



the  
**POWER**  
of  
**JAVA™**



# Using NetBeans™ Mobility Pack to Develop JSR 226 Applications

Vincent Hardy   Petr Suchomel   Jerry Evans  
Sun Microsystems Inc.

TS-3301

Copyright © 2006, Sun Microsystems Inc., All rights reserved.

2006 JavaOne™ Conference | Session TS-3301 |

[java.sun.com/javaone/sf](http://java.sun.com/javaone/sf)

# Goal of This Session

Show how NetBeans™ Mobility Pack allows developers to leverage the work of graphic artists, illustrators and animators

# Agenda

Markup and Java™ Technology: Keys to Collaboration

Developer Tools to Leverage the Work of Graphic Artists and Animators

Demonstrations

Slideware, Demoware, Realware?

What Is Real, What Is Coming?

# Agenda

Markup and Java™ Technology: Keys to Collaboration

Developer Tools to Leverage the Work of Graphic Artists and Animators

Demonstrations

Slideware, Demoware, Realware?

What Is Real, What Is Coming?

# DEMO

Simple SVG Demo



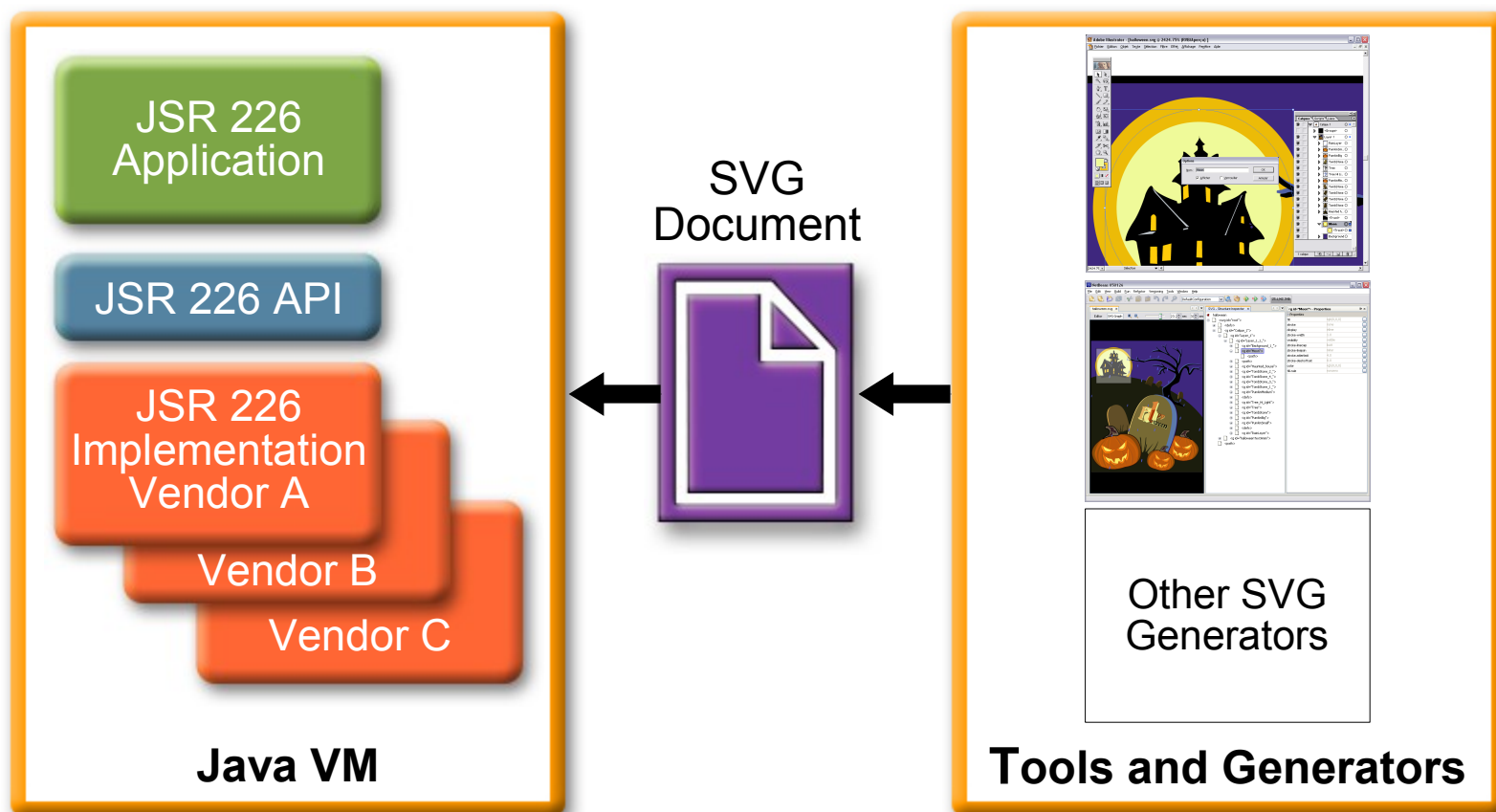
# Underpinning Technologies

## Standards Are Collaboration Enablers

- Graphics or animation authoring tool can easily generate standard XML markup
- Developer tools can easily import markup (they already use XML extensively)
- SVG Tiny 1.1 is an example of markup that can be easily generated and exported
- Java technology and JSR 226 provide a platform and an API to leverage SVG Tiny resources on the Java platform

