Alpha Presentation
Hardware in the Loop (HIL) Vehicle Simulator

The Capstone Experience

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Project Overview

• Windows 10 application that will simulate a vehicle’s CAN Bus by using a HIL system.
• Current hardware is too expensive and not available to all of Bosch’s engineers at once.
• Simulates vehicle functions such as acceleration, steering, braking, gear changing, cruise control, and more.
• Ability to simulate different variations of vehicles that is configurable by the user.
System Architecture
Hardware in the Loop Diagram
Main Frame

45 Mph
1500 Rpm
Graph Frame
Automatic Testing Frame
Configuration Frame
What’s left to do?

• Have the GUI update in real time with the relative signal values.
• Have the graph update in real time with the relative signal values.
• Implement the automated testing section.
• Implement the master signal list section.
• Implement the configuration section to edit JSON files.
Questions?