



MUNIN FINAL EVENT - WEDNESDAY, 10 JUNE 2015

09:00 10:00 Registration

Session A: Opening of MUNIN Final Event

- 10:00 10:10 Welcome and introduction
Carlos Jahn, Fraunhofer CML
- 10:10 10:30 Opening keynote: The vessel for the future
to be announced, Vessels for the future Initiative

Session B: MUNIN concept in a nutshell

- 10:30 11:00 The MUNIN project – an overview
Hans-Christoph Burmeister, Fraunhofer CML
- 11:00 11:15 MUNIN's Autonomous Bridge
Wilko Bruhn, Fraunhofer CML
- 11:15 11:30 MUNIN's Autonomous Engine Room
Michael Schmidt, MarineSoft
- 11:30 11:45 MUNIN's Shore Control Centre
Scott MacKinnon, Chalmers University
- 11:45 12:00 MUNIN's Communication Architecture
Ørnulf Jan Rødseth, MARINTEK

12:00 13:00 Lunch break



Fraunhofer CML

at Hamburg University of Technology

Schwarzenbergstraße 95 D

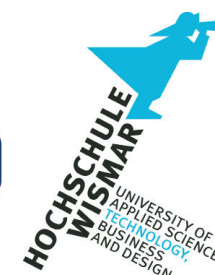
21073 Hamburg

Germany



MARINTEK

MARORKA





MUNIN FINAL EVENT - WEDNESDAY, 10 JUNE 2015

Parallel session C-1: Assessing maritime autonomy

- 13:00 13:25 Legal framework for the unmanned ship
Bénédicte Sage-Fuller, University College Cork
- 13:25 13:50 Risk assessment of the unmanned ship
Ørnulf Jan Rødseth, MARINTEK
- 13:50 14:15 Business case of the unmanned ship
Lutz Kretschmann, Fraunhofer CML
- 14:15 14:30 Plenum discussion "Assessment"
Carlos Jahn, Fraunhofer CML

14:30 15:15 Tea and coffee

Parallel session D-1: Assessing maritime autonomy

15:15 16:45 Identical to session C-1

16:45 17:00 Group photo and bus transfer to Hamburg city/hotel

19:00 23:00 Dinner

Parallel session C-2: Unmanned vessel test-bed

- Technical tour through the unmanned vessel test-bed
- Shore Control Centre
 - Remote Manoeuvring
 - Unmanned Bridge Technologies
 - Autonomous Engine Room
- Hans-Christoph Burmeister, Fraunhofer CML*

Parallel session D-2: Unmanned vessel test-bed

Identical to session C-2



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MUNIN FINAL EVENT - THURSDAY, 11 JUNE 2015

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Live scenarios E-1: Unmanned bridge

09:30 09:45 Sensor fusion detection
09:45 10:00 Collision avoidance
10:00 10:15 Harsh weather
10:15 10:30 Outlook
10:30 11:00 Q&A session

*H.-C. Burmeister,
Fraunhofer CML*

Live scenarios E-2: Shore-based control

Handover procedure
Remote monitoring
Remote maneuvering
Outlook
Q&A session

*Ørnulf Jan Rødseth,
MARINTEK*

Presentations E-3: Reliable engines

Diagnostic tools and simulators
Autonomous engine monitoring
Unmanned maintenance
Energy efficiency
Q&A session

*Karsten Wehner,
Hochschule Wismar*

11:00 11:30 Tea and coffee

Session F: Closing of MUNIN Final Event

11:30 11:50 Final conclusions of the MUNIN project
Hans-Christoph Burmeister, Fraunhofer CML

11:50 12:10 Closing keynote
to be announced

12:10 12:15 Farewell and goodbye
Carlos Jahn, Fraunhofer CML

12:15 13:00 Light lunch

