



SwingLabs – Status Update

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Agenda

- What is SwingLabs
- SwingX
- SwingX – WS
- More Subprojects
- How to Contribute
- Q & A

What is SwingLabs

- Java Desktop Developers Community
- An Incubator for new Swing Components and features
- Free OSS
 - Mostly LGPL
 - Some code licensed under BSD Like License
- Umbrella project for Java Desktop Development

SwingLabs Projects

- SwingX
- SwingX – WS
- TimingFramework
- JXLayer
- AnimatedTransitions
- SwingWorker
- JSR 295 & 296
- And many more !!!

Why to Bother?

- We do the heavy lifting so you don't have to
- Allow you to spend more time on problem domain rather than writing plumbing code
- Promoting nice and usable Java Desktop Apps
- Giving you extra time to think of even better features ;)

Information Sources

➤ swinglabs.org

- Tutorials & Articles
- Blogs & Examples
- Downloads
 - Daily
 - Weekly
 - Releases

➤ SwingLabs Forum

- <http://forums.java.net/jive/forum.jspa?forumID=73>
- Discussions on different features functionality
- Troubleshooting
- Proposals for new features and updates

Continuous Integration

Hudson

search ? logout

Hudson » [SwingX Weekly Build](#)

[ENABLE AUTO REFRESH](#)

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- [Coverage Trend](#)

Project SwingX Weekly Build

Weekly Build of SwingX. Once a week, on Sunday, it runs a build and posts the results to java.net, and prepares the link on swinglabs.org.

Build History [\(trend\)](#)

- [#81](#) [May 4, 2008 6:05:41 AM](#)
- [#80](#) [Apr 27, 2008 6:05:06 AM](#)
- [#72](#) [Mar 2, 2008 6:03:51 AM](#) [lock](#)
- Release 0.9.2
- [#53](#) [Oct 21, 2007 6:01:34 AM](#) [lock](#)
- Release SwingX-0.9.0
- [for all](#) [for failures](#)



[Javadoc](#)



[Workspace](#)



Latest Artifacts

- [swingx-2008_05_04-src.zip](#)
- [swingx-2008_05_04-bin.zip](#)
- [swingx-2008_05_04-javadoc.zip](#)



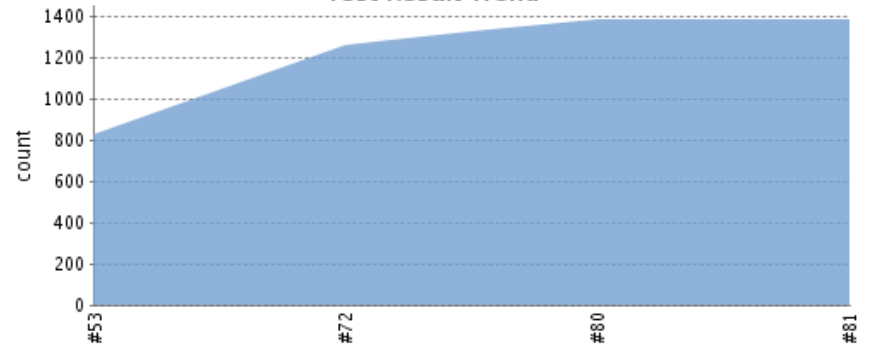
[Recent Changes](#)



[Latest Test Result](#) (no failures)

[edit description](#)

Test Result Trend



[\(just show failures\)](#) [enlarge](#)

Code Coverage Trend



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SwingX

- Swing eXtensions
- Provides Additional Functionality above the basic Swing
- Big Collection of New (or Extended) Swing Components
- Aim is to Provide Features
 - Commonly requested
 - Simple To Use
- Removes burden of reimplementing complex functionality (e.g. autocomplete)

