ECE Senior Design Weekly Report

Engineer’s Name: Mark Luna Date: 3/23/17

Team Name: The Globetrotters Lab Section: 4, Thursday 12:30 PM

Week’s Task: Search for ways to run python files from a batch file, find a way to keep the Raspberry Pi from going idle, find out how to open an HTML file in full-screen mode, and research how to keep a window or task active in Linux.

Results:

* Creating a simple batch (.sh) file that runs commands is very simple, therefore python scripts can be executed one at a time. However, we need to be able to run them as multiple processes or on multiple threads at once rather than sequentially and this is still being researched.
* A small modification of two lines of code in a file will prevent the Pi from going into sleep/idle mode and also from turning off the display, which may be the reasons why the device stops responding to the python scripts and user commands after it’s been left alone for an extended period of time. Testing is needed to confirm that this works.
* A piece of JavaScript code found online allows the HTML page to be shown in full-screen mode when the JavaScript function is called from another function or when a page event occurs. When placed in the page load method/function of the page, it should allow the screen to launch directly into full-screen mode when the HTML file is first opened. Of course, the page will be opened in the default browser of the operating system, but regardless of the browser used this implementation should work since it is made to be universally compatible with most web browsers.
* A python module called wmctrl allows windows to be programmatically controlled. Using its functions to retrieve properties about the currently running windows/applications in the system, this tool will allow us to periodically keep the browser window active in the system in the case that another process decides to take away the focus of the browser window. This is a necessary feature for us because once the software is fully integrated, we won’t have any control of it with a mouse and we need the focus of the browser window in order to send keyboard commands that will update the content of the page.