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**Input paper for the following Committee(s):** **Purpose of paper:**

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**☐** ARM **☐** ENG **☐** PAP **☐** Input

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**Agenda item** [[1]](#footnote-1) 6.2

**Technical domain/ Task number** 2 …………………………………

**Author(s)/Submitter(s)** AIVeNautics corp.

Report on mcp related work conducted in international projects

# Summary

This information paper simply informs about MCP related work conducted by AIVeNautics corp. and their Danish partner company Digital Maritime Consultancy (DMC) in two international projects

The EU BSR project MaDaMe

The GMDRT2 project sponsored by the Korean Ministry of Ocean and Fisheries

# Background

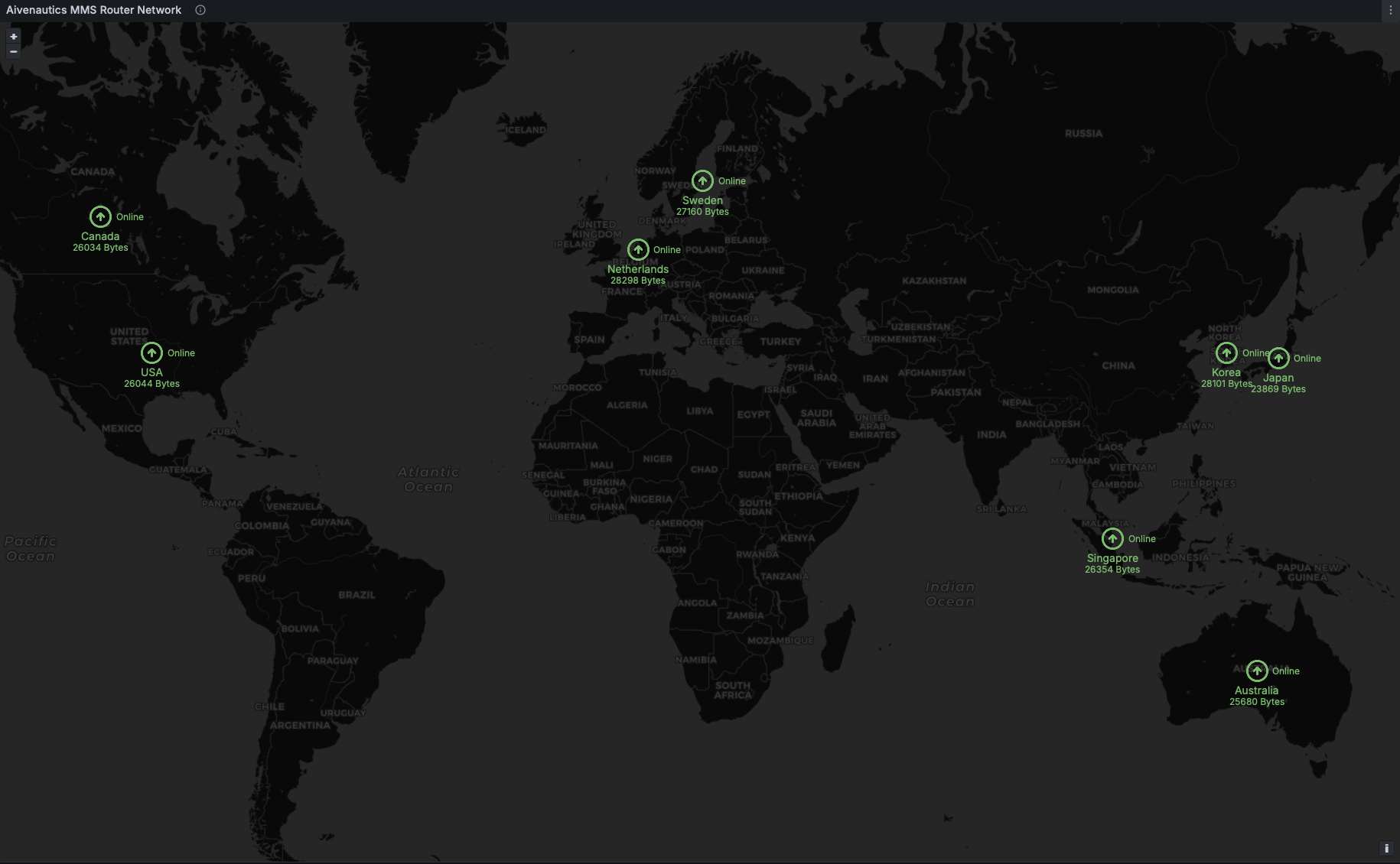
Both project have a focus on MCP - but the main overlap / collaboration has been on the Maritime Messaging service (MMS). AIVeNautics/DMC have collectively contributed to the following activities:

* + Contribution to the process of making the MMS an RTCM standard
    - This includes contribution in the MMS working group of the MCP consortium - which produces input to the MMS working group in RTCM
    - Participate and support the MMS working group in RTCM
  + Within the MCP consortium - work on the development of an open source reference implementation of the MMS
  + Within the projects conduct tests and trials of the MMS, both using IP connections and VDES. Separate reports on this will be planned.
  + Setting up a "large" commercial MMS network - that will become operational in the near future
  + Developing an SECOM/MMS gateway - in order to access SECOM subscription services over MMS.
  + An app (ChatSea) has been developed, that can connect to the MMS network

This collaboration between a European and Korean project - continues a strong history. During the period from around 2008 - 2018, the main work on MCP was carried out in a number of European projects - and one very large Korean project, namely, EfficienSea, EfficienSea 2, Monalisa, Monalisa2, STM validation project and SMART Navigation project.

