

## ICEMAR – a System for Sea Ice Information Delivery

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The sea ice in the Arctic seems to be diminishing at an accelerating pace. This opens up opportunities for transportation in the Arctic area. Still the conditions are extreme and a prerequisite for safe shipping is the availability of good forecasts of the sea- and ice state. There are many national ice services providing ice information, but delivering this information to ships in the Arctic area is challenging and often requires polling of many sources, which is cumbersome and time consuming.

In ICEMAR, a project funded by the European Commission, a consortium consisting of system providers, a satellite service provider, ice chart producers and maritime educators, a system is built that acts as an automated ordering and delivery portal for sea ice information for on board use. Project coordinator of the consortium is Kongsberg Satellite Services (KSAT) in Norway.

The ICEMAR User sets up a profile defining area of interest, products of interest and on board display and communications capabilities. This information is then utilized by a server acting as the common hub that gathers products (ice charts, satellite images and iceberg information) from different producers in real time. Based on the user specific profile parameters enhanced with information about the current position of the ship, the ICEMAR server selects, converts and subsets the products to be delivered to the user over existing telecommunications channels.

VTT develops the on board part of the system, the so called ICEMAR Manager (IMM), which communicates with the ICEMAR server using XML based messages. On reception of the ordered products the IMM automatically decompresses the packages and puts the products in a predefined folder for export to an on board viewing application such as ViewIce or as an additional layer to an ECDIS system.

The system will be piloted on some ships in the Arctic area. The main trial period will be after May 2013. Trials will also be performed in the Baltic Sea in the ice season of 2013.

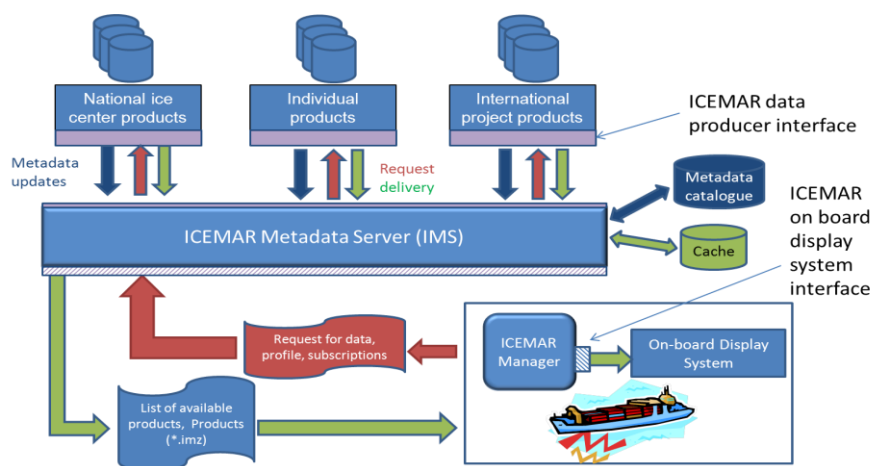


Fig 1. The ICEMAR system