

There are 15 million blind and visually impaired people in North America and 1.5 million are blind.

99% + of blind people do not participate in any kind of athletic activity because they do not feel safe or secure when exercising.

Our Mission:

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



### Summer 2008 Passive Team Members

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With Collaboration from:  
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National Federation for the Blind  
Wisconsin Center for Blind and Visually  
Impaired  
Notre Dame Masters Swimming Program  
Volunteer Swimmers

## **IPRO 310**

### **Prototypes for Assisting Blind Swimmers**

### Passive Team

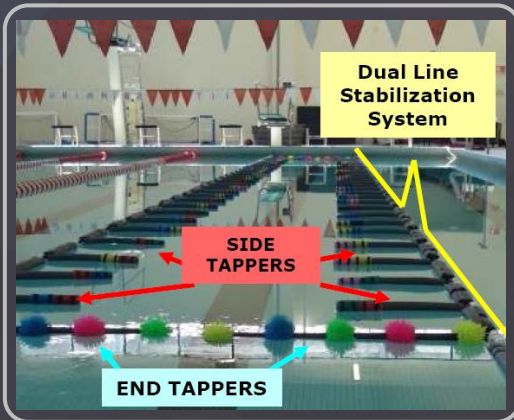


**The Problem**

Blind and Visually Impaired Swimmers cannot locate themselves in a pool. They have difficulty knowing when they are approaching the end of the lane and whether or not they are on center within the swim lanes. This causes blind swimmers to hit the pool walls and to veer off to the lane dividers or pool sides, which can cause injuries.

Currently, blind swimmers use one or more strategies to locate themselves in the pool and avoid collisions with swimmers or pool walls:

- Access a pool when there are no other swimmers present
- Hire tappers who alert them when they reach the end of the pool
- Constantly hit lane dividers with their arms to locate themselves in the pool lane.



▲ Passive device components

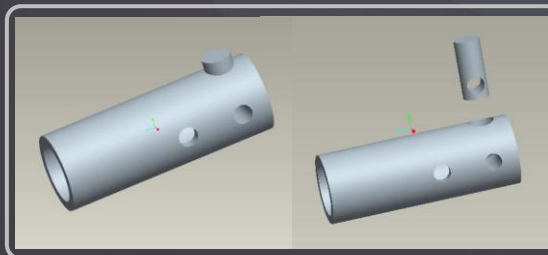
EyeSwim is a device used by blind swimmers to establish lane position and execute corrective maneuvers.

Advantages of EyeSwim:

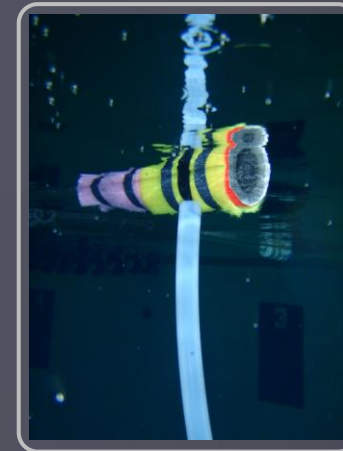
- Alerts – Swimmer to pool sides and end
- Swimmer Independence – no Tappers required
- Safe – Made of soft flexible materials
- Affordable – cheaper than hiring tappers
- Orients – minimizes zigzagging along lane

We improved previous design by suggesting I-connectors to replace the T-connectors of the previous version, I-connectors are a single piece design equipped with Spring Lock.

I-Connector, links side tappers together and is incorporated with the dual line stabilization system of the previous version.



We also changed Icicles with dense rubber tubing based on recommendation from swimmers.



▲ Icicles are part of the device which hangs downward in the water, creating a tactile effect for underwater swimming

We intend to build the device for WCBVI (Wisconsin Center for the Blind and Visually Impaired)



▲ Wisconsin Center for Blind and Visually Impaired