Dear readers,

As digitization is on the rise, the CML, too, is doing research on more and more processes and technologies that offer chances for new business models in the course of this development. In this newsletter we introduce the use of focused data analyses in maintenance schemes for cargo vessels to our readers.

In addition to that you will read about new chances for investigating and visualizing flows of goods. The CML is developing a model that calculates a change of infrastructure loads as a result of changes in the traffic volume. Infrastructures can be planned with the help of this so-called European Freight Model in the shortest possible time.

On behalf of the Fraunhofer CML I would like to wish you a merry Christmas and a successful new year 2017.

Enjoy reading our Newsletter.

Sincerely,

Prof. Carlos Jahn
Head of Fraunhofer CML
The North Range Ports – here the Port of Hamburg – are fierce competitors. Visualization of flows of goods throughout Europe is possible by using the European Freight Model.

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ANALYSIS AND VISUALIZATION OF FREIGHT TRANSPORT

The European Freight Model EFM

Competitive seaports are a prerequisite for the international exchange of goods over sea. Amongst other aspects their competitiveness depends on the capacity of available transport infrastructures in the ports themselves and between ports and their hinterland regions. However, the planning of transport infrastructure is particularly difficult against the backdrop of an ongoing global economic weakness, aging infrastructures and the demographic change. Freight transport models provide an adequate solution for analyzing and evaluating transport infrastructures. The Fraunhofer CML has developed an innovative instrument for the large-scale modeling of freight transport in PTV Visum – the European Freight Model (EFM). It puts the user in a position to model and assess the hinterland connection of seaport locations and to calculate various scenarios for the development of the hinterland traffic of seaports. The model covers the European transport network and can be adapted quickly to individual customer requirements. Potential users of the model are the providers of infrastructure, ports, forwarders, transport companies and other players in the maritime supply chain.

The EFM consists of three models: The network model includes the European transport networks of the various transport modes – road, rail and inland waterways – as well as the seaport and hinterland terminals. The demand model contains demand data for the individual commodities. The traffic assignment model comprises the choice of the means of transport and the route selection, which is based on distance-dependent and time-dependent costs.