

The Maritime Cloud and its applications

A technical infrastructure to support seamless
information transfer in e-navigation

e-Navigation Underway 2014

Thomas Christensen
Danish Maritime Authority
Maritime technology and e-navigation



- What is it?
- Why do we need it?

MSC 85/26/Add. 1 Annex 20

Strategy for the development and implementation of e-navigation

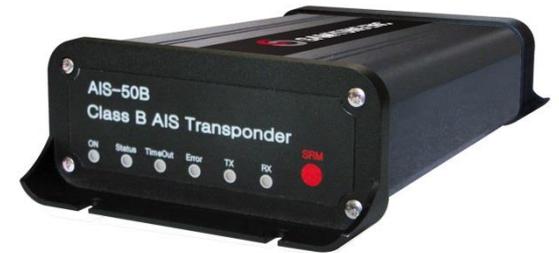
Vision of e-navigation:

An **infrastructure** providing authorized seamless information transfer on board ship, between ships, between ship and shore and between shore authorities and other parties with many related benefits.

The Maritime Cloud provides that infrastructure!

Or that is what the little Kingdom of Denmark proposes.

Because we need more than

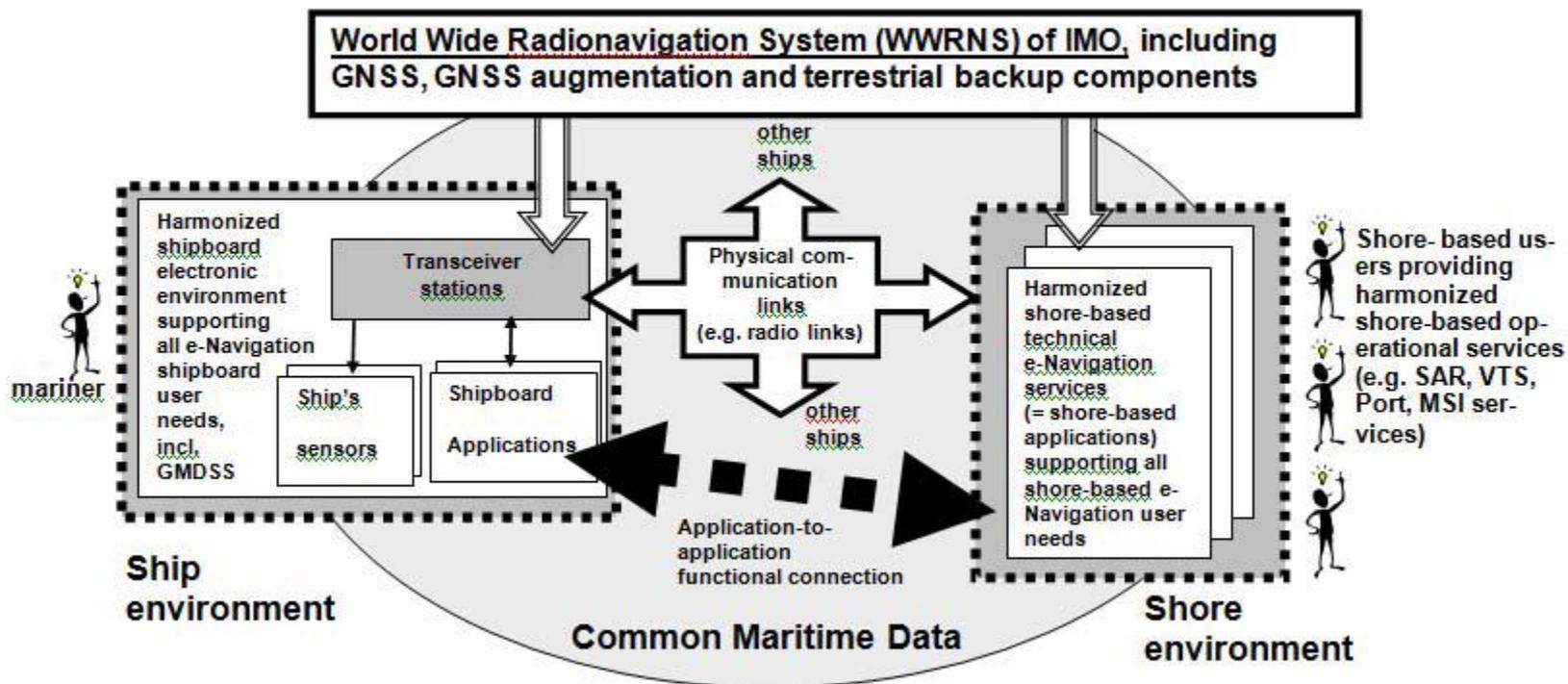


We need a logical layer (infrastructure) on top of the physical communication links that will allow for users to exchange information

An infrastructure that will facilitate: Integrity, Confidentiality & Authenticity

There you go BIMCO, Cyber Security!

