Any ID’aes for harmonization?

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E-Navigation Underway, 2018
EfficienSea2 project has 15 end-user services

**Navigation**
- Navigational Warnings and Notices to Mariners
- Weather on Route
- Nautical Charts based on S100 Standards
- Smart Buoy Interaction
- Route Optimisation
- Ice Charts
- Crowd Sourcing of Ice Information
- Route Exchange
- No-go Areas and Comfort Zones

**Arctic**
- Arctic Live Position Sharing
- Arctic SAR Tool
- Space Weather Forecast

**Administration**
- Automated VTS/SRS reporting
- **Automated exchange of port information**

**Emissions**
- Sulphur emission monitoring
Exchange of information

• Complex and diversified picture
  • Pre-arrival documents are sent in advance
    o Pre-arrival documents very often have different deadlines for submitting; 72-48-24 hours before arrival,
  • Port documents for the Authority are handed over on arrival
  • Information exchanged between many stakeholders

• The receiving entity, type and template differs from port to port – even within same country and region
### E2 Case study on required reporting from a ship

**En route from Port of Gdansk, Poland calling Port of Aarhus, Denmark**

<table>
<thead>
<tr>
<th>Event</th>
<th>Event number</th>
<th>Time</th>
<th>Information</th>
<th>Details</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td>1</td>
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<td>Great Belt PreTransit</td>
<td>VTS</td>
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<td>2</td>
<td></td>
<td>72 hrs before arrival</td>
<td>Port State Control Information</td>
<td>Notification for ships eligible to expanded inspections</td>
<td>EU-SSN form C3</td>
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<td>3</td>
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<td></td>
<td>VTS</td>
<td>Notification</td>
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<td>4</td>
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<td>As early as possible</td>
<td>Garbage removal form</td>
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<td>5</td>
<td></td>
<td>24 hrs before arrival</td>
<td>ETA-24 hours to ETA</td>
<td>Notification for ships arriving in and departing from ports of the EU</td>
<td>EU-NSW form A1</td>
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<tr>
<td>6</td>
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<td>24 hrs Pre-Arrival documents</td>
<td>Border Control</td>
<td>Border checks on persons</td>
<td>EU-NSW form A2</td>
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<td>7</td>
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<td>Dangerous Goods</td>
<td>Notification of dangerous or polluting goods carried on board</td>
<td>EU-NSW form A3</td>
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</tbody>
</table>

**Identified 150+ reporting requirements!**

for 4 ports
International regulation on reporting

- IMO Facilitation Committee (FAL) adopted in 2016 new requirements for electronic data exchange

- New mandatory regulation requires public authorities to establish systems to assist ship clearance processes by April 2019

- For international shipping, a unified, global approach to facilitation of international maritime traffic is vital
A SCENARIO COULD BE…

THE MARITIME CONNECTIVITY PLATFORM

Authority:
- Immigrations
- Customs
- Police
- Maritime Authority
- Port State Control
- Health
- Ports
- …

Information:
- Cargo formalities
- Waste delivery
- Bunkers
- Pre-arrival/Departure
- Dangerous Goods
- Crew/Passenger lists
- Ten last ports of call
- Certificates
- …

Authority:
- Ports
- Service providers
- …

Information:
- Reception facilities
- Contact points
- Holiday Calendar
- Taxes & Tariffs
- …

Service provider
BIMCO port database

Communication behind firewall

Single Windows

Identity Registry

Service Registry

Port Authorities

Mariners

owners

Port Authorities

BIMCO
On-line test of e-solution
Ship management system

- Collect and maintain ship report data
- Release report data when ready
Examples – information's from the SafeSeaNet.DK
STANDARDS – HARMONIZATION – STANDARDS

• **Harmonization** and use of **international standards** is key to for M2M **interoperability**

• Use of a suitable data model, mapped across main models (e.g. UN/CEFACT Multimodal Reference Data Model, WCO Data Model and ISO)

• The solution shall be **technology neutral**, and provide the ability to adapt to new technologies (backwards and forwards compatible)

• The solution do not call for additional systems/equipment; but must be implemented by all stakeholders
What are the obstacles....

• Need for common data element’s ID standard

<table>
<thead>
<tr>
<th>Data element</th>
<th>Description</th>
<th>ISO 28005</th>
<th>UN/EDIFACT</th>
<th>WCO ID</th>
<th>IACS R.75</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ship name</td>
<td>Given name of the ship in the ship registry</td>
<td>ShipID.ShipName</td>
<td>C222:8212 (Name of ship)</td>
<td>T005</td>
<td>SHIP_Name</td>
</tr>
<tr>
<td>Call sign</td>
<td>Call sign for the ship. Sequence of letters and numbers, unique to each ship by which ships can be identified usually in radio communications.</td>
<td>ShipID.CallSign</td>
<td>C076:3148 (call sign)</td>
<td>Type (253)</td>
<td>SHIP_Call_Sign</td>
</tr>
<tr>
<td>IMO number</td>
<td>Unique ship identification number assigned by Lloyd's Register – Fairplay in accordance with IMO resolution A.600(15).</td>
<td>ShipID.IMONumber</td>
<td>C222:8213 (IMO Number)</td>
<td>T006</td>
<td>SHIP_IMO_Number</td>
</tr>
<tr>
<td>MMSI number</td>
<td>Identifier used by maritime digital selective calling (DSC), automatic identification systems (AIS) and certain other equipment to uniquely identify a ship or a coast radio station.</td>
<td>ShipID.MMSINumber</td>
<td>-</td>
<td>Type (253)</td>
<td>-</td>
</tr>
<tr>
<td>Comments</td>
<td>Any other information related to ship identity</td>
<td>ShipID.Comment</td>
<td>-</td>
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</tr>
</tbody>
</table>
Common maritime data model

Where overlap between the data models exists, there is a need for associating the data definition with multiple data element ID's.

Key sources
- IHO S-100 framework data set
- IMO FAL compendium data set
- IALA port call message standard data set
- IHMA nautical port information data set
- ISO 28005-2 data set, comprises also:
  - National Single Window (building on EMSA data set)
  - WHO maritime health declaration
  - IMO data on safety and environmental matters
- ...

Key source
- UN/CEFACT data set
- ...

Key source
- WCO data set
- ...

Key source
- ...
Reduction of the administrative burden

• E2 project have issued a questionnaire asking navigators about time spend to prepare, perform and finish 32 mandatory administrative tasks
  ➢ The average total time to complete the most time consuming tasks is 62 minutes
  ➢ The average total time to complete the least time consuming tasks is 16 minutes

• E2 solution estimate a reduction between 67-79% of this time*

* we are still analysing the numbers, but the reduction seems to be conservative
Thank you!

Contact BIMCO at
www.bimco.org

For further information, contact
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