Component & Feature List

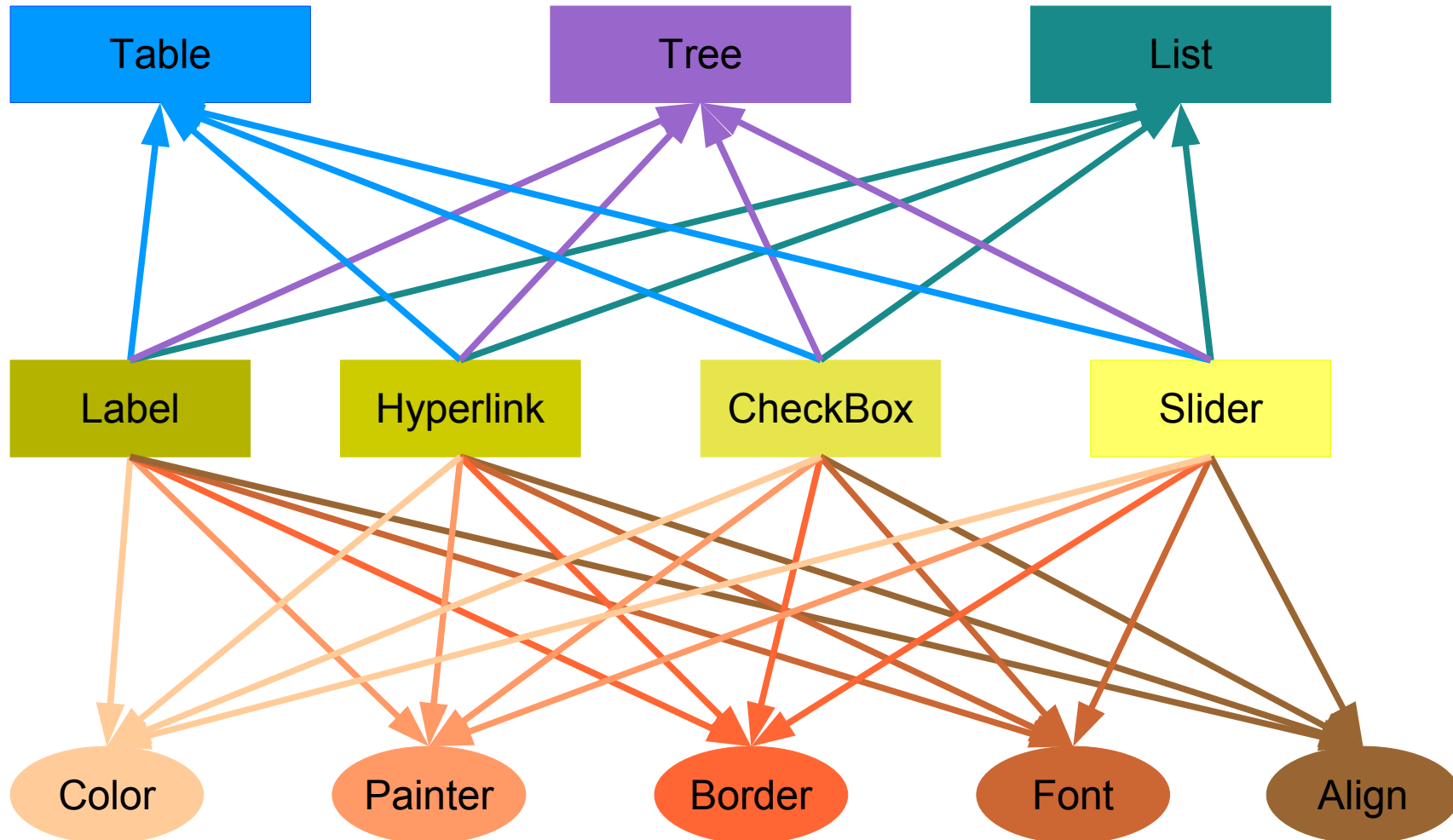
- JXTable & JXTree & JXTreeTable
- Painters, Filters, Highlighting, Sorting
- JXDatePicker, JXColorChooser
- JXDialog & JXHeader & JXLabel
- JXLoginPane, JXStatusBar
- MultiSplit Layout
- And Many More!

