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

Mickey wants to know...
Who is your favorite princess?

- Cinderella
- Snow White
- Ariel
- Rapunzel

Vote ends in 2019