**Developing an Inertial-Proximity Sensor-Fusion System**

An inertial-proximity sensor fusion system was developed for more effective three dimensional position estimation. An ADXL3xx accelerometer was used to achieve initial inertial measurements. Software was developed to take measurements from the accelerometer, filter noise, and visualize the data onto a 3D isometric display. Additionally, a radio-based broadcaster/receiver system was developed for use as a proximity sensor. Software was developed to fuse the proximity data with the inertial measurements in such a way that the proximity data constantly checked and recalibrated the inertial data to eliminate drift error.