SwingX

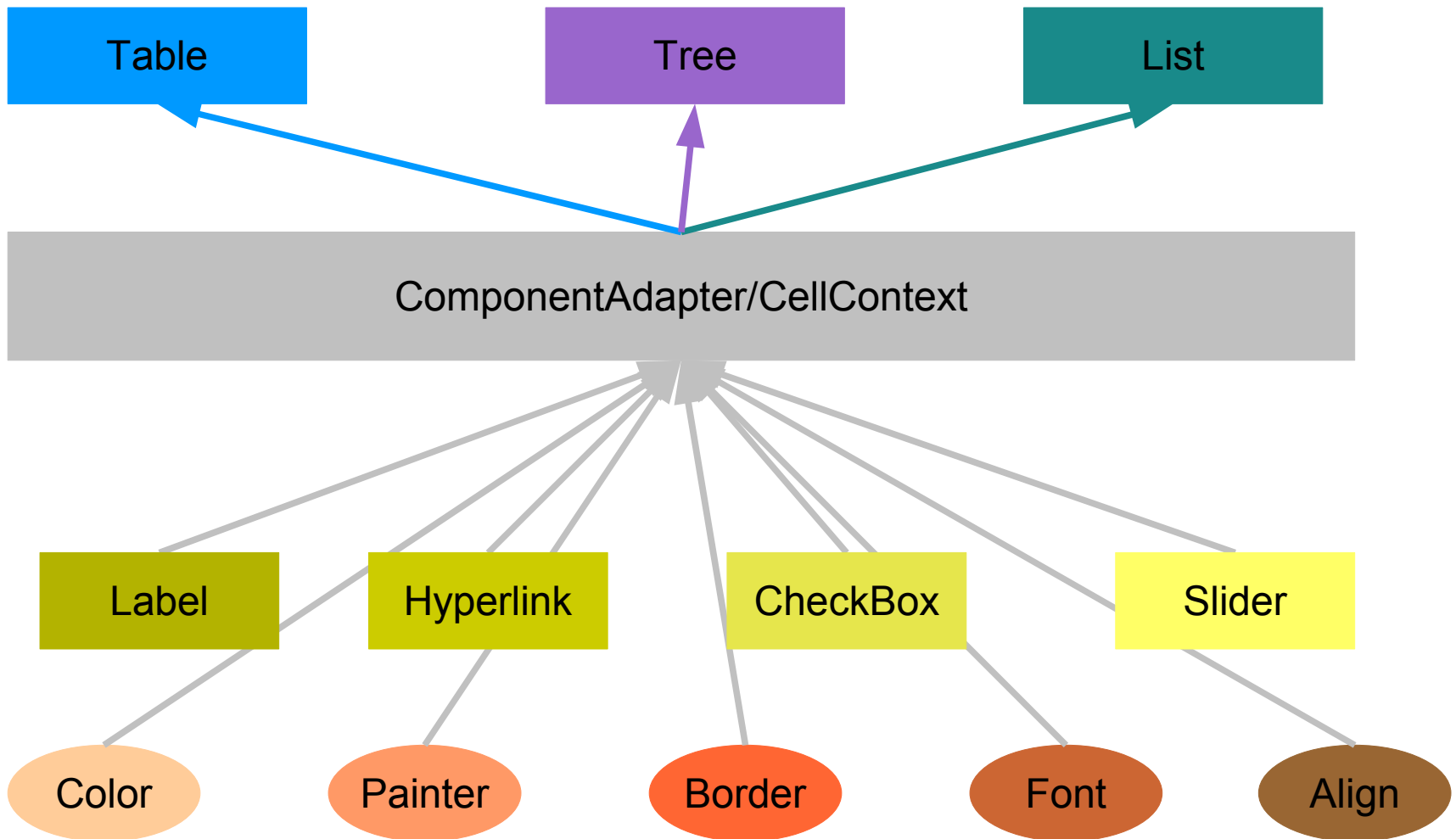
- Contains stable components with reviewed API
 - Unlikely to undergo API changes, production ready
- Also includes experimental components
 - API not reviewed and might change over the time
 - Mostly nearly production ready
- Distinction marked in JavaDoc
- We strive to provide bug fixes or workaround as fast as possible
- Issues are frequently discussed in forums.

