Fraunhofer CML

FRAUNHOFER CENTER FOR MARITIME LOGISTICS AND SERVICES CML

NEWS 4.15

SEA TRAFFIC MANAGEMENT IN EUROPE
THIRD PHASE OF MONALISA PROJECT

Within the framework of the EU project MONALISA 2.0 the Fraunhofer CML was involved in a leading position in the development of a Europe-wide network for ship handling simulation until fall of this year. The project started in October 2013 and aimed at developing a framework for the European sea traffic management (STM) to improve the safety of shipping in the long run. Furthermore the partners want to enhance the efficiency, capacity, flexibility and predictability of the maritime traffic.

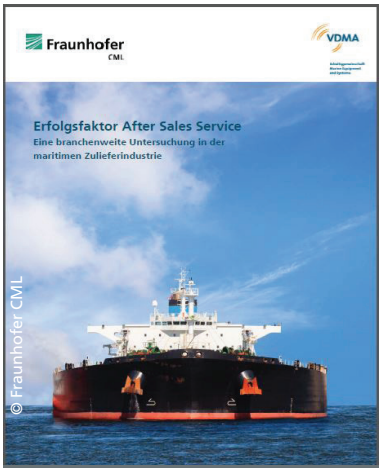
The STM Validation Project that has just started is taking MONALISA into the next round: „Before the STM reaches the development and utilization phase in the years ahead, our next step is the validation of the present concept", says Ole John, Senior Research Associate at the Fraunhofer CML.
For this reason more participants will be involved in the European simulator network, which was developed during the preceding project, and the stability of the process will be ensured.

The STM Validation Project encompasses 300 vessels, ten ports of different sizes and three shore centers that will be used in the simulation scenarios in Northern Europe and the Mediterranean Sea. 39 project partners (private, public and academic) from 13 countries will test STM for its applicability.
The project has a total budget of 43 million euros and a duration of three years. 50% of the budget is subsidized by the EU.
Find more information at www.monalisaproject.eu.

Good start into the new year: The STM Validation Project is taking MONALISA into the next round.

CUSTOMER RETENTION, INCREASE IN PROFITS
NEW CML STUDY ABOUT AFTER SALES SERVICES

With a turnover of 12 billion euros in 2014 the maritime supply industry makes a decisive contribution to the value added in the German maritime sector. Despite being mostly well positioned in their business areas, the companies are facing an increasing competitive pressure due to the international competition. As a differentiation by quality and costs in the new product business is getting more and more difficult for the companies, the after sales service is gaining in importance: A customer-oriented after sales service can help the companies to increase their turnover and revenues, set themselves apart from the competitors and create a long-term customer retention.
How is the maritime supply industry presently positioned in the field of after sales services? Where do the companies see chances and potentials and how can they be used best?
To get to the bottom of these and other questions the Fraunhofer CML together with the VDMA Marine Equipment and Systems AG has carried out the study „Performance factor After Sales Services – A sector-wide investigation in the maritime supply industry".
The results of the study show that after sales services in the maritime supply industry should be developed further to minimize downtimes at the customers. A high availability of spare parts is a decisive criterion for many customers in their choice of the supplier. From this follows a demand for innovative service strategies and logistics concepts from the viewpoint of CML.
For further information about how to receive the study please contact info@cml.fraunhofer.de.



„Success factor After Sales Services"

FOREWORD

Dear readers,

Within the framework of the EU project MONALISA 2.0 the Fraunhofer CML was involved in the development of a Europe-wide network for ship handling simulation until fall of this year and has prepared a Sea Traffic Management Plan together with the project partners. The STM Validation Project that has just started and is partly subsidized by the EU is taking MONALISA into the next round.

Read our latest newsletter and learn exciting news about the „Vestvind" project in which the CML develops a statistic prognosis tool for the arrival of vessels.