# Underpinning Technologies

## Standards Are Collaboration Enablers



# Scalable Vector Graphics Tiny

## What Is SVG?

```
<svg width="500" height="500">
  <g transform="translate(250,250)">
    <circle id="bkg" r="240"
      fill="rgb(253,237,153)"
      stroke="rgb(255,209,31)"/>
    <ellipse rx="240" ry="80" fill-opacity="0.25">
      <animateTransform attributeName="transform"
        type="scale"
        values="1;0.2;0.8;0.3;1"
        begin="bkg.click"
        dur="5s"/>
    . . . .
  </g>
</svg>
```



# JSR 226\*

## An API for SVG Tiny

- Load SVG Tiny Content into application
- Modify SVG Tiny Content through API calls
- Render and Play SVG Tiny Content in application
- Interact with SVG Tiny Content by listening to user events (e.g., detect click on graphical elements)
- Compatible with CLDC/MIDP, CDC and Java Platform, Standard Edition (Java SE)

\* JSR 226: <http://www.jcp.org/en/jsr/detail?id=226>

# JSR 226 Code Sample

```
import javax.microedition.m2g.*;
import org.w3c.dom.svg.*;

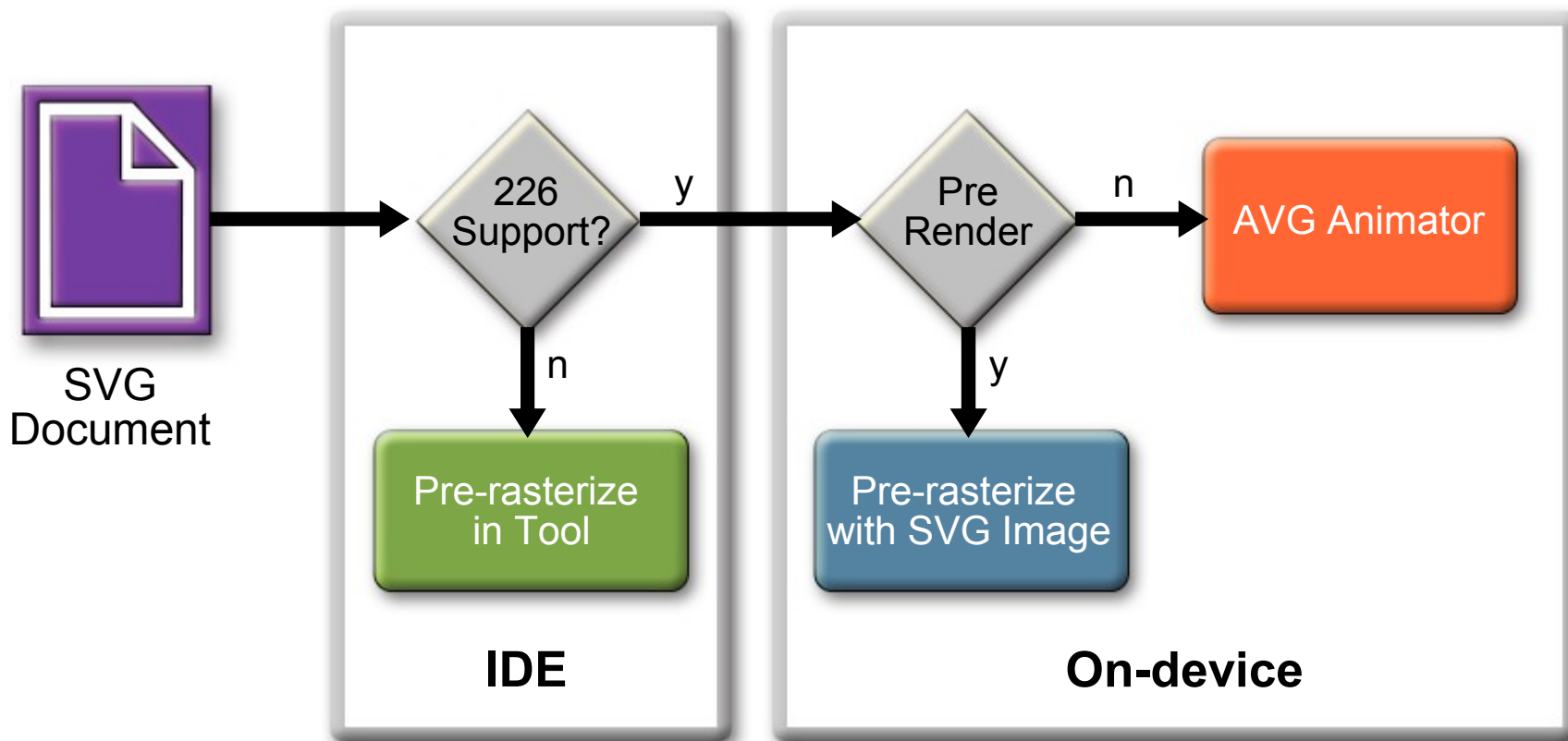
// Load SVG Tiny Content
SVGImage svgImage = SVGImage.createImage(svgURI, null);

// Access and modify a specific node in the document
Document doc = svgImage.getDocument();
SVGElement rect = (SVGElement) doc.getElementById('myrect');
rect.setFloatTrait("width", 200f);

// Play the SVG Tiny Content
SVGAnimator animator = SVGAnimator.createAnimator(svgImage);
animator.play();
```

