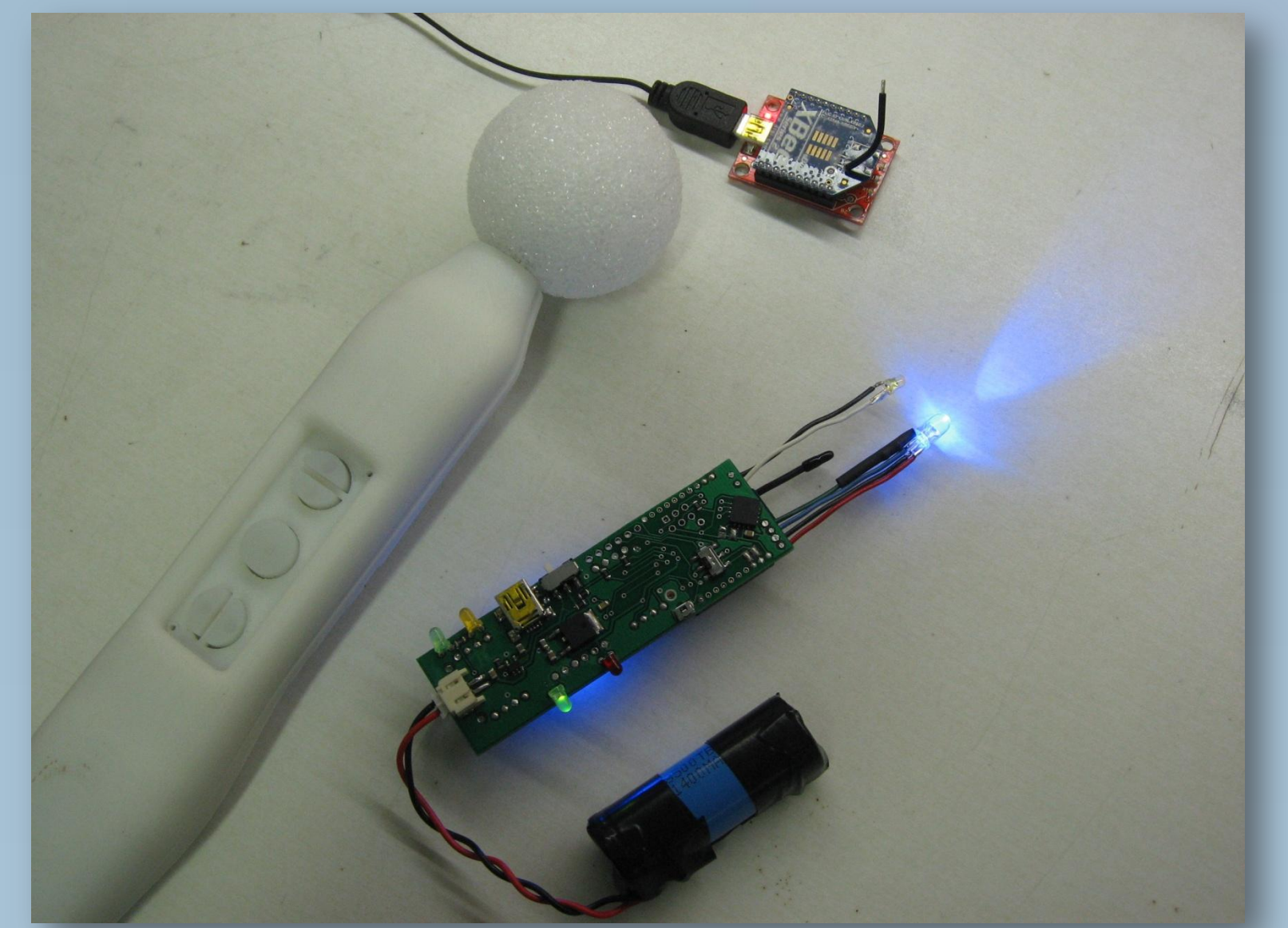# Team Fantasia

Adeola Bannis, Ethan Goldblum, Claire Mitchell and Nirav Patel

Motivation

Long wait times in theme parks detract from an otherwise magical experience.

Objective

Create a collaborative multimedia experience that turns the line into an attraction of its own.

