Fraunhofer CML

FRAUNHOFER CENTER FOR MARITIME LOGISTICS AND SERVICES CML

THE FUTURE OF MARITIME NAVIGATION AND COMMUNICATION

Innovative Services on the Maritime Connectivity Platform

Hamburg. What is the current status of information exchange in maritime navigation and communication? How do companies in maritime shipping make use of the new possibilities of data exchange and information transmission? And can efficiency and safety in maritime shipping be improved sustainably?

The Maritime Connectivity Platform MCP provides answers to these questions. The communication platform provides new applications based on open standards for shipping and maritime transport systems with the aim of enabling efficient, secure, reliable and seamless electronic information exchange. The MCP is based on an operating system-independent open source technology that is accessible to registered users via different transmission protocols and enables the seamless digital connection of different communication systems and terminals.

The platform was originally conceived as "Maritime Cloud". But it was not until 2015 that the offering of content and the expansion of the user community accelerated. This development was based on cooperation of the EU-funded projects "EfficienSea2", "STM Validation Project" and the "SMART Navigation Project", financed by South Korea. Almost 100 users have now joined the platform.
The MCP initially addresses the e-Navigation strategy of the International Maritime Organization IMO. This includes an improved bridge design, standardized and automated reporting, as well as the improvement of navigation information, graphic requirements and Vessel Traffic Service communication. In addition, the MCP aims to promote digitization in the maritime sector as a whole and take into account the objectives of the South Korean and EU initiatives for electronic navigation.

The main components for the implementation of the services of the MCP are, besides the Maritime Identity Registry of the users, the Maritime Service Registry and the Maritime Messaging Service. In the Maritime Service Registry, users can use free and fee-based services from different providers. Potential commercial and non-commercial institutions can become providers themselves by providing their own applications or only specifications on the platform. During the STM Validation project, for example, the Voyage Information Service (VIS) was specified and designed. The specification was made available through the Service Registry and various interested partners have implemented instances that have been used for real-world testing. The Maritime Messaging Service enables the exchange of public and private information across different system boundaries and thus sustainably improves the data exchange between ship and shore.

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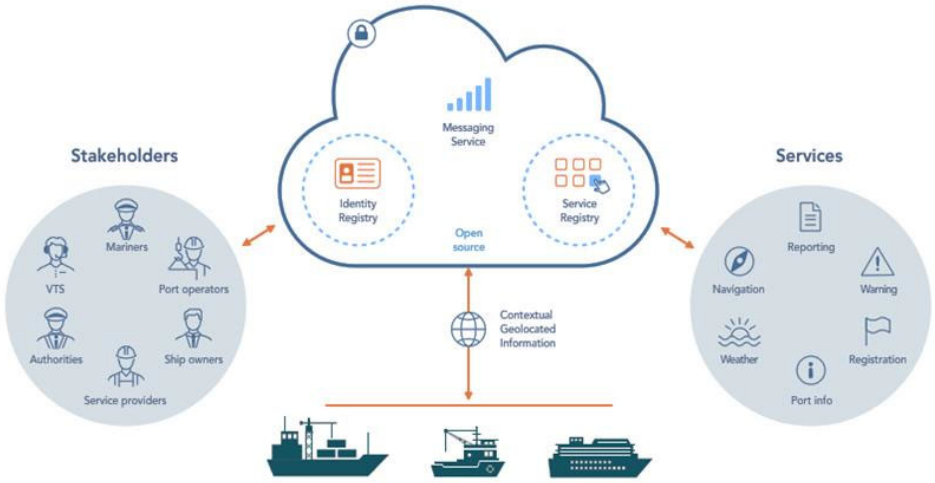

Grafik 1: Concept of the Maritime Connectivity Platform

On February 8 2019, the Maritime Connectivity Platform Consortium (MCC) was founded at the conference "e-Navigation underway 2019" with a signing ceremony. The task of the consortium is to operate a test environment for the Maritime Connectivity Platform and to develop and monitor its framework conditions. In order to accompany these developments, the MCC will be established as a neutral and independent consortium of interested parties. It will act as a coordinator for the provision of guidelines and standards. The MCC will adopt the open structure of the World Wide Web Consortium (W3C) and interested parties will be encouraged to join to contribute their own ideas and competencies.

Founding members of the MCC are OFFIS, Germany, KRISO, Republic of Korea, RISE, Sweden, University of Copenhagen, Denmark and the General Lighthouse Authorities of UK and Ireland. The Danish Maritime Authority (DMA), the Swedish Maritime Administration (SMA) and the Ministry of Ocean and Fisheries of the Republic of Korea (MOF) join as government observers. As a consortium member, the CML, with its expertise in the development of information systems and in the maritime industry, will make a major contribution to the further development of standards for the secure and seamless exchange of information via the MCP. The MCP has the potential to drive forward digitization in the shipping industry in a focused and future-oriented way.

Find more information at www.maritimeconnectivity.net .

About Fraunhofer CML

The Fraunhofer Center for Maritime Logistics and Services CML develops and optimizes processes and systems along the maritime supply chain. Within practically oriented research projects CML supports public and private sector clients of port operations as well as from the logistics services industry and from the shipping business.

Fraunhofer-Gesellschaft

The Fraunhofer-Gesellschaft is the leading organization for applied research in Europe. Its research activities are conducted by 72 institutes and research units at locations throughout Germany. The Fraunhofer-Gesellschaft employs a staff of more than 26,600, who work with an annual research budget totaling 2.6 billion euros. Of this sum, 2.2 billion euros is generated through contract research. Around 70 percent of the Fraunhofer-Gesellschaft's contract research revenue is derived from contracts with industry and from publicly financed research projects. International collaborations with excellent research partners and innovative companies around the world ensure direct access to regions of the greatest importance to present and future scientific progress and economic development.