A Vision for Blind Swimmers

Technology

OBJECTIVES
- Evaluate approaches in previous IPROs
- Research previous IPROs most recurring technologies to determine the most ideal solution
- Meet with subject matter experts for assistance
- Design and test a basic prototype for preliminary testing
- Evaluate performance of prototype and document findings

IDEAL PARAMETERS
- Easy to generate and transmit from a small portable device
- Limited interference
- Easily received and interpreted by a receiver on the person
- Calculations involved in the localization of the signal not too complicated
- Cost effectiveness based on research done by the Communication Team

RESULTS
- Semi-functional transmitter and receiver were built
- Design needs work → bridge rectifier
- Incorporate magnetic switch
- Signal attenuation in pool water must be calculated

RESEARCH
- Determined that signal interference was too great to overcome due to size of pool
- Required too much electrical current to be practical. Incompatible with pacemakers.

DEVICE
- Require EE or ECE majors for technology team

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Image sources are Attached

The Chicago Lighthouse
for People Who Are Blind or Visually Impaired