

ENERGY EFFICIENCY IN PORTS AND AT TERMINALS PROJECT FINALE FOR GREEN EFFORTS IN BRUSSELS



Wind turbines provide terminals with renewable energy.

Making ports and terminals greener is the objective of the GREEN EFFORTS project („Green and Effective Operations at Terminals and in Ports“). The participants in the project met for the closing conference on the 12th and 13th of May in Brussels. Since the beginning of 2012, eight partners from the fields of maritime economics and research (including the Fraunhofer CML)

have been working on this project, for the purpose of highlighting energy saving potentials and the corresponding measures to reduce the carbon footprint of ports and terminals.

The Fraunhofer CML supports the project in doing so by throwing a scientific light on both the current status and saving potential at terminals and in ports. Im-

portant tools for this include process mapping, modelling and simulation, which can be used to make action recommendations to port and terminal operators. To be more specific, the CML simulated loading and unloading procedures for ferries at the RoRo Terminal Trelleborg, among others. Visualisations of the progress and results are used in conjunction with the project as an essential element to increase awareness of energy efficiency and savings. „We are more than happy with the results of GREEN EFFORTS, as we were able to show that it is possible for every terminal and port operator to save large amounts of energy“, says Prof. Carlos Jahn. Because of the high relevance and applicability of the results, the project was expressly commended by both the maritime industry and representatives of the European Commission. Further information is available at www.green-efforts.eu.

SEA TRAFFIC FORECAST 2030: CML PREPARES PLANNING GUIDELINES FOR THE GERMAN BVWP

By the year 2015, the Federal Ministry of Transport and Digital Infrastructure (BMVI) will have developed a new Federal Transport Infrastructure Plan (Bundesverkehrswegeplan – BVWP). An important building block for the BVWP plan is the port turnover and sea port hinterland traffic forecast

prepared by the Fraunhofer CML together with Uniconsult GmbH, IHS Global Insight and MWP GmbH. The basic parameters for the sea traffic forecast have already been published by the Federal Ministry of Transport and Digital Infrastructure BMVI and are used as guidelines for infrastructure planning. The response to the publication was, as expected, controversial. The consistently good growth prospects of the German ports have

been almost unanimously welcomed and confirmed. The Fraunhofer CML, within the context of co-operation with its partners, developed the forecasting methodology and the hinterland integration matrix. This involved combining the fixed methods of the BVWP and the input from the trade forecasts in an innovative approach. The findings were, among other things, that the major German seaports of Hamburg, Bremerhaven and Wilhelmshaven reach annual growth rates of over three percent. The high figures of previous forecast releases could not be confirmed however.

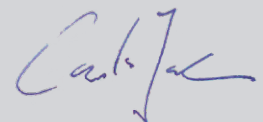
Further growth expected for German seaports.

FOREWORD



Dear Readers,

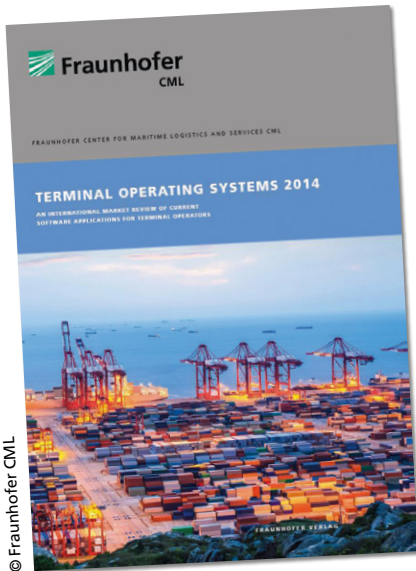
Fraunhofer CML again hosted the Tag der Logistik (Logistics Day) on the 10th of April – an event where more than 650 companies in the logistics industry from 18 countries provided insights into their operations. Many interested visitors came to the venue at Schwarzenbergstraße in order to be informed about our planning environment and to play the captain themselves on the ship handling simulator – a successful event! In addition to this, at the beginning of May the GREEN EFFORTS closing conference took place under the motto „The Color of the Future is Green“. The results of the two and a half year project were highly commended. The topic of „Green Terminals and Ports“ is coming more and more in focus at events: At the CeMAT Port Forum at the end of May, for example, I gave a presentation on the complex decision-making situation for ports and ship operators in view of the limits on sulphur emissions effective from 2015.



