Agenda item 9, 10

Task Number WG1- 5.1.19

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Working paper – Questions on a digital infrastructure framework for e-navigation to be considered Maritime Digital Infrastructures and Testbed seminar in Nov/Dec 2015

# Summary

This paper summarizes questions raised in WG1 and WG 2 during ENAV16 related to the Maritime Cloud, SeaSWIM and a Maritime digital Infrastructure framework.

## Purpose of the document

To pass the questions raised on to ENAV17, for a qualifying discussion providing input to the seminar proposed on digital infrastructures for e-Navigation.

## Related documents

ENAV16\_9\_22

ENAV16\_9\_23

ENAV16\_9\_24

ENAV16\_10\_5

# Background

At ENAV16, respinding to Action item 37 of ENAV15, three papers were presented on the Maritime Cloud concept, the SeaSWIM concept and a common Maritime Infrastructure Framework.

Taking into account ENAV16\_10\_5 working group 1 considered the papers and decided to raise a number of questions to be discussed at ENAV17, in order to qualify input to the proposed seminar on digital infrastructures for e-navigation, leading towards Delivery 2 of Task 5.1.19 of WG1.

Working group 2 considered the input papers and raised a number of further questions and initial reastions, to be considered at ENAV17.

# Discussion

## Questions raised by WG1:

Q:Who are we adressing? Who are the stakeholders? Of services delivered or the development or policy?

A: The group considered that the target audience of the discussion should focus on leading up to the proposed seminar, and would be IALA members and experts in digital infrastructure development and related policy issues.

**Maritime Digital Infrastructures**

* Should a better name be chosen than Maritime Cloud?
* Does the Maritime Cloud support e-Navigation ?
* Does the Maritime Cloud enable the vision of IMO on e-navigation, considering the approved IMO Strategy Implementation Plan ?
* Is the architecture/ framework fixed or flexible to accommodate new services ?
* What kind of technical and organizational details are required to promote a deeper understanding by stakeholders ?
* Should the name Sea Traffic Management (STM) be changed to avoid concerns over control of ships from shore ?
* Since STM goes ‘beyond e-navigation”, what role should IALA play?

**Identities & Security**

* How will the integrity of a message be preserved ?
* Is there just one global node with identity registry / service registry / messaging server?
* Can a holistic approach to Unique Identifiers encompass Actors using the infrastructure as well as navigational and other maritime objects?
* Traceability (audit trail)?

**Description, Registration, Management of Services and Governance**

* Governance of core services and registrations – at national level, regional level, global level?
* Is the governing body global or regional?
* If there exists a infrastructure framework with a joint governing board, who approves the governing body?
* What are the TOR of the governing body?
* Who should be represented in the governing body?
* Is there a ‘membership’ of the infrastructure?
* Who manage maritime service portfolios – who manage them, who is liable?
* Is there liability associated with a discovery service / catalogue service?
* Does the infrastructure assure service delivery quality? Does it qualify the service? (5 stars!) If so how?
* How does a service provider become qualified to use it?
* Who authorises the services that are available?
* Is the infrastructure just a discovery service or does it also delivery some services?
* What does manage mean? (deliver, regulate, …)
* How are individual services harmonised?
* Does it provide access to services provided by commercial business?
* Compliance testing – how does this fit into type approval regime
* How will it be funded – what’s the business case? Look at LRIT cost / benefit structure – who pays or the service and the bandwidth
* Does it require IMO approval or endorsement – or can it evolve naturally based on other drivers
* Traceability (audit trail)?
* Optional or mandatory services? (maybe contained within service naming convention)
* What is the minimum set of services? (cfr carriage compliance)
* Should a minimum set of services be defined (within regional context) ?
* Will there be any regional obligations?
* Is there just one global node with identity registry / service registry / messaging server?
* If there are more, can I choose where I register – and can I access services or communicate with users on the other nodes?
* How can individual services in the MSPs be described?
* How should legal and governance aspects be addressed by the Maritime Cloud ?
* What is the role of IALA in development and implementation of the Maritime Cloud?
* Would a federated approach risk the loss of control of the custody of information ?
* Are the proposed governance concepts consistent with current international, regional, national or local regimes ?
* What should IALA’s role be in infrastructure governance (e.g., approving and providing services) ?
* Service level implications for services? Critical or non critical

**Testbeds**

* How can the defined concepts (e.g. Maritime Cloud, etc.) be validated in testbeds ?

**Maritime Digital Implementation**

* Will its implementation start on a regional level?
* What should the implementation Roadmap be ?
* Can I send a message to any other subscriber?
* Traceability (audit trail)?
* Is there a single point of payment?
* Who funds the maintenance of it?
* How do we know if a message was delivered? Who answers and acknowledges – system level(which system), user? Each single equipment to provide ACK?
* Bandwidth consumption
* Is there a killer app that will justify it’s use?
* Transition…?
* Where is my data stored?
* Is there just one global node with identity registry / service registry / messaging server?
* If just one node - Is it not a single point of failure?