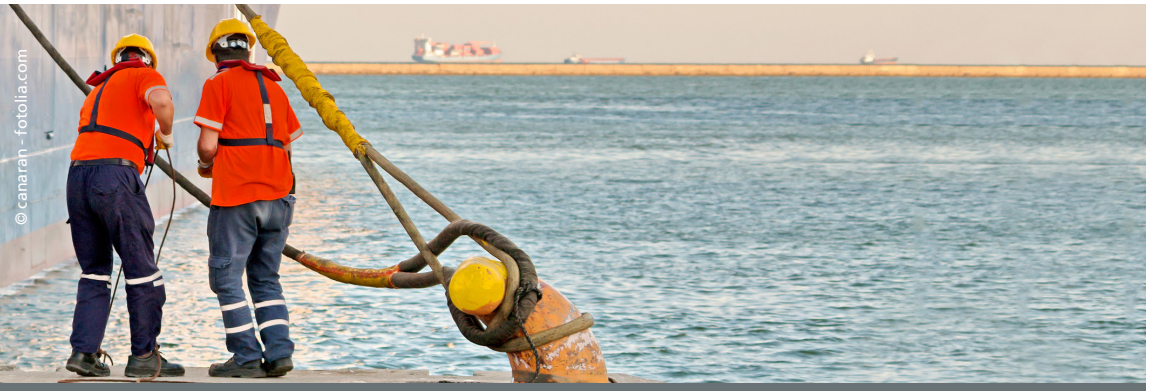
On behalf of all of us at Fraunhofer CML I'd like to wish you a Happy Festive Season and a prosperous New Year 2016.

Enjoy reading our Newsletter!

Sincerely,

Prof. Carlos Jahn
Head of Fraunhofer CM

CREW SCHEDULING AND PROCUREMENT SOLUTIONS
CML USES MATHEMATICAL OPTIMIZATION



Not only for maneuvers: Every position must be optimally filled in shipping

When solving complex decision situations mathematical optimization methods may offer an immense help. Prerequisites for this are the goal-oriented preparation of the data base and the development of practical mathematical algorithms.
Especially in this field the CML has significantly expanded its competences and created innovative pilot solutions for various shipping companies.
The main application field have been the personnel and crew scheduling as well as procurement logistics for fleets.
The long-term personnel planning can be carried out using the Crew Scheduling Optimizer (CSO). The operating times and vessels are specified for every seafarer of a fleet for a long-term period (for example, one year).
The Crew Compliance Optimizer (CCO) is designed for the crew deployment planning. The CCO is used for the optimization of all tasks for the single positions onboard so that compliance requirements (for example, resting times) and organizational requirements (for example, defined wake cycles) can be met satisfyingly.
The Supply Chain Optimizer (SCO) is used for tackling planning tasks within the procurement logistics. It provides a decision support tool for procurement planning, e.g. with regard to order date and quantity.
The user surfaces are graphically visualized in a user-friendly way and a number of analysis options make the tool a helpful instrument for a long-term planning.

EXTENSION OF THE PLANNING HORIZON
CML IS DEVELOPING PROGNOSIS MODEL

For the efficiency of port processes the early and reliable knowledge of ship arrivals is of great importance. So the multitude of partners involved, as, inter alia, pilotage, tugs, mooring line, terminal operators, logistics and transportation services and shipbrokers, plan and optimize their extensive staff and resources early.
However, different influences such as unfavorable weather conditions, heavy traffic or draft related bottleneck situations induce variations in the timetables of the ships.
To offer a solution, Trenz AG and the CML develop a predictive model of ship arrivals for German seaports under the project Vestvind. The aim is to predict ship arrivals reliably up to 72 hours before arriving.
For this purpose diverse data sources are used. These include, amongst others, AIS data from specially developed AIS receivers, weather and tide information, and movement patterns of the waterway as soon as traffic density analysis.
A central task of the project is the development of statistical methods to derive reliable forecasts out of the diversity of these data. As a result, a user-friendly, web-based solution for the many possible user groups will be developed and marketed.
The project is funded by the Hamburgische Investitions- und Förderbank IFB.

An innovative prognosis model will help to predict vessel positions more precisely in the future

IN BRIEF

*The scientific institutions in Hamburg opened their doors during the **„Nacht des Wissens"** on November 7, 2015. The CML participated in this year's event and introduced its 3D planning environment and a ship handling simulator. They showed the visitors in a practical way how they could build their own port terminal and connect sea ports and handling centers in the hinterland.*

*Furthermore, from November 17-19, the CML appeared on this year's **Intermodal Europe in Hamburg**, an international conference for the transport and container industry. At the CML stand the visitors to the fair used the opportunity to familiarize themselves with the planning and simulation tools for ports and terminals and get information about a transport model for the container traffic in the hinterland.*

*On November 10-11, the **Final Conference of the MONALISA 2.0** research project took place in Gothenburg. The results of this project with regard to the core contents of „safe vessels", „operative safety" and „maritime traffic management" were introduced in presentations, demonstrations and exhibitions.*

+ + + DATES + + +

- ***e-Navigation underway 2016***
  02.-04. February 2016, Copenhagen-Oslo
- ***Digital Ship 2016***
  25.-26. February 2015, Hamburg

IMPRESSUM

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