The overarching architecture



Such infrastructure will:

Support information exchange needed for e-navigation solutions in the short... and long term!

S2 Means for standardized and automated reporting - FAL reporting

S4 Integration and presentation of available information in graphical displays received via communication equipment

S9 Improved Communication of VTS Service Portfolio

And future solutions relying on exchange of information

Also, the maritime cloud will be extremely valuable in transition planning

Facilitation a seamless transition from old to new communication technology

Nice, but what is it, and how does it do it?

It's mainly software*

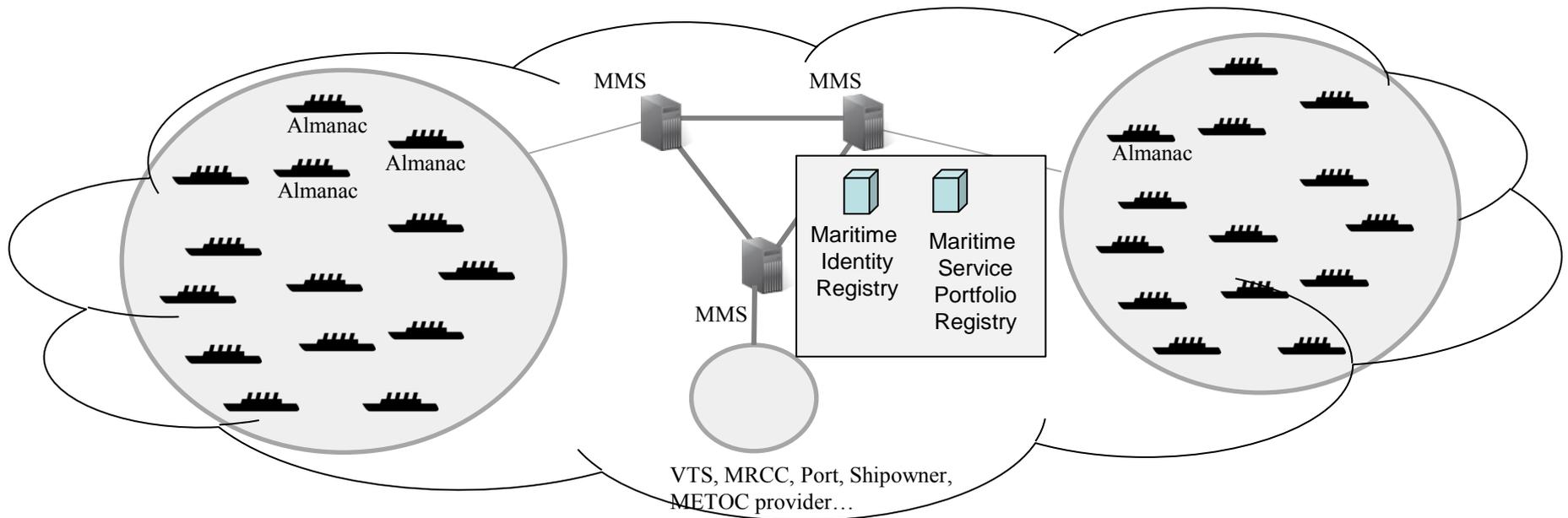
With three main components:

A Maritime Identity Registry

A Maritime Service Portfolio Registry

A Maritime Messaging Service

Something like this:



Thomas, remember to mention the Almanac...

A tiny demo...

Please exit your mail program on your phone/tablet/laptop
and enter:

Maritimecloud.net

Apart from this small demonstrator, we have prototype
e-navigation services running at the DMA stand in the
exhibition area.

So what do we need?



MC here

Another few remarks on the MC:

It is derived from test beds!

It uses existing technology to great extend!

Current prototype is open source!

Where are we now?

We have descriptions on several levels

We have prototypes of some elements

The prototype is being tested in test beds

Everything is open source

Where do we want to go?

We want to further develop the MC (hopefully with others)

We want to continue testing the MC

And of course...

Eventually...

The Maritime Cloud adopted as the e-navigation infrastructure
(in some form)

The maritime cloud is not “nice to have”!

We **need** the Maritime Cloud (or something very similar)
in order to realize e-navigation!

And that is what we all want, isn't it?

Thank you

