THE CONCEPTS OF THE MARITIME CLOUD

Axel Hahn (OFFIS), Jens Jensen (DMA), Mikael Lind (Viktoria Swedish ICT), Thomas Lutz (Frequentis), Benjamin Weinert (OFFIS), Jin H. Park (KRISO)
Technology on its way to the Ocean

Automatic Identification Systems / Electronic Nautical Charts

What's the glue?

GMDSS

Vessel Traffic Services / Logistics

EFFICIENSEA
WE HAD A DREAM...
The Glue: The Internet of the Seas
The Maritime Infrastructure Framework

- Infrastructure framework
- Ship operations management
- Sea traffic management
- Cargo management
- Inter-modal transport management
- Offshore operations
- Maritime safety
- E-maritime
- Single window
- e-Navigation
- Trade
The Architecture of the „The Internet of the Seas“

Ship Management | Sea Traffic Management | e-Navigation | Offshore Opps

Value Added Services (like SeaSWIM)

The Maritime Cloud

Common Maritime Service Infrastructure

Infrastructure Management

The technical backbone

And many more
The Maritime Cloud: A Quick Recap..... The Concept

• An Internet Protocol (IP) based multimodal communication Backbone

• A Service Oriented Architecture
  - „Everything is a Service“
  - Service user (Clients) an Service provider (Server)
The Maritime Cloud: A Quick Recap..... Additional Elements

IDENTITY AND AUTHENTICATION
THIS IS WHO I AM
- Individual
- Group
- System

AUTHORISATION
THESE ARE MY RIGHTS
- Low Risk
- Medium Risk
- High Risk

DISCOVERY
LOCATING MY SERVICES
- Type
- Standardised
- Government
- Commercial
- Approved

CATALOG
MY SERVICES
- Authorised
- Commercial

[Diagram with icons and additional elements]
Established „Maritime Cloud Development Forum“ to Coordinate the Work

Maritime Cloud Development Forum
Austria Denmark, Germany, Korea, Sweden.

Working groups
One or more technical coordination groups
Participants from projects

Project EfficenSea2
STM Validation Project
Project KRISO/ETRI
...

Develop the Maritime Cloud concept with the aim of becoming the global infrastructure for e-Navigation

Develop the Maritime Cloud in order to meet infrastructure requirements in EfficenSea2, STM validation and KRISO/ETRI e-navigation projects

Implementation and realisation of the Maritime Cloud Concept

Coordinated by:
The Methodology: The Maritime Architecture Framework

Comes with different interoperability-layers to enable various interactions within the maritime domain.

Domain-specific: covers all areas of the maritime sector.

Includes a use case mapping process for (new) technologies.
MCDF Working Groups

Identity management and security
Lead by DMA

Service specification and provision
Lead by OFFIS

Communication and Messaging
Lead by KRISO
MCDF: Lightweight Cooperation

GoToMeeting

Dropbox

SEMAT

Google

GitHub
Do You have a Contribution?
Join the Team!