

FRAUNHOFER CENTER FOR MARITIME LOGISTICS AND SERVICES CML

# PRESS RELEASE

---

PRESS RELEASE

February 12, 2014 || Page 1 | 2

---

## Unmanned shipping a topic at e-Navigation Underway 2014

**Hamburg, February 12, 2014 – On the M/S Pearl Seaways, numerous experts from the maritime industry met from January 28 to 30 for the e-Navigation Underway 2014 international conference. One topic of the talks and discussions was unmanned shipping, which Fraunhofer CML is examining and advancing as part of the research project MUNIN (Maritime Unmanned Navigation through Intelligence In Networks).**

E-navigation – in other words the collection, analysis and exchange of maritime information both on land and at sea – was the main subject of talk on the M/S Pearl Seaways and discussed by the maritime experts on various levels. Speaker at this sea-going conference, which sailed between the Scandinavian port cities of Copenhagen and Oslo, was Hans-Christoph Burmeister from Fraunhofer CML, among others. He spoke about unmanned shipping as well as the MUNIN research project. "Autonomous shipping has many benefits. For instance, it can contribute to lowering operational costs and reducing environmental pollution. At the same time, it offers new career opportunities for maritime experts, enabling them to work on land for the most part and thus remain within in their social surroundings," emphasized Burmeister.

Regarding the conference's main topic, he illustrated how the journey from e-navigation to autonomous shipping could be achieved. "The topic of unmanned shipping goes beyond e-navigation, which has been the context to date. However, research in this area does profit greatly from e-navigation," according to Burmeister. The MUNIN project also contributes to achieving some of the goals defined in NAV 59 (59th session of the IMO Sub-Committee on Safety of Navigation) in September 2013. These include improved reliability, stability and resilience of navigational information. Thanks to on-site testing and simulations of navigational sensor fusion, in other words the fusion of output data from several sensors, MUNIN is providing important input in this field. Additionally, as part of MUNIN, a modern sensor system is being developed that functions both as an automatic and a remote-controlled monitoring post. In NAV 59, it was also stipulated that information, which is received with the help of communication equipment, be integrated and presented in graph-based displays. The experts from MUNIN are working on a function indicator system within this field which monitors ship status. "The aspects fundamental to the topic of e-navigation are thus also vital for unmanned shipping and will be pushed ahead with during development," says Burmeister.

---

Contact

**Claudia Bosse** | Fraunhofer Center for Maritime Logistics and Services CML | Tel.: +49 40 42878-4476 |  
Schwarzenbergstr. 95 D | 21073 Hamburg | Germany | [www.cml.fraunhofer.de](http://www.cml.fraunhofer.de) | [claudia.bosse@cml.fraunhofer.de](mailto:claudia.bosse@cml.fraunhofer.de)

**FRAUNHOFER CENTER FOR MARITIME LOGISTICS AND SERVICES CML**

## About MUNIN

The three-year research project, MUNIN – Maritime Unmanned Navigation through Intelligence In Networks, was launched in September 2012. The aim of this project is to develop a concept for autonomous ship operations. The idea is that such unmanned ships should be able to navigate autonomously on the high seas in the future and be controlled by the respective land-based operational centers. The overall MUNIN concept encompasses several linked systems, whereby the focus is on the expansion and connection of existing technologies. In this way, the ships of today can be upgraded to autonomous ships. In addition to its development, the concept is also being tested for its realization with the help of integrated simulators within MUNIN. The results from MUNIN should contribute to achieving sustainable shipping in Europe, both from a financial as well as from ecological and social standpoints. Fraunhofer CML is leading this project in close collaboration with MARINTEK (Norwegian Marine Technology Research Institute), based in Norway. MARINTEK is developing a method for autonomous navigation on the high seas and performing the assessment of the final concept for autonomous ships. More information available at: <http://www.unmanned-ship.org/munin/>.

---

## PRESS RELEASE

February 12, 2014 || Page 2 | 2

## Innovations for the maritime Industry

Fraunhofer CML develops and optimizes processes and systems alongside the maritime supply chain. Within practically oriented research projects CML supports public and private clients of port operation as well as from the logistics services industry and from the shipping business to initiate and realize innovations.

## Fraunhofer-Gesellschaft

Research of practical utility lies at the heart of all activities pursued by the Fraunhofer-Gesellschaft. At present, the Fraunhofer-Gesellschaft maintains 67 institutes and research units. The majority of the more than 23,000 staff are qualified scientists and engineers, who work with an annual research budget of 2 billion euros. Of this sum, more than 1.7 billion euros is generated through contract research. More than 70 percent of the Fraunhofer-Gesellschaft's contract research revenue is derived from contracts with industry and from publicly financed research projects.

---

### Contact

**Hans-Christoph Burmeister** | Tel.: +49 40 42878-6131 | [hans-christoph.burmeister@cml.fraunhofer.de](mailto:hans-christoph.burmeister@cml.fraunhofer.de) | Fraunhofer-Center für Maritime Logistik und Dienstleistungen CML