Personal Locator Beacons (PLBs)
A User's Experience

Capt. Jonathan Samuell

NavTech 2022 – Seattle, WA

Houston Pilots

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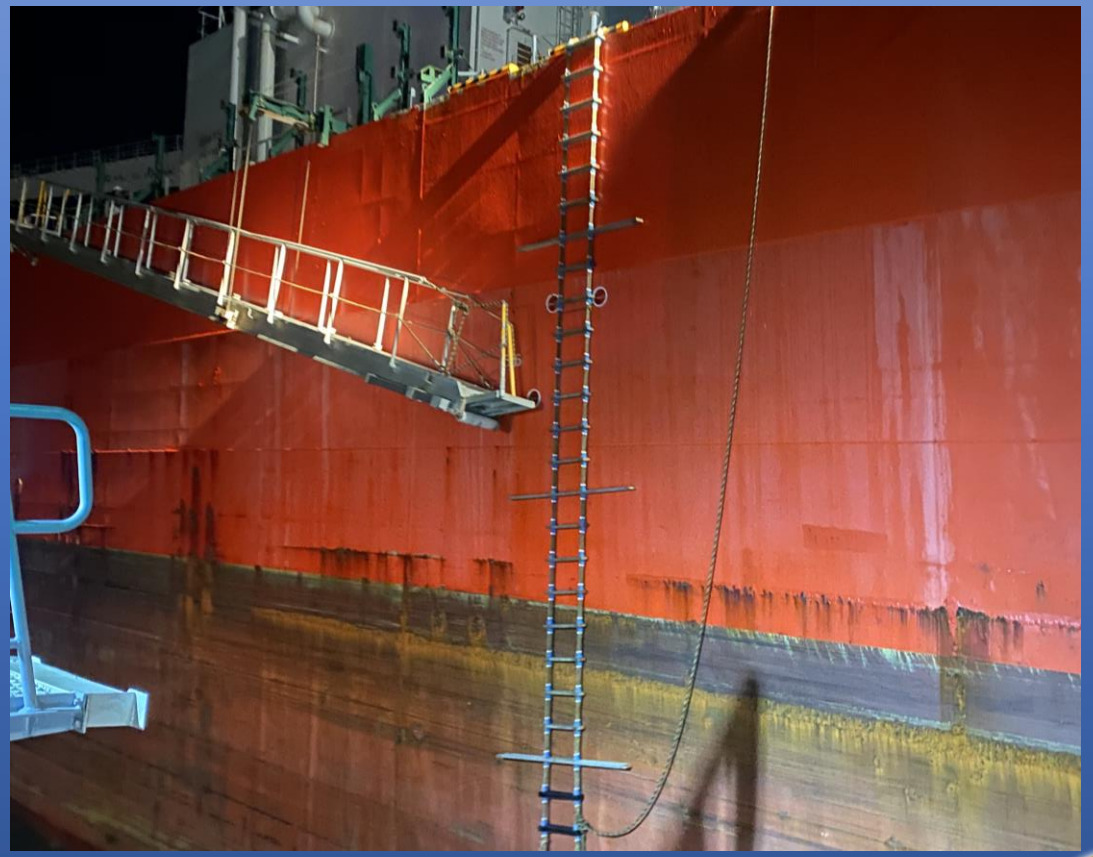
Normal Disembarking Arrangement for a Houston Pilot

- Outbound widebody tanker: Combination rigging, Gangway 7m, Ladder 3m
- 2 pilots to disembark to upper platform of large station pilot boat



