### University of Massachusetts

Department of Electrical and Computer Engineering

ECE Capstone Design Course Project Description

PROJECT ECE-xx

**Title:**

#### *Television Auto Commercial Mute System*

**Customer/ Sponsor: Dr. Paul Fortier**

**Customer Company/Org: UMass Dartmouth**

**Customer Contact Information**

**email: pfortier@umassd.edu**

**Phone No(s)** (508) 999-8544,

**Team Composition: ECE students with interest in signal processing, embedded systems, systems control**

**Project Description and Objectives:**

Commercials are an ever increasing annoyance to the average viewer due to the use of increased sound intensity during transmission. This project looks to use existing technologies to determine when a commercial is occurring and to auto-mute the sound during the duration of commercials.

This project includes

* Developing the specifications for the television mute system (TV interface (e.g. HDMI, Sound jack, etc.), signal capture, signal processing, signal control) and successfully addressing the constraints imposed by the remote present controller interface (power, space, etc.) and television interface.
* Understanding the existing television and remote controller on-board control and data processing systems
* Specifying the requirements for a data extraction, processing, decision processes and control outputs to monitor and alter audio outputs
* Developing interfaces to the existing systems
* Assessing the impact of altering audio signal outputs
* Prototyping and testing the system in the lab

**Resources:**

#### An existing HDMI based TV set will be provided along with a remote controller. The project will fund all equipment and supplies for the project after approval and justification by the team.

#### **Faculty Advisor** *TBD*