## The AIVeNautics/DMC MMS network

The network comprises of MMS routers in several countries around the globe. The setup is designed to be very resilient - and monitoring of the performance of the individual nodes are established in a system that also visualises the geographical location of the routers, as can be seen on the figure below;

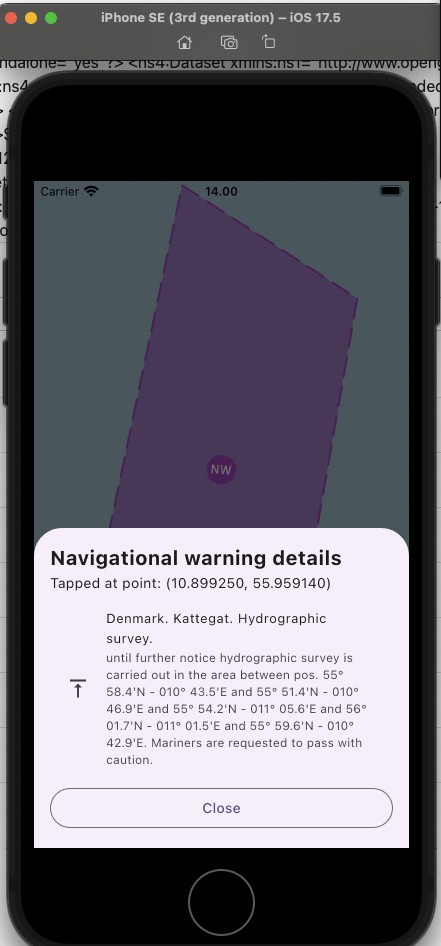
Figure : AIVeNautics/DMC MMS router network

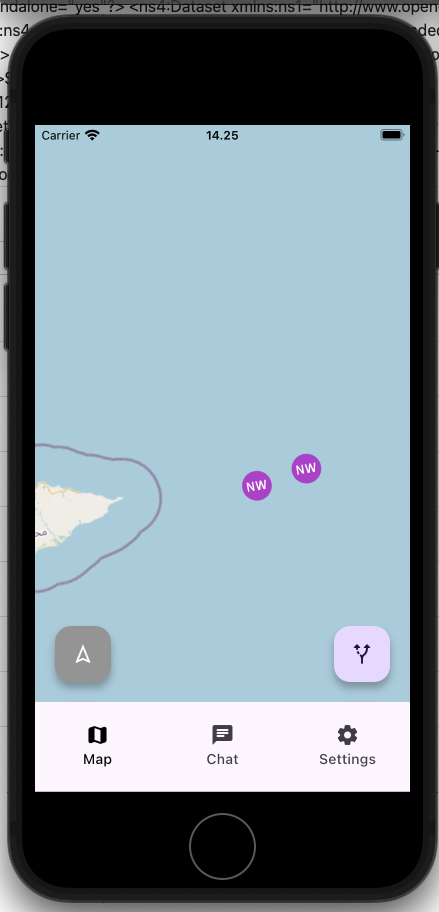
Given the relatively large number of nodes - ensures efficient availability of the MMS network to users from wherever they connect to the network.

## ChatSea app

The ChatSea app is under development - and the prototype is capable of;

* Sending messages to other devices/users on the MMS network using their MRN as address.
* Receiving and rendering S-124 messages send over the MMS network



Figure : ChatSea showing Navigational Warnings (S-124)

## SECOM/MMS Gateway

A SECOM/MMS gateway has been developed, which enables SECOM subscribe services to be used through the MMS network. The ChatSea app connects to the gateway - and receives S-124 from SECOM services through that.

It is planned to develop a SECOM/MMS gateway that implements all SECOM interfaces - and not just the subscribe interface. This will open up for usage of more complex SECOM services over MMS - like route exchange and VTS traffic clearance.

# References

1. MaDaMe web page: https://interreg-baltic.eu/project/madame/
2. Open source reference implementation of MMS: https://github.com/maritimeconnectivity/MMS

# Action requested of the Committee

The authors would like to encourage projects and organisations to join the efforts to realise the ambition of the MCP - to become a global platform to support secure and reliable information exchange in the maritime domain.

1. Leave open if uncertain [↑](#footnote-ref-1)