

AUTOVEST

ALERT AND RESPOND







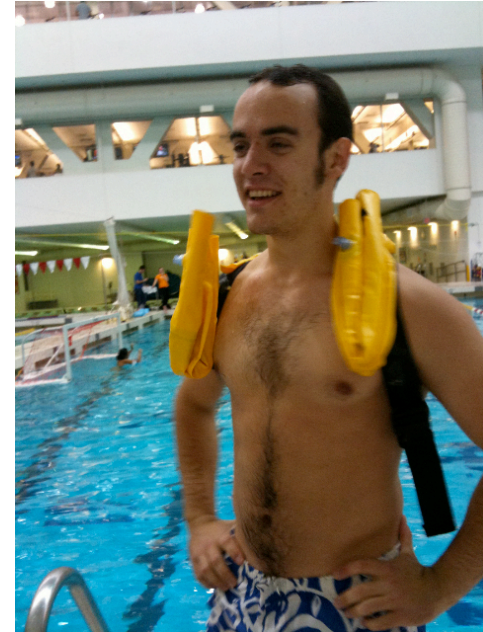
UNIQUE RISKS TO SURFERS

- Can't wear Personal Flotation Device (PFD) while paddling/swimming
- Bulky and unstylish
- Inflating PFDs not designed for surfing.
- 60,000 drowning rescues by surf lifeguards per year in America. (NOAA)



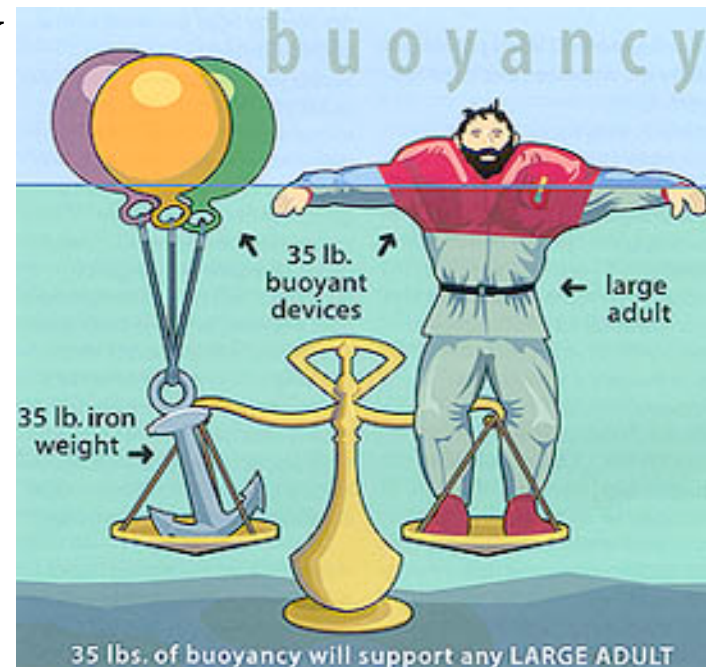
AUTOVEST

- Compact and Comfortable
- Wear while swimming
- Automatic Operation
 - Depth Sensor
 - Blood Oxygen Monitor
 - Water Sensor
- Manual Operation
 - Pull Tab
 - Inflation Tube
- Designed for Extremes
- Surfers are the Lead User



BUOYANCY

- One liter of gas provides about 10N of force
- The average person is neutrally buoyant
- Our intended purpose only requires 50-150N



WEIGHT AND COST CHART

Part	weight	Price
Blood Oxygen sensor (Detects Drowning)	.05-.1 kg	\$38-\$675
Depth sensor (Detects depths deeper than people swim)	.075-.3kg	\$25-\$2000
Water sensor (arms system)	0.075-.3 kg	\$2-\$75
Vest material	.4-1kg	\$5-\$20
CO2 cartridge (Inflates vest when activated)	100 grams	\$3-\$6
Transponder (communicates data inflation system)	.005-.4	\$1-\$30



