

Biweekly Status Report #4

Group sdmay20-31

AUTOMATIC TRACKING OF ACTORS WITH INTELLIGENT THEATRICAL LIGHTING SYSTEMS

Week Summary:

During these last two weeks, our main focus was working on having the localization hardware functioning with the software part. It has been crashing and lagging for various reasons, but we are working on fixing it. We also mounted our spotlight in theater and tested the spotlight software to make sure it functions as expected.

Past week accomplishments:

- Tested the spotlight in theater and calculating the error margin for it.
- Troubleshooting and diagnosing the software for the localization to make sure what is wrong with it.
- Identifying the problem of needing to work on a router, not just any hotspot for the case of the localino chips.

Advisor Weekly Meeting:

During this week's meeting, we identified to our advisor the need for a router and he provided us with one. Also, we managed to reserve a black box theater on campus (Carver 308) to mount and test the spotlight under our advisor supervision. Finally, we got to meet our client briefly and explain our progress to him and our expectations for next week.

Individual contributions:

- Joel Ohge & Raed Albloushy - Working with the code that controls the localino and troubleshooting why it has been crashing. Also checking if the boards are functioning using Wireshark to test and see if they are transmitting any data, which they do. So they got it down to understanding that they need to work on a separate router that is only dedicated to the localization boards.
- Joel Ohge & Hassan Almohammedsaleh & Hassan Alhaddad & Mouez Zayed - This part of the team worked on mounting the spotlight in the theater on campus and test to see

how well it works based on the calculations and angles provided. They have worked many test cases to see the accuracy and smoothness of the spotlight movement. We have not yet gotten the coordinates from the localization, so the coordinates were generated by a program and compared to positions on stage in real life to see the accuracy. The team calculated an error margin of 6 inches with the possibility of improvement since the one we are working on is not the spotlight that we will show the final project with.

Weekly issues:

- We are still figuring out how the software for the localization boards is working. Once that is done, we could connect it to our spotlight software and transmit data to the spotlight.

Name	Individual Contributions	Hours this week	Hours cumulative
Joel Ohge	Spotlight Programming And Testing	12	48
Hassan Alhaddad	Soldering and fixing the broken board	12	48
Hassan Almohammedsaleh	Software analyzation/ synthesis	12	48
Raed Albloushy	Flashing localinos and system setup	12	48
Mouez Zayed	Soldering Flashing localinos	12	48

Plans for the upcoming week:

- Having a working system that could at least give us an (x, y, z) coordinations from the localino system.
- Setting up a testing stage to see how effective the demo system is.
- Test the approximate accuracy and jitter of the 3D coordinates given by the localino
- Link the hardware and the software of the project.
- Joel: Figure out how to get the spotlight to point to the correct position with a higher accuracy