ECE Senior Design Weekly Report

Engineer’s Name: Mark Luna Date: 2/9/17

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

Week’s Task: To brainstorm, investigate, research, and propose methods of implementing different parts of the levitating globe project for presentation to the clients for approval.

Results:

* Encountered a small number of patents through the United States Patent and Trademark Office pertaining to two components of the project (magnetic levitation and gesture control), from which we could draw implementation ideas:
  + Levitation through at least three stationary magnets in a circular base.
  + Levitation through an induced magnetic field caused by rapidly moving magnets.
    - EDS (Electrodynamic Suspension)
  + Image processing to identify objects and movements for motion gestures.
* Searched for cheap pre-built magnetic levitating globes that may be used as building blocks to our own implementation of the device.
  + Majority use ABS material for a solid globe.
* Interaction ideas:
  + If information regarding a selected region on the globe is to be displayed on an interactive tablet, an application could be developed that would pull and display the requested information from an online or local database containing regional data.