Create a low-cost, low-power, wirelessly networked wand that allows every park visitor to participate in a community of games and activities.
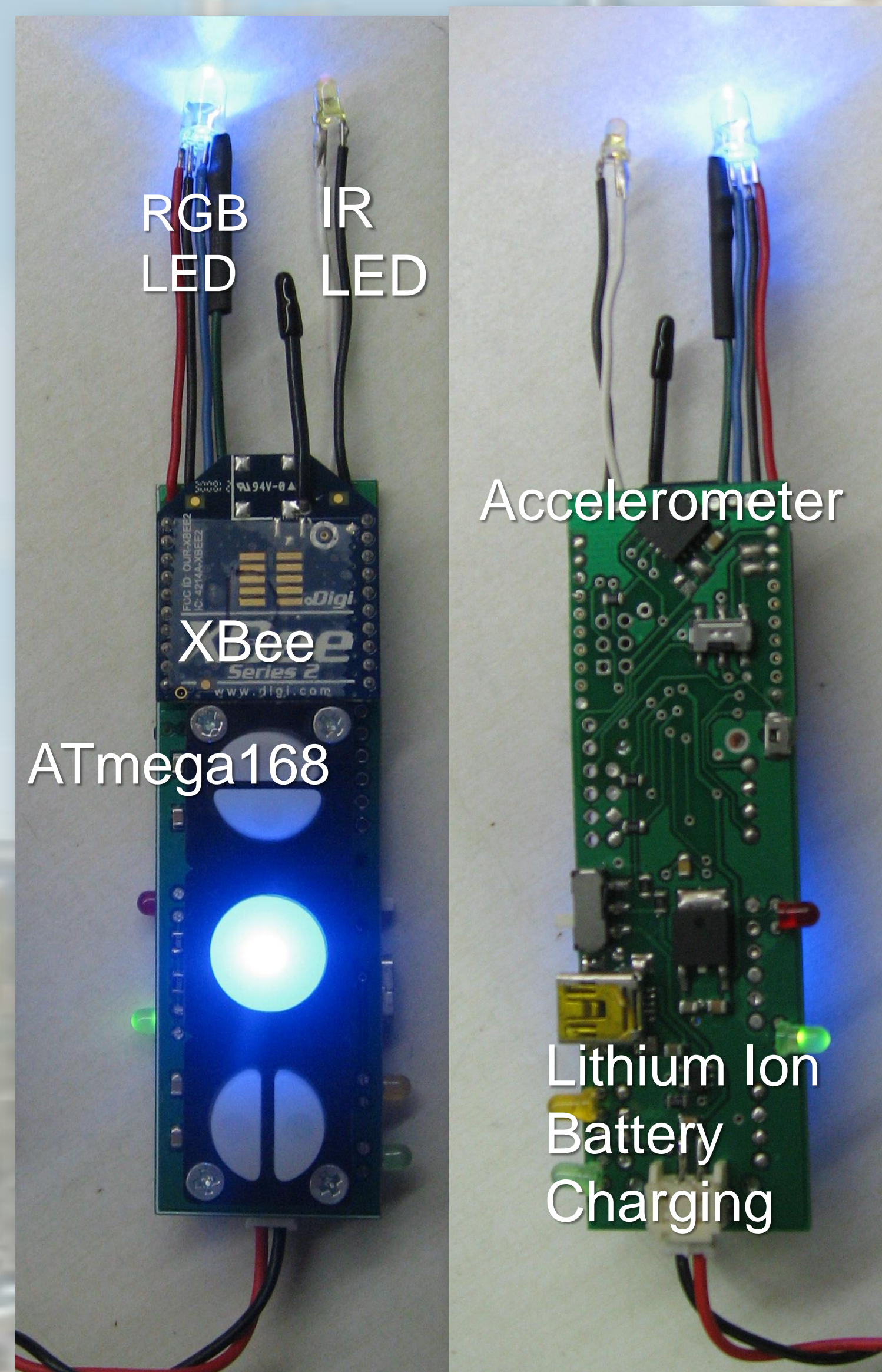
Development Environment

Hardware
Arduino
ATmega168
3-Axis Accelerometer
XBee ZNet 2.5
Custom PCB and Enclosure

