

Ferry Safety & Technology: Expand the Use of AIS

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Expanding the Use of AIS: An Action Agenda

Outline of Presentation

- Who we are
- About AIS
- Status and Obstacles
- Expanding the Use

Worldwide Ferry Safety Association: Who We Are

Mission: Save lives by reducing ferry fatalities

- Follow on to Interferry-IMO-Bangladesh Ferry Safety Project 2006
- NGO formed 2008 and activated in 2012
- **Work in Realm of Data, Research, Information, Technology**

What We Do

- Maintain **database of ferry fatalities** since 2000
- **Commission research** on ferry systems & solutions
- **Sponsor international Student design competition** for safe affordable ferry –
 - **Singapore Straits ferry 2017-18**
 - **Philippines Ferry 2018-2019**
- **Convene Ferry Safety and Technology Conference** – 5th annual
 - **Bangkok Feb. 20-22, 2019**

Why Focus on Technology?

Technology:

- Causes **social change**
- Influences **regulations & enforcement**
- Influences policies, practices (including safety culture) because **Technology can make things possible, even with minimal resources.**

Technology Focus: AIS

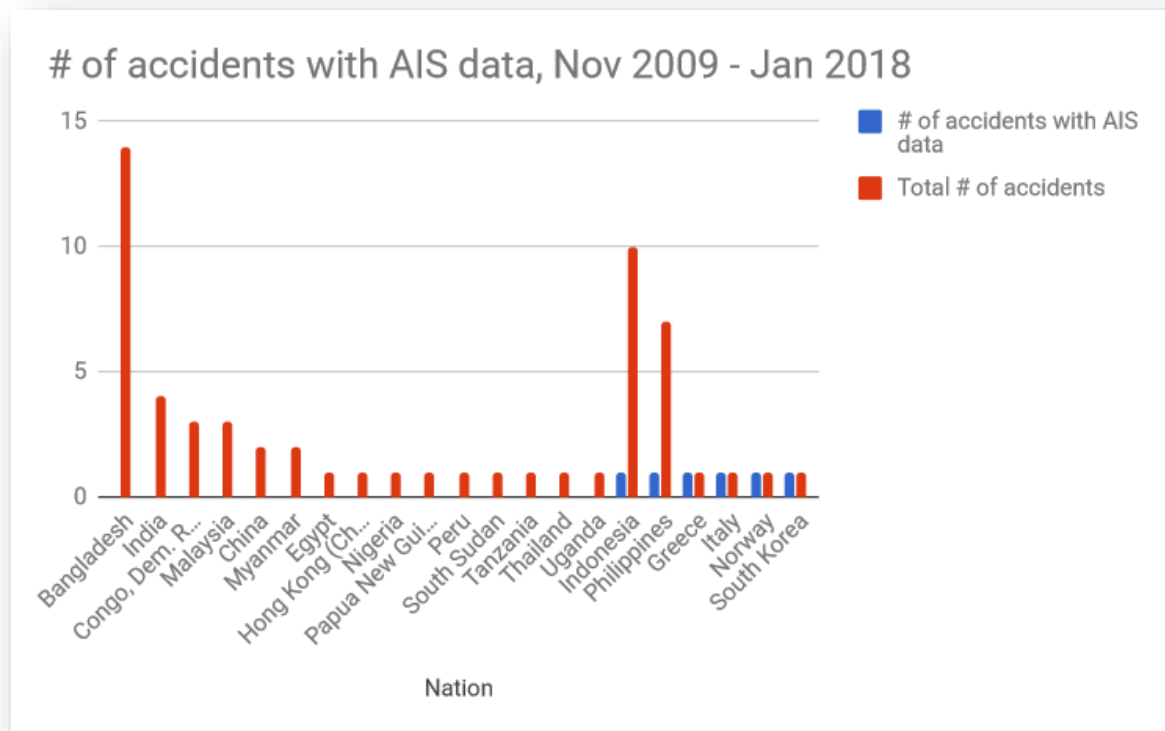
About Automatic Identification Systems (AIS)

- Radiofrequency communication of vessel's location/key information
- Originally for collision avoidance
- IMO mandated for vessels in international trade & ferries 2004
- IMO asks nations to enforce AIS for their ferries
- BUT we are unaware if IMO tracks enforcement & adoption

Is AIS Adoption on Ferries Universal?

- As stated, IMO doesn't enforce AIS for ferries, relies on nations to do so
- And we are unaware if IMO tracks nations' enforcement/adoption for ferries
- **To understand the degree of adoption of AIS, we mined our ferry fatality data, working with Vesseltracker**

A Measure of AIS Adoption



How to make AIS Adoption for Ferries Happen?

Strategy to make AIS happen --

Follow the Smartphone model: Attractive & Accessible Cost

Attractive:

- **Many Compelling Apps** DATA generated! **Numerous applications**
 - Oversee vessel on route, management, planning, accident investigation, SAR.
 - <http://bit.ly/fry-wbnr-rcdg> (“Increasing ferry safety with the big data tools you already have on hand”)

To Reduce the Cost of AIS

Antennas

- For public and private entities:
- Free antenna, if provide space and commit to maintain
- Obtain AIS data free as well
- Vesseltracker – business model to cover the globe
- > 2700 antennas worldwide

AIS: To Reduce the Cost

Transponders on vessel

- Buy in bulk? Or --
- **Make it yourself!**
- **3D printing** – Philippines and China maritime agencies undertaking
- WFSA partnering with U Albany – **3 D printed ferry route weather monitors** – can share methodologies

For vessels outside of antenna range:

- Antenna range – 50 km if antenna is on high location
- Current satellites – infrequent pass over & download; miss data; costly
- New satellites -- **Nano satellites,**
- Focused on +/- 20 Latitude – much of Pacific islands and archipelagos
- Available 2Q 2019
- Cost TBD

Convergence of transmission AIS and Weather

Push

- Ferry Safety Data: **Over 50% fatal accidents, weather** a causal factor
- Commercial Vessels: **Results of El Faro** – lack timely weather information
- Recreational vessel needs

Pull

- Technological feasibility

Thank you!

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Please plan to attend:

Ferry Safety & Technology Conference

February 20-22, 2019