Electronic Data and Audio

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Overview

- Voyage data recorder (VDR) transcription issues

- Inadequate performance testing for VDRs

- Global maritime distress and safety system (GMDSS) user entered position errors

- Automatic identification system (AIS) emerging standards

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Voyage Data Recorder Audio Quality

- Poor audio quality prevented a complete transcription
  - Use of monoaural audio channels to record multiple microphones
  - Noise pollution
  - Microphone placement

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VDR Annual Performance Testing

- Inadequate annual performance testing
  - IMO definition of "normal operations" inadequate
  - Ability of VDR audio system to perform while the ship is underway at sea, using main source of propulsion

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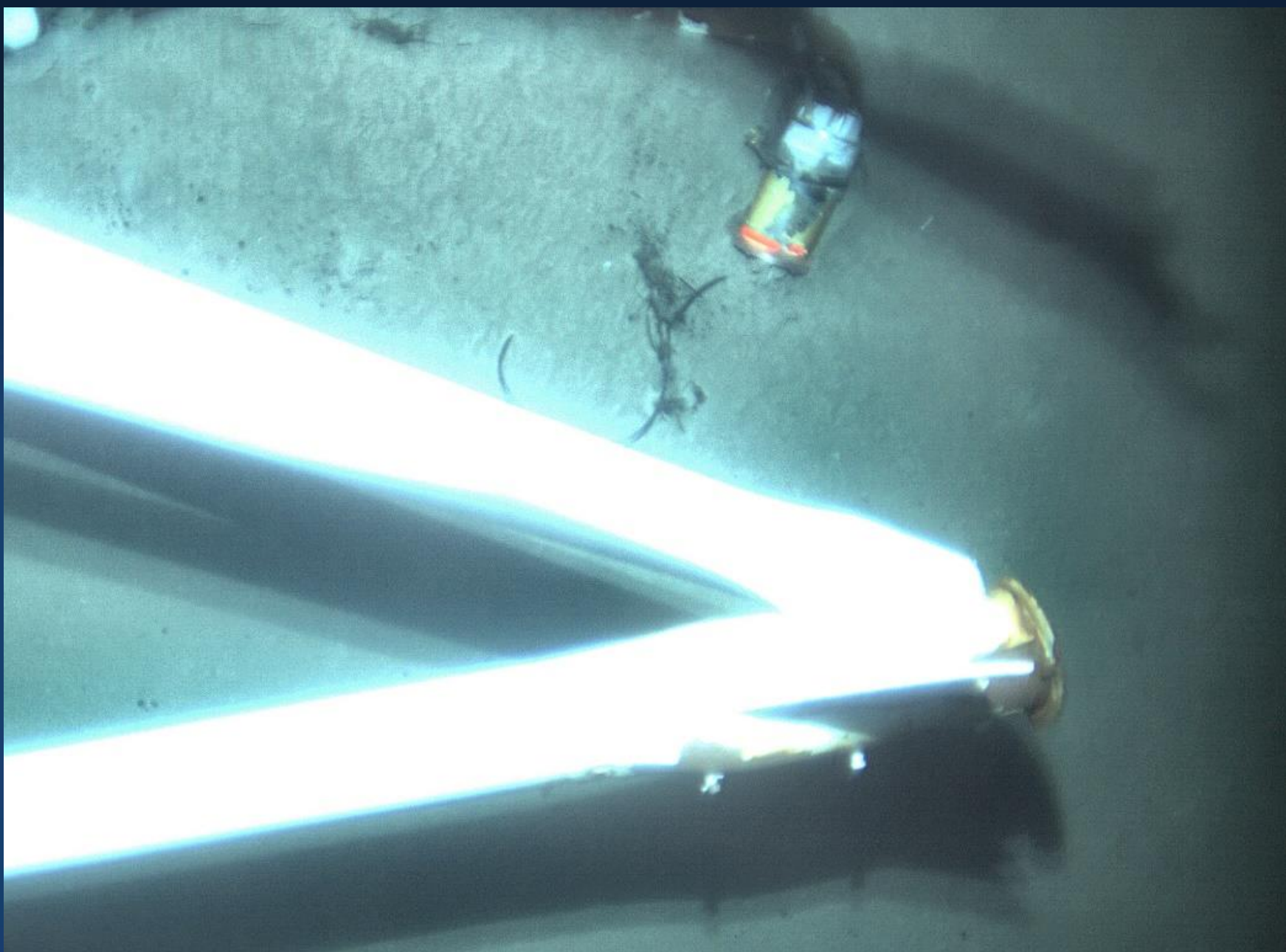YESTERDAY ★ TODAY ★ TOMORROW