Core Swing Renderer

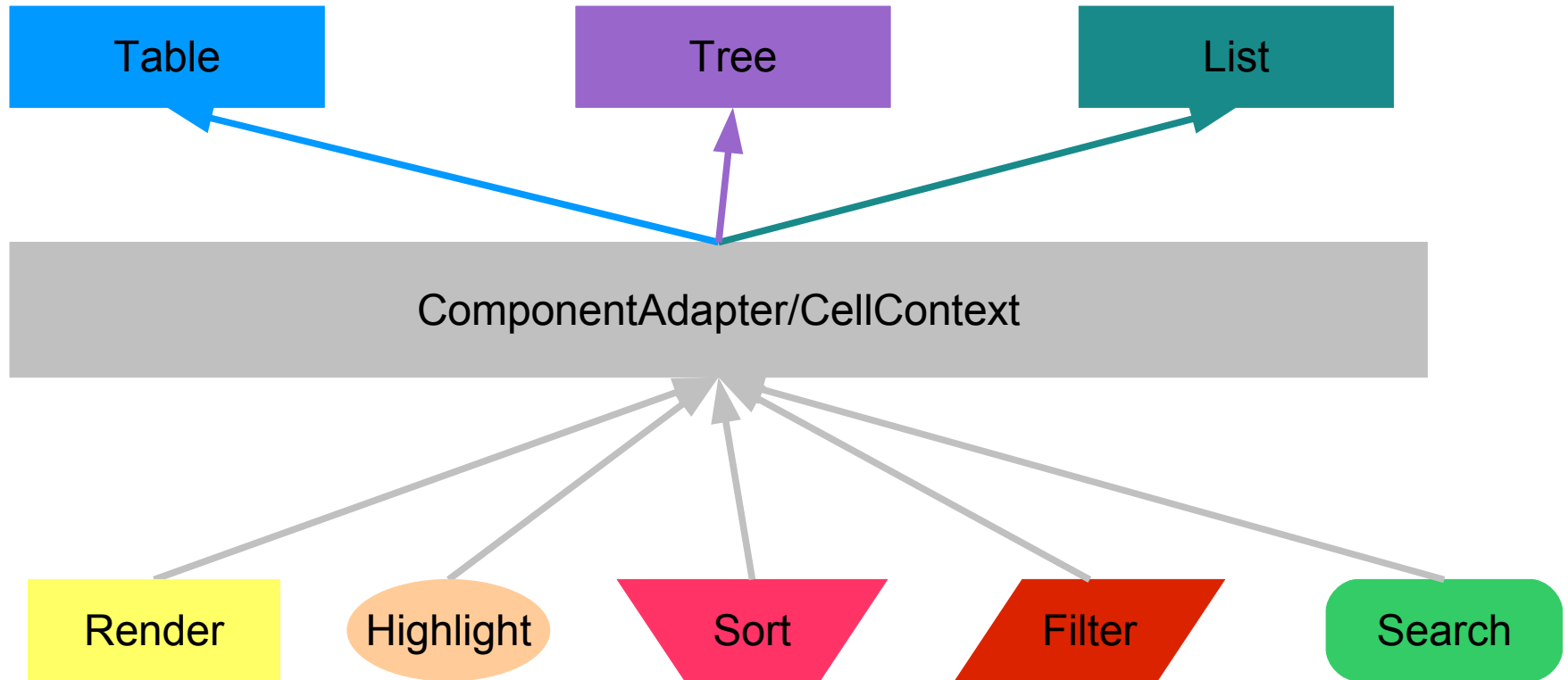
(by Jeanette Winzenburg)



SwingX Unified Renderer



SwingX Renderer Functionality



WISIWYM

➤ What You See Is What You Match

```
// concat content from last/firstName
StringValue converter = new StringValue() {
    public String getString(Object value) {
        Contributor c = (Contributor) value;
        return c.getLastName() + ", " + c.getFirstName();
    }
}

// match functionality
HighlightPredicate p = new PatternPredicate("Jeanette");
Filter f = new PatternFilter("Jeanette");
searchable.search("Jeanette");
```

WISIWYM - Continued

```
// configure renderer
table.setDefaultRenderer(Contributor.class,
    new DefaultTableRenderer(converter));
list.setCellRenderer(new DefaultListRenderer(converter));
tree.setCellRenderer(new DefaultTreeRenderer(converter));

// apply to view (= table, list, tree)
view.addHighlighter(new ColorHighlighter(predicate,
    background, foreground));
view.getSearchable().search("Jeanette");
view.setFilters(filter);
```

SwingX Code & API Changes

- table/tree/highlighters
 - unified rendering architecture
 - no more AlternateRowHighlighter ... use ColorHighlighter(HighlightPredicate.EVEN).
- DatePicker
 - all related code packaged together
 - Unified rendering over subcomponets (like JXMonth)
- Painters
 - Fixed caching problems
 - no more GradientPainter ... use MattePainter with GradientPaint

