2.10 ALERRT CENTER Weekly Status Report

Septmeber 09, 2019

Submitted by: Bo Heyse

Course Instructor: Mark Welker
Faculty Advisor: Dr. McClellan
Sponsor: Texas State University

Team Members:
Bo Heyse[PM]
Karina Paz
Matthew Healea

Green Current Project Status

Over the first two weeks of this semester the team has had a massive leap forward in the implementation of the motion capture system. Bo has created an iOS app that creates a connection to the Bluetooth module on the inertial measurement unit. In conjunction with the iOS app, code was created for the arduino that writes raw data values to the Bluetooth serial port and allows for data transfer between the Sensor and iPhone. Matt worked with the firmware on the sensor to improve drift that was seen in our virtual representation. Karina finished iteration one of the enclosure that is in the process of being 3D-printed for verification. Next week is to get file transfer over Bluetooth from the Arduino's SD card to work and visualized on the iOS app.

Individual Updates (Activities Completed, Activities Planned)

Bo	Created an iOS app that creates a connection to the Bluetooth module on the inertial measurement unit. This connection allows for the sensor to send and receive data from the SD card to a file on the iOS app, where eventually it could be uploaded to a cloud drive.
Matt	Worked on new calibration software to implement SD card logging functionality and alternative computation for pitch, yaw, and roll. Worked on separate identifications for each Bluetooth module.
Karina	Designed 3D model enclosure for the system. Going to start 3D printing process to output a protype case.

Upcoming Deliverables (course and project due in next 2 to 3 weeks)

Deliverable	Due Date	Status
SD Card File Transfer	09/13/2019	In Progress
Updated Firmware	09/13/2019	In Progress

Sponsor and Faculty Advisor Meetings/Calls Held & Planned

Who	Last	Topic(s)	Next
Dr. McClellan	05/07	Discussed plan going into summer	09/16