POTENTIAL ELECTRICAL CHALLENGES

- Keeping price affordable
- Configuring blood oxygen sensor for aquatic applications
 - Sensing drowning in water is a daunting task
- Electrical engineering training

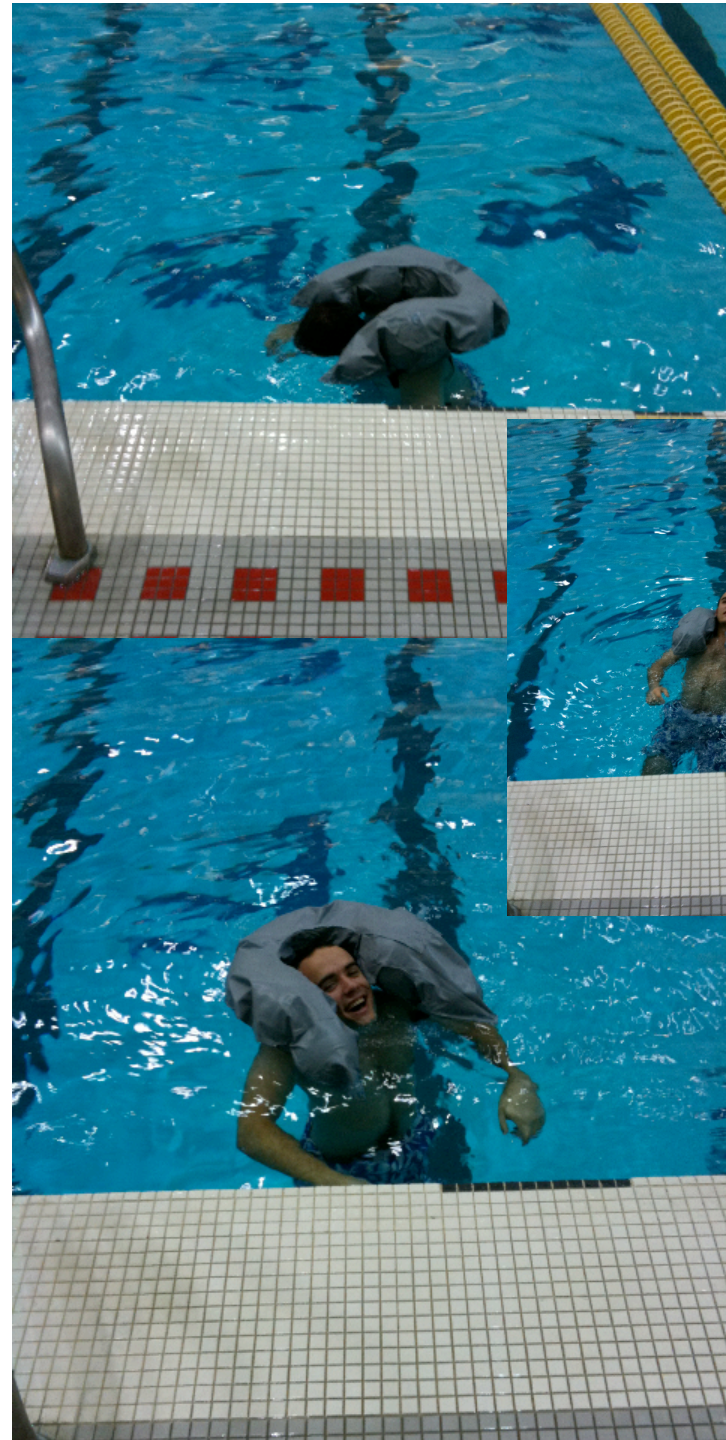


CONTEC



TESTING

- Wearability
 - Good mobility and comfort
 - Challenging to put on
 - Sizing to different people
- Floating
 - Ample buoyancy
 - Not sufficiently constrained



REFERENCES

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