# Various Ways of Leveraging SVG with JSR 226

## Multiple Opportunities



# Agenda

Markup and Java™ Technology: Keys to Collaboration

Developer Tools to Leverage the Work of Graphic Artists and Animators

Demonstrations

Slideware, Demoware, Realware?

What Is Real, What Is Coming?

# Tools for Creating Rich Content

## Rich Content Requires Different Skills, Different Tools

- Professional coding and debugging requires developer skills and developer tools (IDE)
- Professional graphics require graphic artist skills and graphic illustration tools
- Professional animations require animator skills and animation tools
- Rich content requires the collaboration of people and tools with different skills

# Integrated Development Environment

## NetBeans Project Introduction

- Open source project sponsored by Sun
- Modular architecture
- Base for NetBeans IDE and other Sun products
- Development for Java SE and Java EE technologies
- NetBeans Mobility Pack for Java ME development available as an add-on
- Powerful development tool for Java ME space

# NetBeans IDE SVG Support

## SVG Support in NetBeans Mobility Pack

- Bridge between artists and developers for both CDC and CLDC development
- Support for SVG graphics viewing and exploration
- Graphics to code binding support
- Preview of created application

# Enabling Collaboration

## Extending NetBeans Mobility Pack for Collaboration

- Leverage NetBeans modular architecture to add an SVG module to provide SVG specific features
- Allowing collaboration with artists requires more than just exchanging files
  - View SVG Tiny Source
  - View SVG Tiny Rendering
  - View SVG Tiny Rendering at different times
  - Inspect the content of an SVG Tiny resource
  - Creating code and binding code to SVG events
  - Using SVG based widgets in visual design
  - Export SVG Tiny to PNG for devices without JSR 226



# Agenda

Markup and Java™ Technology: Keys to Collaboration

Developer Tools to Leverage the Work of Graphic Artists and Animators

**Demonstrations**

Slideware, Demoware, Realware?

What Is Real, What Is Coming?

# DEMO

NetBeans Mobility Pack's SVG Module

# SVG Tiny Images for Legacy Phones

## If My Phone Does Not Support JSR 226

- Export SVG image as PNG
- Export SVG animation as PNG sequence
- Fully suitable for MIDP 2.0 Game API
- NetBeans Mobility Pack's 'Configurations-aware' support helps defining if any given phone supports JSR 226

# DEMO

Using SVG Images for Legacy Phones

# Agenda

Markup and Java™ Technology: Keys to Collaboration

Developer Tools to Leverage the Work of Graphic Artists and Animators

Demonstrations

Slideware, Demoware, Realware?

What Is Real, What Is Coming?

# Status

## What Is Here? What Is Coming?

- SVG Tiny 1.1 (Jan '03), SVG Tiny 1.2 (Last Call)
- JSR 226 (Mar '05)
- JSR 226 implementations are coming and will be deployed soon
- JSR 287 is a new effort for SVG Tiny 1.2 and more
- Tools to generate SVG Tiny content exist: Ikivo, Beatware, Adobe Illustrator
- SVG support for NetBeans Mobility Pack available soon

# Summary

## Tools and Collaboration

- There is no one size fits all tool
- Tools should integrate using open technologies, such as standard markups
- SVG Tiny and JSR 226 are an example of how the work of graphic artists, animators and developers can be integrated
- The model can be extended to more sophisticated markups such as Compound Document Formats (CDF)

# For More Information

## SVG Tiny

<http://www.w3.org/TR/SVGMobile12/>

<http://www.svg.org>

## NetBeans software:

<http://www.netbeans.org>

## Compound Document Formats (CDF):

<http://www.w3.org/2004/CDF>

## JSR 290 (CDF)

<http://www.jcp.org/en/jsr/detail?id=290>

## JSR 226 and 287:

<http://www.jcp.org/en/jsr/detail?id=226>

<http://www.jcp.org/en/jsr/detail?id=287>





the  
**POWER**  
of  
**JAVA™**



JavaOne  
Part of the Network and Business Solutions

# Using NetBeans™ Mobility Pack to Develop JSR 226 Applications

Vincent Hardy   Petr Suchomel   Jerry Evans  
Sun Microsystems Inc.

TS-3301