

# SWTBot Project Creation Review

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# What is SWTBot

- ✦ A set of APIs to find SWT controls widgets and manipulate them in a way that end users would
- ✦ Passing unit tests does not always mean working software -- there's always more to test

# Objectives

- ✦ SWT and Eclipse applications are becoming more complex everyday
- ✦ Writing SWT tests need understanding of SWT
- ✦ Keeping track of UI threads is a pain
- ✦ Extensibility for other toolkits (GEF/Eclipse Forms/eSWT)

# ...Objectives

- ✦ Everyone wants to write tests at a different level
  - ✦ Developers want to write tests that run quickly and cover smaller areas
  - ✦ Quality people want to run the end to end tests

# ...Objectives

- ✦ Not everyone understands SWT and Eclipse equally
  - ✦ Developers understand the technology well
  - ✦ Quality people understand the application well

# Where we are

- ✦ Support for most SWT controls
- ✦ Support for most UI operations on SWT controls
- ✦ Support for Eclipse based contributions:
  - ✦ Views
  - ✦ Text Editors (autocompletion, typing, etc)
  - ✦ View Toolbars and View Menus

# Where we are

- ✦ Finding controls based on visual cues (textWithLabel, buttonWithTextInGroup)
- ✦ Support for multi threaded applications where updates to the UI happen gradually over a period of time
- ✦ Support for testing internationalization

# Implementation

- ✦ UI Traversal: to find all the controls in the UI
- ✦ Filters and matchers: locate a particular control within all the controls
- ✦ Wrappers around controls: to provide API to interact with them



# ...Design

- ✦ No coupling between the components, so they can be used independently of each other
- ✦ Flexible enough to add support for new controls (eclipse forms, nebula)
- ✦ Independent of SWT, so can be ported to other toolkits like GEF, eSWT or Swing

# Scope

- ✦ Add support for remaining SWT widgets
- ✦ Provide a lot of convenience API in SWTBot for most common usage patterns
- ✦ Investigate and add support for MultiPageEditors and Eclipse Forms
- ✦ Continue to investigate porting SWTBot to eSWT/eRCP

# Project Plan

- ✦ The plan is to line up a 1.0 release with the Galileo release train, with support for any possible new features in SWT 3.5 and Eclipse 3.5
  - ✦ 1st Jan - complete support for all SWT controls
  - ✦ 1st Feb - Polish off any remaining work - javadocs/help guides etc.
- ✦ 1st Mar - prepare for 1.0 release

# Mentors

- ✦ Chris Aniszczyk
- ✦ Ed Merks

# Initial committers

- ✦ Ketan Padegaonkar (ThoughtWorks Studios)
  - ✦ Ketan has been working with Eclipse RCP development since more than 3 years. He loves TDD and therefore wanted a simpler way to write SWT based tests. To fulfill this need, he wrote the initial implementation of SWTBot a year ago and has since then, contributed most of the code and ideas into SWTBot.

# ...Initial committers

- ✦ Steve Paulin
  - ✦ Steve began developing Eclipse and RCP apps 3 years ago. Steve joined SWTBot in June (2008) and started working on completing the documentation for the SWTBot core. He now works on enhancing Eclipse based functionality for SWTBot including capabilities to access plugin contributions. His experience with the Eclipse architecture provides an excellent resource in the development of SWTBot.

# ...Initial committers

- ✦ Sami Lechner
  - ✦ Sami works with embedded devices. He has ported SWTBot to eSWT/eRCP. He has since then contributed the port back to SWTBot. He continues to maintain the port and evolve it to add support for more eSWT controls.

# Community response

## ✦ eclipse.swtbot

- ✦ “This project finally brings [the] important software engineering technique [of functional testing] to RCP developers.” - Kevin Taylor
- ✦ “I recommend SWTBot to be the standard tool for testing SWT and RCP applications. ... There is definitive a good conceptual integrity in SWTBot.” - Hans Schwaebli
- ✦ “[we] are also highly interested in the proposed work for the SWTBot port for eRCP/eSWT.” - Christine Mitterbauer

## ✦ ~ 50 downloads per day, in addition to the nightly downloads



# More info

- ✦ Project web site
  - ✦ <http://swtbot.org>
- ✦ Primary communication channel
  - ✦ <news://news.eclipse.org/eclipse.swtbot>