Recording of Internal and External Ship's Communications

- Internal communications not recorded
  - Calls to/from engine room
  - Calls to/from the captain's stateroom
  - Calls to/from other portions of the ship
- External (VHF) communications not recorded
  - *El Faro* VHF radio recorded through ambient noise

VDR Annual Performance Testing

- Expired locator beacon battery

- VDR capsule recovery hampered

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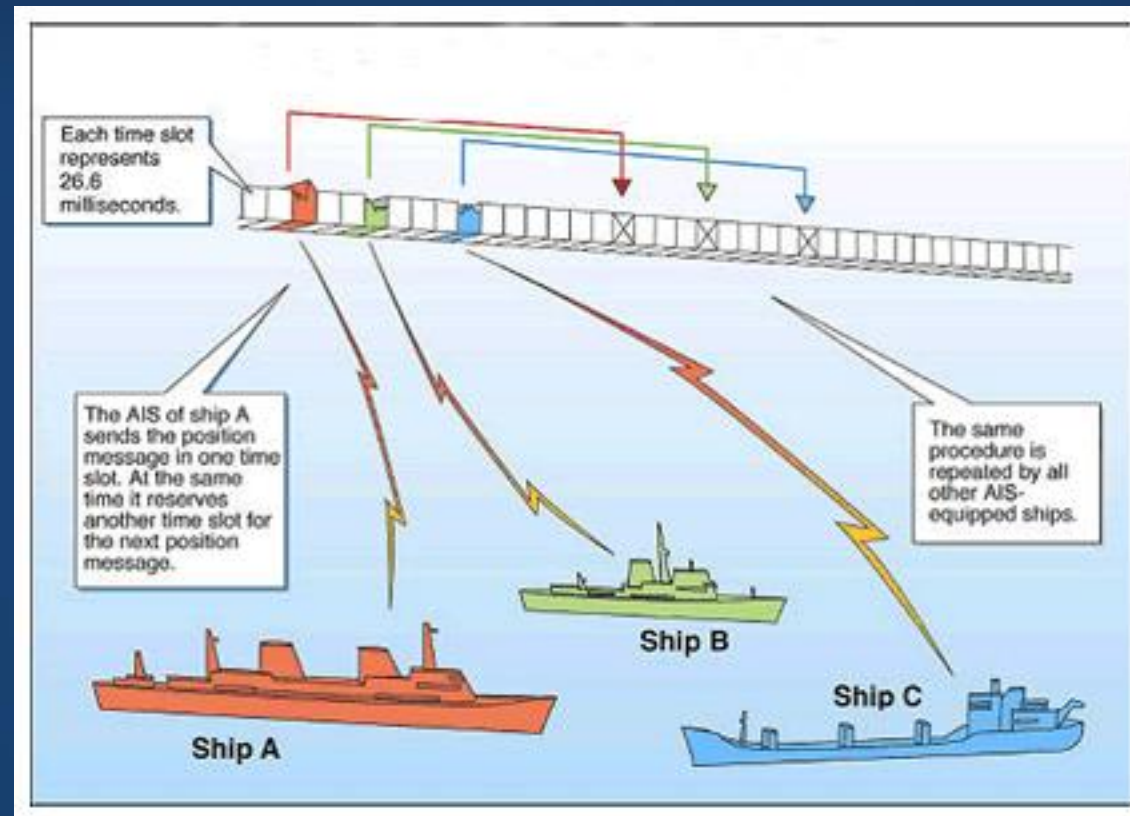YESTERDAY ★ TODAY ★ TOMORROW

GMDSS Formatting Issues

- GMDSS – Global maritime distress and safety system
  - Inmarsat-C distress alert interface
  - User modifiable distress position
  - System does not update distress position at time of sending

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Expanding AIS – Benefits and Limitations

- Automatic identification system (AIS) can be overloaded with application specific messages (ASM)

Expanding AIS – Frequency Allocation

- Effort to separate AIS and ASM messages under VHF data exchange system (VDES)

- VDES frequencies not allocated by United States

- Frequencies currently licensed by private corporation

- License will expire in 2018

Summary – Electronic Data and Audio

- Findings

- Recommendations

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