SwingX Code & API Changes

> JLabel

- foreground & background painters
- support for line wrapping
- support for text rotations (mainly useful for tables)

> JXBusyLabel

- Refactored painter & fixed memory issues
- Added support for GeneralPath based trajectory
- Added support for any Shape as a highlight point

> JXLoginPane

- experimental support for CapsLock detection
- wider options for customization (banner & background)

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SwingX - WS

- Set of functionality to enable simple interactions between Java Desktop and Internet Applications
- Recently rewritten to be more stable and to fix previously identified mistakes in API
- Will be released soon
- Some articles/blogs on usage are in pipeline

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SwingLabs subprojects

➤ SwingWorker

- by Igor Kushnirskiy
- Backport of Java 6 SwingWorker functionality for Java 5
- <https://swingworker.dev.java.net/>

➤ TimingFramework

- by Chet Haase
- Currently being incorporated in SceneGraph, but will be maintained as standalone project as well
- <https://timingframework.dev.java.net/>

➤ JXLayer

- by Alex Potochkin
- Previously part of the swing-helper project
- <https://jxlayer.dev.java.net/>

JXLayer Overview

(by Alex Potochkin)

- The universal decorator for Swing components
 - Controls the painting of its subcomponents
 - Catches all input and focus events
 - for the whole hierarchy
- This combination allows:
 - Easy enrichment of any compound components
 - The single entry point to all kind of decorations
- Uses only public API
 - No use of RepaintManager, AWTEventListener, etc.
- Extremely friendly to your application
 - Can be used in restricted environment

JXLayer Overview

```

JXLayer<JPanel> layer = new JXLayer<JPanel>(panel) ;
myLayerUI = new AbstractLayerUI<JPanel>() {
    protected void paintLayer(Graphics2D g2,
                               JXLayer<JPanel> l)
        // add custom painting
        super.paintLayer(g2, l) ;
}
public void eventDispatched(AWTEvent e) {
    // catch any input and focus events
    super.eventDispatched(e) ;
}} ;

layer.setUI(myLayerUI) ;
  
```

JXLayer Overview

➤ Common Decorator Painting Problems

- Container's paint() does not get called when a child is repainted itself
- It prevents Swing compound components from being decorated
- We need to repaint the parent component when its child is repainted

➤ Solutions

- Make every subcomponent non-opaque
- Install a custom RepaintManager
- Show a transparent panel on top of the container

JXLayer Overview

- JXLayer solution to the problem
 - Its own transparent Panel that is always on top of all components inside
- Advantages
 - If there is a transparent component, Swing has to repaint it when a lower component is repainted
 - In this case Swing starts repainting from its common ancestor (JXLayer)
 - Swing is smart enough to not repaint more than necessary

SwingLabs subprojects

➤ AnimatedTransitions

- First cut of the advanced transition framework for Java Desktop Applications
- <https://animatedtransitions.dev.java.net/>

➤ Bindings (JSR 295)

- by Shannon Hickey
- Focuses on ease of binding java beans to the background data stores

➤ PDF Renderer

- Provides support for rendering PDF inside of your Java App
- <https://pdfrenderer.dev.java.net/>

SwingLabs subprojects

➤ Nimbus Look And Feel

- by Richard Bair and Jasper Potts
- Started as SwingLabs project
- Already incorporated in Java 6 update 10

➤ Application Framework (JSR 296)

- by Hans Müller
- adds support for declarative programming
- Provides common application infrastructure
- <https://appframework.dev.java.net/>

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How to Contribute

- Participate in forums
- Log the bugs
 - Provide patches or tests where possible to facilitate fixes
- Become a contributor
 - Sign SCA (Sun Contributor Agreement)
 - Dump your code into JNDC Incubator
 - Write quick summary explanation for it on wiki
 - Ask for comments in forums
 - Be prepared to receive critical review
- Write Articles, Tutorials and Blogs about SwingLabs and its use.

More Info

- Swinglabs Web - <http://swinglabs.org>
- All subprojects are on java.net - look for <https://nameOfTheSubproject.dev.java.net>
- Wiki - <http://wiki.swinglabs.dev.java.net>
- Forum - <http://forums.java.net/jive/forum.jspa?forumID=73>

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THANK YOU



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