

# JTable Filtering/Sorting

- import javax.swing.table.TableRowSorter
- import javax.swing.RowFilter
- Can specify a filter to limit
  - > Regular Expression
  - > Date
  - > Number
- Add sorting with one method call
  - > `setAutoCreateRowSorter(true)`
- Demo

# Compiler Access

- Classes on demand
  - > JSP kit that need to generate bunch of classes on demand
  - > Aimed for people who create tools for Java development and for frameworks
- Programmatic access to javac
- Jasper JSP runs 4x faster
- Demo

# JDK Tools

- Tools shipped with JDK 6
  - > **jstack** – snapshot of all threads and what they are doing in the stack frame
  - > **jmap** – snapshot of what's going in memory at any instance
  - > **jhat** – tool that interpret the result of jmap
  - > **jconsole** – can connect to the application that didn't startup with JMX agent
  - > **xjc** – convert xml code into getter setter of java
  - > **jinfo** - assignment 😊
- Demo ?

# Disk Space

- Enhanced file API <java.io.File>
- API for disk checking
  - > getTotalSpace()
  - > getFreeSpace()
  - > getUsableSpace()
- Demo

# Desktop Improvement

- Graphics hardware acceleration on Windows
- True double buffering
- Update Swing L&F on Windows/Unix
- LCD text rendering
- Vista L&F
- JTable Sorting/Filtering

# Dialog Modality

- Allow the developer to limit dialog box modality
  - > modeless
    - > Don't block any window
  - > document-modal
    - > Block top level windows
  - > application-modal
    - > Block all windows from same application
  - > toolkit-modal
    - > Blocks all windows running under the same toolkit
- Allow dialog and windows to be parentless.
- Demo

# <java.io.Console>

- Added new Console class – strengthen IO class.
- Read line from console
- Read password from console
- Can block application, before start up. More Application usages ?
- Demo

# More with File...

- Can make file read only
  - > `file.setWritable(false);`
  - > `file.canWrite();`
- Can get a proper URL from a file object
  - > `file.toURI().toURL();`
- Demo

# Features not covered here

- JDBC 4.0, Java DB
- Pluggable Annotations
- Security Features
- Web Services Enhancement
- New Layout Designs
- Consumer JRE

- Questions and some suggestions !