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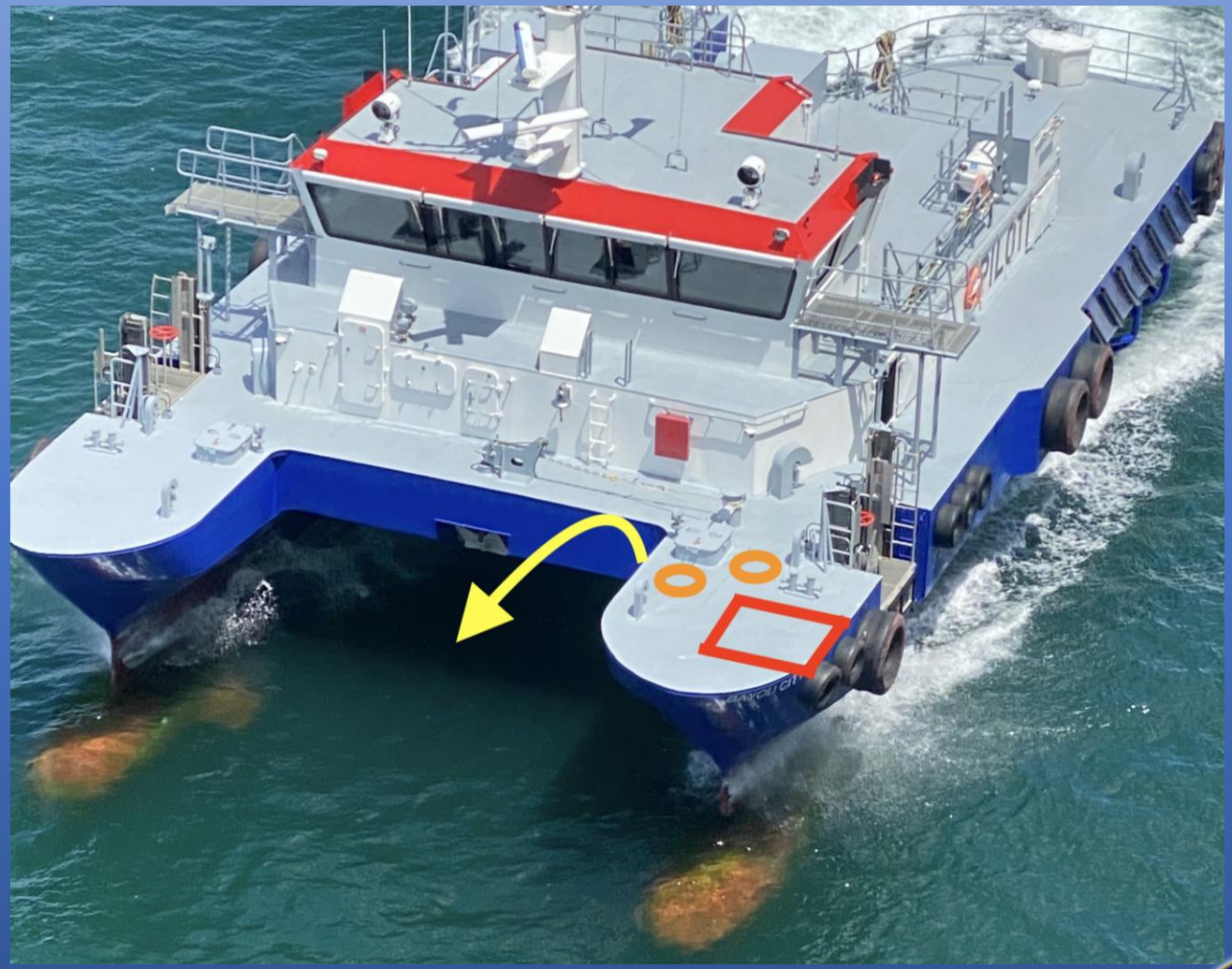
Man Overboard

- Underway making 10 kts.
- October 28th around 10 pm.
- 5-7 ft southerly swells from TS Zeta.
- PPE in use: helmet, PFD, gloves, white pylon strobe light, flashing bladder backlights, AIS PLB.
- No one witnessed the actual fall of 1st Pilot in the water.
- 2nd Pilot noticed a “white light” behind the pilot boat.
- Deckhand went inside to see if 1st pilot was below decks.



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Man Overboard Detection

- White pylon strobe light, flashing bladder backlights and auto inflation of PFD were water activated immediately.
- AIS PLB was inflation activated immediately.
- Smaller shuttle pilot boat was in vicinity headed to larger station pilot boat to pick up 2nd Pilot.
- Smaller shuttle pilot boat passed very near the MOB and did not see him nor receive any alarms from the AIS PLB.

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Man Overboard Detection

- AIS PLB signal was first received on large station pilot boat by the *Furuno* AIS FA-170.
- This AIS console is located more than 2m from the Operator and not easily seen. The audible alert is not very loud.

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Man Overboard Confirmation

- The pilot boat manufacturer connected the pilot boat's AIS receiver to the *Boning* Vessel Monitoring Software for the pilot boat, triggering boat-wide alarms at 4 stations and on both levels.
- The pilot boat operator turned the pilot boat to a reciprocal course and was able to see the white strobe light and reflective tape on the helmet.
- The pilot boat crew recovered the MOB utilizing the purpose built man-lift.
- The entire process (detection, confirmation, and recovery) took about 10 minutes.