Software
Arduino
Google protobuf
Pygame
xbee-api
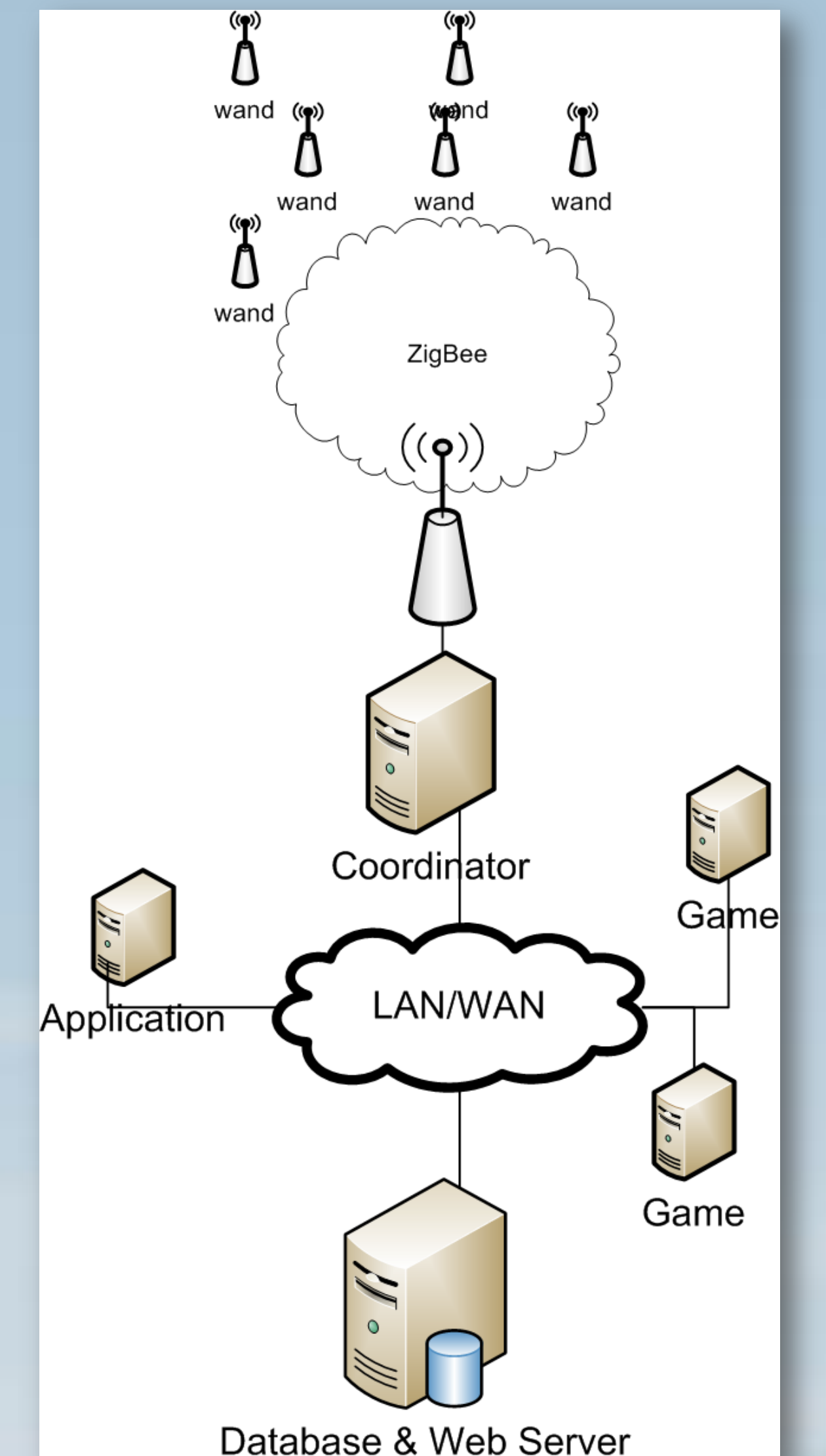xbee-api-on-arduino
Pylons
MySQL
C, Python, Java

Architecture

Wireless ZigBee (IEEE 802.15.4) network

Service oriented architecture that abstracts the underlying infrastructure from applications and wands

Tracking and logging wand activity to a web accessible database for live analysis

Results

Games Developed Including:
- Motion based games using IR tracking camera and accelerometers
- Activities supporting an unlimited number of players