Maritime Bridge Distractions- “Stargazing Seafarer’s and Muddled Mariners”
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Maritime Bridge Distractions- a Click Away
DUKW BOAT
GPS Satellites
Modern vessels with modern equipment but not totally integrated systems cause greater mariner distractions
Overview

• Mariners have been plying the oceans, rivers, lakes and harbors for over 2,000 years!

• What has transpired in the last 25 years that has had a substantial impact on vessel safety?

• Impact of Maritime Bridge Distractions on navigation and pilotage
Most Wanted List of Transportation Safety Improvements

• Top Three:
  • **1. Eliminate Distractions**
  • 2. End Alcohol and Other Drug Impairment
  • 3. Ensure the Safe Shipment of Hazardous Materials

• Also on the list:
  • Reduce Fatigue-Related Accidents
Ship and Shore Based Technologies

• Impact and support situational awareness and decision-making
• Include: (alphabet soup)
  AIS
  ECDIS
  IBS/INS
  ARPA
  LRIT
  VTS
  GMDSS
AIS

- Automatic Identification System is now a critical ship-to-ship and ship-to-shore system
- AIS data is used to track vessel movements in real time and is an extremely important ship monitoring, collision avoidance and surveillance tool
- Critical component in today’s world from a mariners perspective pertaining to navigation, situational awareness, rules of the road and decision-making, if a vessel does not show up on the AIS it is invisible!
- Over-reliance on electronic equipment on the bridge
Are the Lights on or off?- eLORAN
NEW DAWN/NEW LIGHT SUMMARY

• Maritime Bridge Distraction Solutions
  Total Bridge Solution-centralized computer that could receive and display all bridge alarms, currently used in Engine Rooms, similar to IBS
  Human Factors/ergonomics- eqpt. layout
  Education, Training & Simulation
  Situational Awareness
Integrated Bridge System
DISTRACTORS

• Q1 What are the biggest causes of distractions on the bridge of a Vessel? AIS, ECDIS, RADAR/ARPA, VHF Communications, GMDSS, etc.?

• Overwhelmingly our received responses focused on the large amount of alarms on the bridge that could not be easily distinguished along with unnecessary VHF communications being received.
AIS

• Q2 What issues, if any, have you had with AIS and SMS/texting in regards to frequency and relevance of messages?
• Several respondents stated the unnecessary messages that come through as test messages from other vessels.
• One respondent however ““some models are not user-friendly - an AIS message is a very useful tool to contact another vessel for collision-avoidance communications - mostly, it eliminates the language/accent confusion” This is in direct contradiction to the 1972 Collision Regulations.
Reduce Distractions

• Q3 What could be improved from a technology standpoint to make a watch less distracting?

• Reduction, consolidation, and organization of alarms to be presented in a fashion easy for the watch stander to determine and acknowledge.
Q4 Is there an over-reliance on the use of AIS and the data provided?

Answered: 171   Skipped: 2

<table>
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<tr>
<th>ANSWER CHOICES</th>
<th>RESPONSES</th>
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<tbody>
<tr>
<td>Yes</td>
<td>52.63%</td>
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<tr>
<td>No</td>
<td>47.95%</td>
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Total Respondents: 171
Improving on AIS

• **Q5** How can AIS be improved?

• The bulk of respondents stated that there is too much proliferation of unnecessary information to navigation ie; fishing floats marked with AIS, test messages sent, etc.
Drawbacks to Electronics

• **Q6** What are some of the biggest drawbacks with the proliferation of electronic equipment on the bridge?

• The majority of respondents believed that watch standers are over reliant on electronic data and fail to stand a proper lookout as required under the Rules of the Road, Rule 5.

• Additionally many respondents are dissatisfied with the amount of alarms on the bridge that sound alike, which causes confusion when attempting to answer an alarm.
Benefits of Electronics

• **Q7** What are some of the biggest benefits to the proliferation of electronic equipment on the bridge?

• When utilized properly the equipment allows for more efficient communication between vessels according to most respondents.
Traffic Level

- Q8 Does the level of traffic have a bearing on distractions and your situational awareness?
  - Yes - 140, 82%
  - No - 31, 18%
Q9 In relationship to where you are located whether rivers, harbors, inland waters, or deep seas have any bearing on your level of distraction?

Yes- 144, 84%
No- 28, 16%
Total- 172
Q10 If you are in brown water areas, does the ability to receive cell signals and the use of cell phone and texting have an impact on your level of distractions?

Yes - 141, 82%
No - 31, 18%
Total - 172
Q11 If in brown water areas what are your company policies about usage of cell phone and texting on the bridge?

No Usage permitted - 79, 46%
Yes permitted subject to it is for the intended purpose of Navigation of the Watch or for Vessel Traffic Management - 91, 54%
Total - 170
Q12 What training have you received, if any, to deal with multi-tasking on the bridge and using the various pieces of equipment?

None - 77, 45%
Bridge Resource Management - 84, 49%
On the Job Training - 10, 6%
Total - 171
Q13 What training have you received, if any, when new equipment is introduced to the bridge?

Type Specific - 88, 51%
On the Job Training - 44, 26%
None - 39, 23%
Total - 171
Current Maritime License

Q14 What is your current license?

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<tr>
<td>Master</td>
<td>78.61%</td>
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<tr>
<td>Chief Officer</td>
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<td>Third Officer</td>
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<tr>
<td>Pilot</td>
<td>9.26%</td>
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<td>Tug/Ferry Captain</td>
<td>3.47%</td>
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<tr>
<td>Tug/Ferry Mate</td>
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Total Respondents: 173
Years of Maritime Experience

Q15 How many years of experience do you have?

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<td>15-20</td>
<td>18.02%</td>
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<td>20+</td>
<td>51.74%</td>
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<td>TOTAL</td>
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Use of Social Media

Q16 How frequently do you use social media?

- Never: 8.09% (14 responses)
- Daily: 55.49% (96 responses)
- Weekly: 19.08% (33 responses)
- Rarely: 14.45% (25 responses)
- All day: 2.89% (5 responses)

Total responses: 173
Summary

• Need for legislation and laws similar to land based for cell usage and texting being prohibited
• Instituting National Maritime Awareness Campaign on the pitfalls of Maritime Bridge Distractions
• Need for enhanced distraction training incorporated in BRM and other courses
• Revision to Rules of the Road to enhance Vessel Bridge-To-Bridge Radiotelephone Regulations, 33 CFR 26 to include Cell Phone and Texting requirements?