Company Overview

IGT is the world's leading end-to-end gaming company. It is listed on the New York Stock Exchange under the trading symbol "IGT." Its holding company headquarters are in the United Kingdom, with operating headquarters in Rome, Italy; Las Vegas, Nevada; and Providence, Rhode Island. IGT attracts the industry's top talent, with more than 12,000 employees across the globe.

IGT's integrated portfolio of technology, products, and services, including its best-in-class content, is shaping the future of the gaming industry by delivering the innovation that players want.
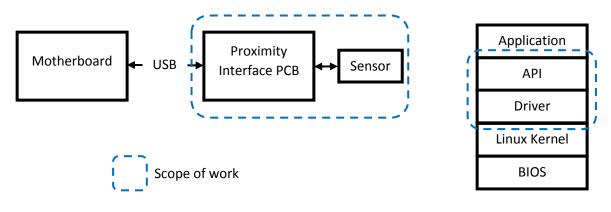
IGT is uniquely positioned to provide the government-sponsored and commercial gaming industry with proven solutions for gaming, lottery, interactive, and social, through every channel across the spectrum, including retail, web, and mobile. It is IGT's mission is to be the global innovation leader in the gaming industry.

Our vision to combine the best of our legacy companies to enhance and build our capabilities; deliver content, technology, and expertise that drive customer and player demand; continue to grow leadership in the lottery and gaming space, and become a leader in the interactive space; and use the power of our understanding of central systems and connectivity to define the future of gaming.

Project Overview

In order to deliver on this vision – we must continue to engage the brightest minds. Therefore, IGT would like to work with a team of URI engineering students to design and develop a proximity detection system for our Self-Service Gemini Touch lottery vending terminal.

This would involve investigating and selecting the most suitable proximity sensor to use, determining it's optimal location and mounting scheme for the terminal, designing the electronic interface board, firmware logic, USB interface, firmware driver, diagnostic test software, API to GUI framework, and optionally, the triggering of our UI from the attract screen.

Team Description

- Student engineers: 2 x EE, 1 x CE
- Ability to work with limited supervision a must

- Willingness to learn from mistakes
- Optics knowledge preferred
- USB interface knowledge preferred
- PCB design and layout experience beneficial
- Linux OS experience
- C Programming experience an advantage

Deliverables

In essence the deliverable of this project is a manufacturing package that allows mass production of the design and widespread deployment in a lottery wide area network. The following items help define the details of that package.

- Hardware
  - o Board Specification – written design specification detailing theory of operation, mechanical outline, connector locations, electrical interfaces, performance characteristics, environmental constraints, and regulatory compliance requirements
  - o Schematic – electronic schematic capture with netlist and costed bill of materials
  - o PCB – electronic PCB fabrication files
  - o Test Specifications – detailed test cases to exercise the product to the envelope of functionality and performance
- Software
  - o Firmware Specification – written firmware interface specification detailing command and control interface
  - o Source code, object code and functioning diagnostic test firmware
  - o Lottery application interface (optional)

Division of Labor

Electrical Engineer 1 (Proximity Sensor)

Electrical Engineer 2 (USB Interface)

Computer Engineer 1 (Driver, API and Diagnostic Application)

IGT Point of Contact

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