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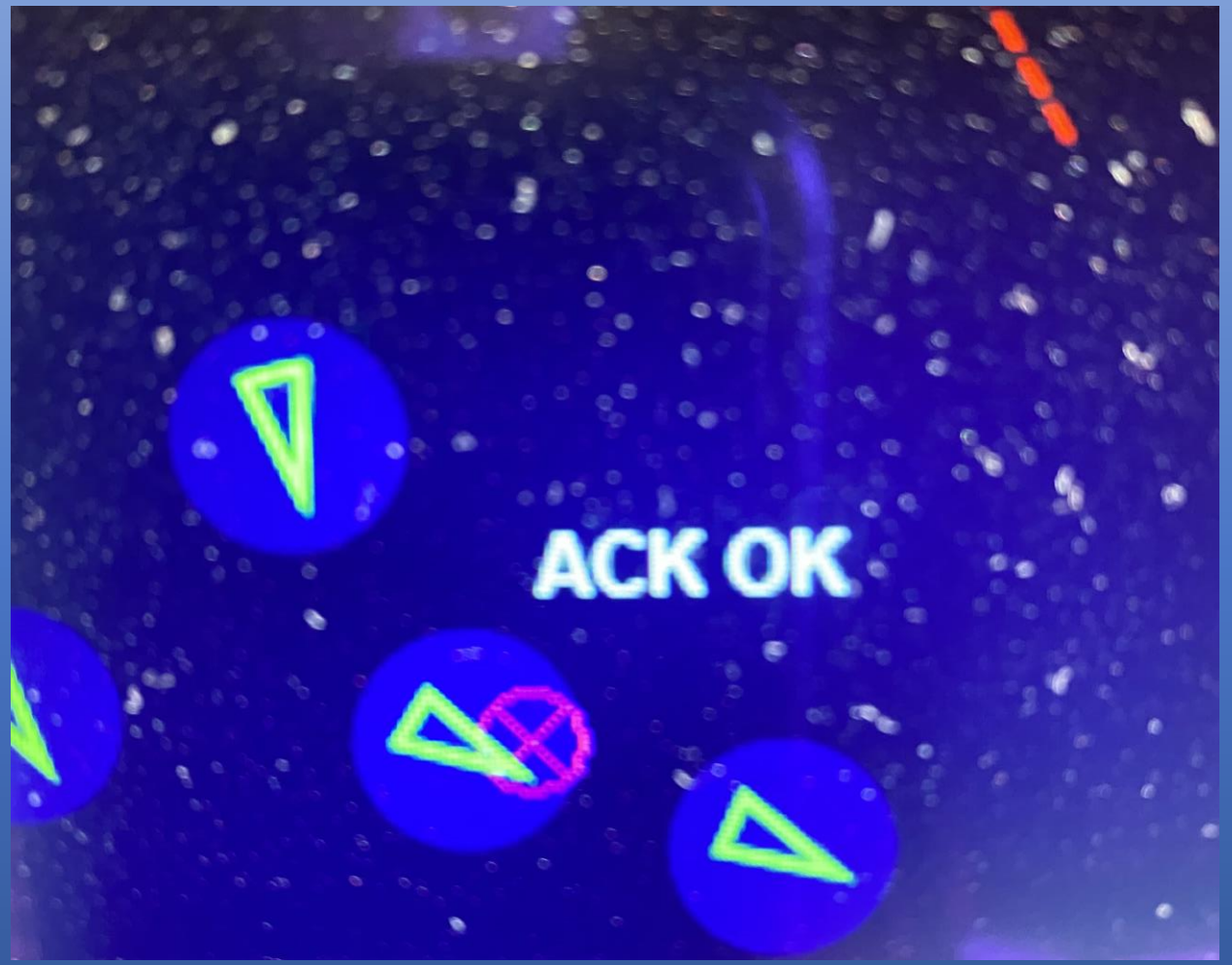
Man Overboard Confirmation

- AIS MOB Active alarm was also displayed on the large station pilot boat's PPU display, showing the location of the MOB.
- However, this was not noticed by pilot boat operator until after recovery of the MOB was complete.



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Local SAR Assets

- Local SAR assets were not notified because the MOB was confirmed so quickly.
- However, local SAR has participated in MOB drills with pilot boat crews on a regular basis.

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Local SAR Assets

- Local SAR assets can see AIS PLB alarms on their systems but prefer PLBs to be 406 and 121.5 MHz (similar to what they wear).

