

Multi-university distributed collaboration in smart car gaming



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Goals

- ▶ Utilize WiFi enabled, Arduino based car to foster a sense of community among UMass Boston Freshman Success Communities (FSCs) and engage engineering upperclassmen in a real world engineering collaborative effort
- ▶ INITIAL SPECIFICATION: One controller and one WiFi enabled car that can go forward, reverse and turn, controlled from anywhere in the world
 - ▶ UMass Boston: ECE FSC Responsible for hardware and embedded systems
 - ▶ UMass Boston: CS FSC Responsible for controller architecture and coding
 - ▶ UMass Boston: FSC upperclass mentors responsible for server architecture
 - ▶ Glasgow Caledonian U: Gaming students responsible for gaming concepts and implementation
 - ▶ UMass Amherst: Upperclass engineering students responsible for next generation car to include multiple car/controllers and streaming video

Milestones

- ▶ Fall 2013: Arduino Car v1.0 developed at UMass Amherst ECE361
- ▶ Freshman Success Communities (FSC) in place at UMass Boston
- ▶ UMass Boston FSC's and Glasgow Caledonian University student exchange in place
- ▶ Car successfully demonstrated at GCU by UMass students Spring 2014

WiFi enabled car controlled via internet for distributed physical computing gaming experience

Glasgow Caledonian University: Gaming Concepts

UMass Boston: Upperclassmen FSC Mentors Server Architecture

UMass Amherst: Upperclassmen Next Generation

