Sprint Report IV

Team Overview

Name
Silver Redux

Members
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Project Title
APMAX Test Suite and Set-Top Box Regression Testing Framework

Company
Innovative Systems, LLC

Sprint Report

Goal:

Our goals for this sprint were quite ambitious – we wanted to finish up the single set-top box regression testing portion of the project, something which was only in the planning stages as of Sprint 3.

By the conclusion of this sprint, we had come a long way towards this goal. The setup of scripts and the baseline screenshots are fully implemented, and we have the ability to run scripts of commands against one or more set-top boxes.

Work for this sprint included:

The number in parenthesis indicates the amount of *story points* that our team assigned to each task.

- **(3) UI STBRT: Create TCP/UDP Receive + UDP Send Classes**

  The first piece towards running commands against a set-top box is networking. We needed the ability to send commands and receive their responses asynchronously, as well as handle multiple connections with multiple set-top boxes simultaneously.

- **(3) Create Regression Test Script processor**

  The test script processor uses the networking components created above to run a script against one or many set-top boxes.

- **(20) UI STBRT: Create/Edit Script Page**

  This was a page added to the Emulator Client UI allowing for the ability to create/edit scripts. This page was shown as a prototype during our previous presentation, the only main addition to the original prototype being the ability to set which STB the user connects to (for a visual preview of what the script is doing).

- **(20) UI STBRT: Baseline Screenshot/Image Masking**

  While setting up a script, any screenshot commands automatically get run and stored in the database as baseline screenshots. At any time a user can go into the baseline screenshot editor mode and draw rectangular masks over the image to block out certain regions of the screen. We used mouse up, down, and move events to handle this editing. Using the mouse, users can create new rectangles, and resize/reposition existing rectangles.

- **(5) UI STBRT: Add/Edit STBs Page**

  This page adds the ability to add, edit, and remove STBs from the DB. A set-top box added through this page can be used to connect with on any other page that requires it.

- **(2) Move Emulator Controller processing to separate project.**

This was code-cleanup so that some of our new projects (mainly the Regression Test Script processor) could have access to the old processing code.

- **(1) Fix Emulator Controller hanging during test setup.**

  This was a bug affecting the Emulator Controller (Phase 1)

Work that is carried over into sprint 5 is as follow:

Tasks related to Phase 2 (Single STBRT):

- Updating documentation to reflect work done in this sprint
- (20) UI STBRT: Run Test Wizard
- (3) Fix TCPSend in EmulatorController (currently this throws an exception)
- (3) Add basic screenshot comparison code (no fancier algorithms yet, just the interface and a pixel-by-pixel comparison)
- Test preconditions

Tasks related to Phase 1:

- Emulator Client Bug – when using the search panel on any GridControl, the data (bound from a ListCollectionView) gets unfiltered! (One solution is to simply disable the search panel)
- Emulator Client Bug – when a new test is created, the client must be closed once before running this test or else no instances of the emulator controller or smartphone launcher get spawned during the test run.
- Emulator Controller Bug – when the APMAX Test Suite Starter Service is configured to use local system, the Client can't connect to the Controller