Wishing you an enjoyable read,
Yours,
Prof. Carlos Jahn,
Head of the Fraunhofer CML

THE USER IN FOCUS

TERMINAL OPERATING SYSTEMS 2014



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Terminal Operating Systems (TOS) are at the heart of successful terminal operations: They are the key to operational excellence, as well as the efficient utilisation of resources. Because of this, TOS suppliers are constantly developing their software – always in

view of current market trends. But what are the differences between the various products? And what exactly are the latest trends? The Fraunhofer CML had already published a study in 2012 to provide terminal operators with answers to these questions: With an overview of the in-transparent TOS market and its functional scope, as well as a detailed analysis of the various market trends, the readers could take a more targeted approach and were provided with a basis for decision-making in the selection of a suitable TOS.

Now, two years later, not only has the CML fully updated the study but has also expanded it significantly. The new edition, „Terminal Operating Systems 2014“, focuses explicitly on the

perspective of the user and offers comprehensive insights into the application of the systems: What is the level of satisfaction with current solutions? Where is there room for improvement and what needs are yet to be fulfilled? In order to collect more detailed information, the CML carried out interviews with TOS users, who described their personal experience with the systems. This input has given the investigation a new, user-oriented character: „The study provides concrete support to terminal operators for making their decision in favour of a system update or, if necessary, completely new software“, says Prof. Carlos Jahn.

The study „Terminal Operating Systems 2014“ is available from the Fraunhofer Verlag publishing house. Further information is available at www.verlag.fraunhofer.de.

THE MARITIME INDUSTRY VISITS HAMBURG

CML PRESENTS ITSELF AT THE SMM 2014

It is the most important trade fair for the maritime industry: This year, the SMM is taking place for the 26th time at Hamburg Messe. Numerous participants are expected from all over the world – in 2012 there were over 50,000 visitors and more than 2,100 exhibitors. The Fraunhofer CML will also be there again this year to present some of its most important projects: An individual software solution called the Crew Compliance Optimizer (CCO) is being developed together with E.R. Schifffahrt. The CCO optimises, controls and documents the required crewing process on trade ships. In addition to this, the international MUNIN research project led by the CML will be holding an open workshop on the topic of unmanned shipping. Interesting presentations will be given within this context on the 10th of September from 9:00 am to 1:00 pm. Scientists and representatives from industry will be reporting on the demands of navigation, shore-based support and

drive technology in autonomous shipping, for example. The guest speakers from SEA Europe and Rolls Royce will be making additional contributions. MUNIN will start a test phase in the summer, in

which real-world unmanned shipping scenarios will be played out as simulations. For this, the CML will use its ship simulator to determine how a ship can make navigational decisions itself, for example.



The Fraunhofer CML is again participating as an exhibitor at the SMM.

IN BRIEF

The sixth “Work Progress and Project Management Board Meeting” of the EU project, T-TRANS, took place on the 6th and 7th of May at the Fraunhofer CML. As a prerequisite for the successful launch of ITS systems, the researchers have so far identified three useful measures: Industry and science must work closely together, learn from mistakes at an early stage and involve the users from the outset.

The annual CeMAT Port Forum took place this year within the context of the world's leading trade fair for intralogistics, CeMAT, in Hanover. More than 100 participants from the maritime industry heard presentations and discussions on the subject of “Growth Market Eastern Europe – A Challenge for Green Logistics at Sea and Inland Ports”. Prof. Jahn presented the complex decision-making situation of the port and ship operators in view of the limits on sulphur emissions effective from 2015.

Around 150 participants met on the 5th and 6th of May at the 4th International Ports Congress in Karlsruhe. The topics discussed included solutions for sustainable port management and green logistics. Representing the CML, Dr. Svenja Töter presented various possibilities for reducing the ecological footprint of ports and terminals in her talk.

+++ DATES +++

- **TOC Europe 2014**
24.–26.6.2014, London
- **SMM**
9.–12.9.2014, Hamburg
- **Hamburg International Conference of Logistics**
18.–19.9.2014, Hamburg

IMPRESSUM

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