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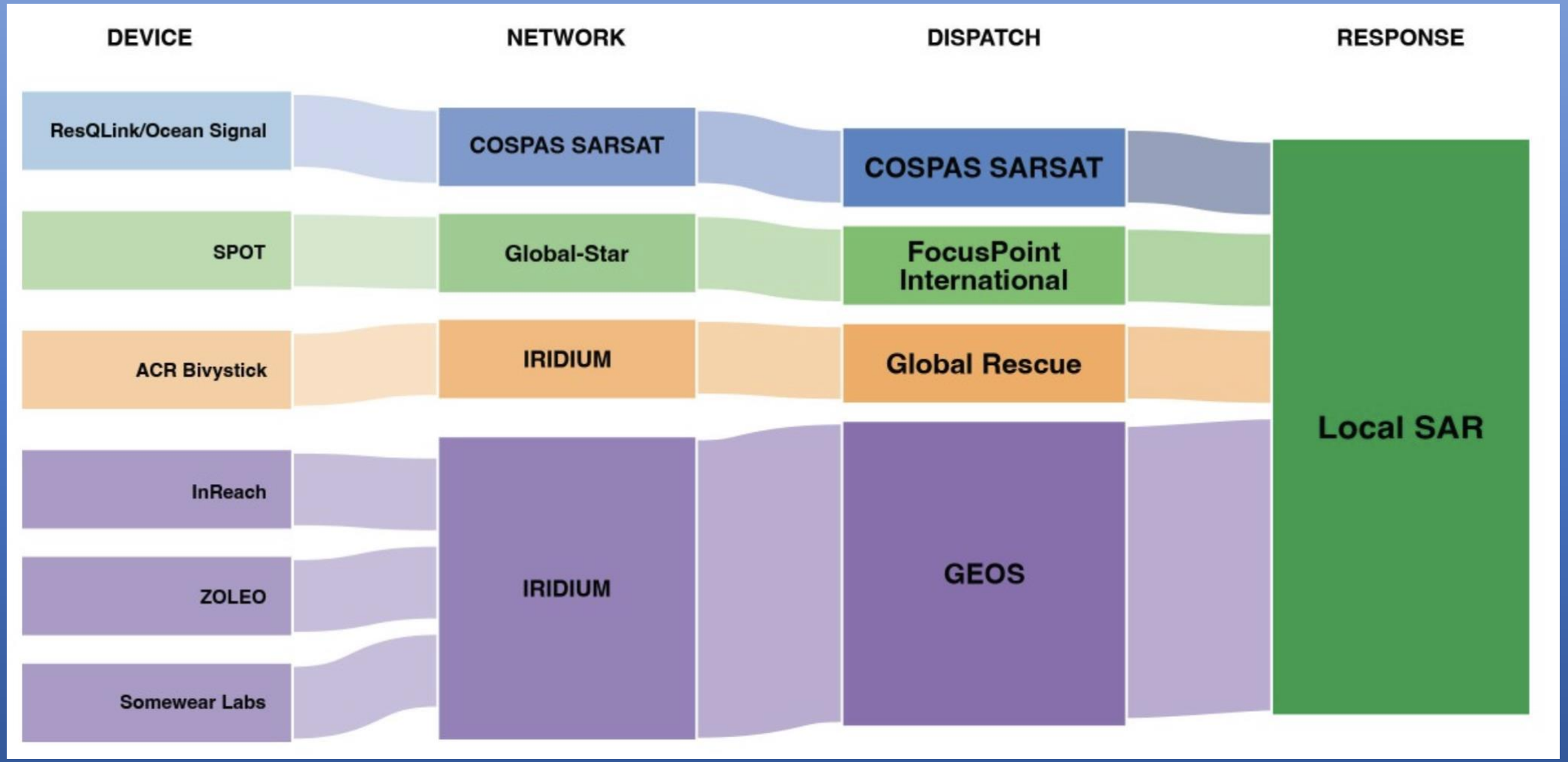
Public vs Private Communication Networks



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Recommendations

- Conduct a risk assessment of your operation and identify who will be the primary and secondary SAR asset in a real emergency. Choose your PLB(s) based on the capability of each.
- Conduct in-depth training (procedures, electronics, Nav/PPU displays) with your crews and involve local SAR assets when possible.
- Consider redundant PPE (i.e. lights, bladders, PLBs). Not everything works every time, redundancy can address this.
- It's a lot easier to make sure all your PPE is working properly in a real MOB scenario, if your conscious. Wear a helmet.
- Just having a symbol show up on a Nav/PPU display is not enough for notification for operators. Explore other notification options with your Nav/PPU vendor.
- Some PPU systems share data between PPUs over the internet. You can use this pathway to relay MOB alarms to other PPUs and SAR assets to extend the effective range of the AIS PLB, and increase chances of a quick recovery.
- Conduct regular checks of your PPE and make sure you are trained on it's use.

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