IPRO 310

Designing and Building Prototypes for Assisting Blind and Visually Impaired Swimmers

ACTIVE TEAM

Our Mission

"Provide a safe, effective, and reliable assistive device for visually impaired swimmers"

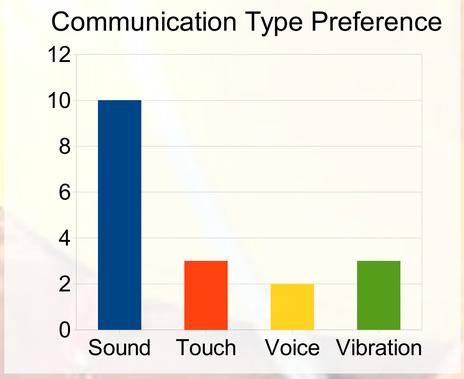
BACKGROUND

- Previous groups developed a vibrating belt and a snorkel device to communicate with BVI swimmers.
- These past devices inhibited or had little affect on the BVI swimmer or their performance.

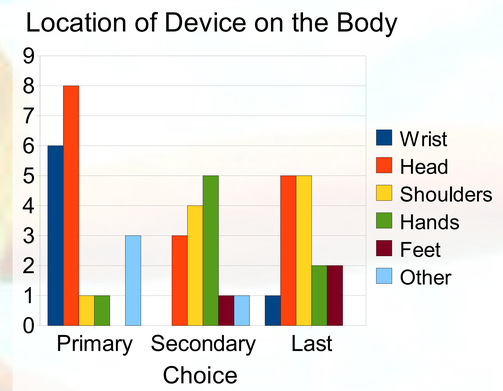
OBJECTIVE

- Incorporate human factors into the decision-making process
- Increase knowledge of current technologies and their applicability to this project
- Improve previous device.
- Test hydrophone, technology

SURVEY RESULTS



Visually impaired individuals were asked how they would like to receive information.



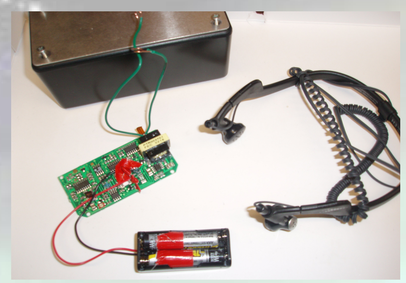
Visually impaired individuals were asked where on the body they would prefer an assistive device.

TESTIMONIALS

"I really like using devices that 'talk back' to me."

"If I had a device, I would like it to be about the size of a cell phone or watch."

Hydrophone device



Converting snorkel to a more hydrodynamic device using headphones concept

"I've used stuff that talks, like watches and computers, and they're really helpful."

METHODOLOGY

The team:

- Developed and administered a survey to the BVI population
- Researched several existing technologies
- Tested a new technology and modified a device from previous semester

CONCLUSIONS

The team found that visually impaired persons prefer a device that does not stand out.

- Audio device
- Worn on the head

FUTURE

Future IPRO teams should use the survey results in the decision-making process for future designs and build on information learned from new and existing technologies