Senior Design Project Description for SPRING 2016
Project Title: Interactive Demonstration Board (UNCC_DEMO1)

Supporter: UNCC/ECE

Supporter Technical Representative: ASSIGNED

Faculty Mentor: __X__ ASSIGNED _____ TBD (check one)

Single Team __X__ Dual Team _____ (check one)

Personnel (EN/ET): __1__ E, __2__ Cp, _____ Cv, __2__ M, _____ SE

(Complete if the number of students required is known)

Expected person-hours: (250 per student)

Description of Project:

This project aims to create an interactive display board that has three touch screen panels and 6 standard monitors to use in outreach activities. This project will also develop a convenient method to setup and breakdown the system and package for storage. Additionally, fun and interactive project development and integration with the board will be accomplished.

Initial Project Requirements (e.g. weight, size, etc.):

- A Display board will be developed that consists of 9 computer screens; 3 touch screens for interactive display and 6 standard screens for static display of materials.
- A stable presentation structure to support the screens and other display materials.
- The presentation structure should be easily disassembled and packaged to be easily moved.
- Computer control to present PowerPoint slides, word documents, videos, and animations on all screens. Up to 6 screens can be used for a single application.
- Interactive demonstration projects including remote controlled (from the touch screen or similar) robots, quad copters, or other projects.
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Expected Deliverables/Results:

- A dynamic display board.
- A support structure for the board that is easily assembled, disassembled, and portable.
- Display projects connected to the display board for demonstration.
- An operator's manual for the system.

List here any specific skills or knowledge needed or suggested (If none please state none):

- Embedded system expertise
- Computing hardware expertise
- Electrical power electronics knowledge
- Mechanical design knowledge for both structural and dynamic knowledge
- C++ programming