Can you hear me now?

6:00 PM - 29 Sep 2015

Edward Snowden 🔄
@Snowden

_reply_twitter_124_550_love_123_685
YES, WE CAN.
Baseline study
Activity 1.1
STM SOP and HMI
Activity 1.2
Shore-based Deep Sea Assistance
Activity 1.5

CHALMERS

STM
Standard Operating
Procedures
Voyage exchange format
Activity 1.3
Extended testbed, EMSN
Activity 1.4

Co-financed by the European Union
Trans-European Transport Network (TEN-T)
Decision support tools
Activity 1.6

97.4% less conflicts
10.9% saved fuel
Maritime Spatial Planning
Activity 1.7
Route Exchange Format, RTZ
Anders Rydlinger
Prerequisites 2013

Status in 2013?

• No International standard exist. Detailed description missing in IMO performance standard and corresponding IEC standards.
• Propriety format is used by manufacturer and service providers
• Common standard does not exist for Shore based part (VTS)

The drawback are obvious:

• Interoperability between different systems onboard
• Not possible to exchange information ship to shore in a unified way
• Additional workload for crew when route is supposed to be used in different systems or operations
Project objectives

The main objective was to develop a common route exchange format that support all processes inside the MonaLisa2 project i.e. Sea Traffic Management (STM) where the route can be used

- Onboard for save navigation (ECDIS etc)
- Onboard for route-schedule –speed optimization
- By service provider for route optimization
- By Pilots

- A shore for Sea Traffic Management and Deep Sea Assistance
- A shore for Route optimization and creation of dynamic routes
- A Shore by other stakeholders who have an interest in the vessels route and schedule (Vetting, Ships-operator, ports.....)

The route format should:

- Be open and if possible be aligned with International Standard.
- Allow easy customization so that project goals can be achieved.
The work

- Organization - Working Group Act 1.3 Lead by DMA (Administrations, academia, Industry partners, Service providers and Research institute)

- Method – Brainstorming addressing
  - User need on the ship
  - Industry need to build voyage related services
  - Project needs to support STM processes

- Base Line for the work
  - Concept of Strategic Voyage Management well defined
  - Concept of Tactical Voyage Management understood and some GAPS was identified
  - Concept of Dynamic voyage management and Port CDM in particular was unclear

No International standard
IEC 61174 ed 4

*Electronic chart display and information system (ECDIS) – Operational and performance requirements, methods of testing and required test results*

**Work group IEC TC80/MT7**

- Need for a Common Route Format has been identified
- Developed for standard exchange of routing information between different equipment on the bridge.
- Work ongoing in
  - CDV - Committee Draft for vote March 2014
  - FDIS - Final Draft International Standard March 2015

**Question is it possible to align project needs with this proposed change of IEC standard?**
Milestones & Status

Project Milestones

• CDV - Committee Draft for vote March 2014 (June)
• FDIS - Final Draft International Standard Jan 2015
• In force (August) September 2015
• Harmonized with new IHO Presentation library 2015/2016
• Implemented for test in EMSN Feb/March 2015
RTZ - The format

**Route Info node**, that contains basic information on the route;

**Waypoints node**, that describes the geographical components of the route;

**Schedules node**, that describes calculated schedule and timing defined by a user;

**Extensions node**, that allows for extending the format to fit the particular needs of a manufacturer.
The format

General Information block
- Route Name
- Route Origen
- Route Status
- Validity Period
- Vessel name
- Vessel MMSI
- Vessel IMO
- Voyage No
- Ship Type
- Environment Class
- Ship Model
- Displacement
- Cargo
- GM (Metacentric height)
- Optimization method
- Max Roll
- Max Wave
- Max Wind
- Speed max
- Speed service Window
- History of Changes

Route Geometry block
- WP Id
- Wp Type
- Revision
- Lat
- Lon
- S XTD
- P XTD
- Turn Radius
- WOL (F-distance)
- Name of WP
- Sf Contour
- Sf Depth
- GC/RL Leg
- Draught F
- Draught A
- UKC_Static
- UKC_Dyn
- Chain information
- Reporting info
- Local access
- Note filed

Route Schedule Block
- WP Id
- ETD
- ETD_Window
- ETA
- ETA_Window
- Stay
- Speed
- Speed_window
- Wind Data
- Current Data
- Wind_Loss
- Wave Loss
- Total Loss
- RPM
- Fuel
- REL_Fuel_Save
- ABS_Fuel_Save
- Note

Co-financed by the European Union
Trans-European Transport Network (TEN-T)
EMSN
Reto Weber
STM applications
Jonas Envall
MONALISA 2.0
Activity 1
STM Operations & Tools

YES, WE CAN!
Thank you all!