

## **Subject: Request for Work: SWTBot Enhancements**

Several Polarsys members use SWTBot framework to develop and execute automated UI tests on their products. However, some development teams regularly encounter troubles developing new tests due to some limitations in the SWT and SWTBot frameworks.

This request for Work is intended to serve as a basis for Polarsys Developer Members to deliver Statement of Works to the Polarsys Steering Committee. The Steering Committee members will then decide to launch the activity based on the Statement of Work they will receive.

### **1. REQUESTED ENHANCEMENTS**

Two major concerns have been selected in these frameworks that have to be eliminated in order to ease the writing and automation of tests.

#### **1.1 SWT NATIVE DIALOGS**

The SWT graphical framework offers the ability to call specific dialogs directly from the OS running the application. Basically, it is possible to integrate the native file chooser dialog in an SWT powered application. Most of these native dialogs don't trigger the same events that a regular SWT dialog. This prevents developers to create UI tests on these dialogs. The first package should focus on triggering standard SWT events from the native dialogs. The highest priority dialogs to support would be:

- FileDialog - The user is prompted to choose a file on the file system
- DirectoryDialog - The user is prompted to choose a folder on the file system
- MessageBox - Informs or warns the user of something (errors, etc).

Some more precise details are available in the Bug "164192 - Provide a listening mechanism for native dialogs" at [https://bugs.eclipse.org/bugs/show\\_bug.cgi?id=164192](https://bugs.eclipse.org/bugs/show_bug.cgi?id=164192)

#### **1.2 SWTBOT SCENARIO GENERATION**

The SWTBot framework provides a scenario generator tool that enables users to realize a standard usage scenario of their application with a recorder and then, the tool generates the code to perform the same actions with SWTBot. Polarsys members have identified a set of limitations that they would like to get fixed:

- generated code finds widgets from a too generic 'workbench' context (increases chance of incorrect test code)
- improve support for tables
- use the new more robust menu API contributed to SWTBot
- implement correct support for view menus
- implement correct support for tool bar drop down menus
- implement correct support for mouse actions by coordinate (needed for our 'graphical' widgets)

### **2. CONTEXT OF THE STUDY**

The limitations listed here above have been identified some months ago. The provided Statement of Works must be established in regards to these limitations, but with an update accordingly to the latest version of SWTBot that have been delivered in the Oxygen release train, namely version **2.6.0**.