

## **Cole Kembel**

Senior Division Engineering

### *Motion Sensored Controls: Advancement In a Higher Application*

A user interface program was created that utilizes motion sensed controls. The system was designed to be highly usable and adaptable in order to satisfy users' preferences. Through computer programming in Microsoft Visual C#, Microsoft Robotics, Bluetooth connection, and a phidget board, the graphic user interface program was created that allowed one Wii remote (Wiimote) to control a remote control car through motion activated controls. The created graphic user interface program was adaptable for the user as it allowed one to set any direction and/or button that can be used by the Wii remote for specific controls of the car. The system provided advantages that make controlling devices both adaptive and usable when compared to the conventional controls of systems that function solely by buttons, switches, and/or joysticks. These advantages include making the operation of the system more intuitive, less complex when learning how to use and also during use, and providing settings of which button or acceleration states were used on the Wiimote to accomplish specific tasks. The system was successful by providing user friendly controls of simple functions such as moving a remote control car forward, and could be applied to more complex functions.