




Master Plan Studies for Development of the
Motorways of the Baltic Sea


**EU TEN-T / WP 3
OUTSOURCING EXPERIENCES**

June 12-14, 2007
at
BSHC 12. Conference in Klaipeda, LT

(prepared by Seppo Mäkinen / FMA)

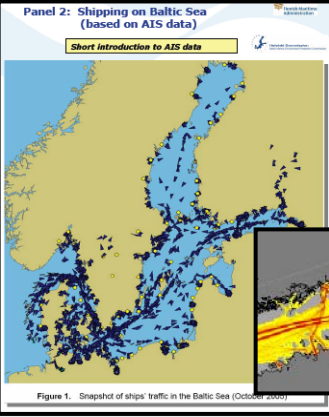

 TEN-T Motorways of the Sea – Baltic Sea


 WP 3 – Safe Routes on MBS: GOF Hydrographic Survey



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WP 3 – Safe Routes on Motorways of the Baltic Sea – Gulf of Finland Hydrographic Surveys





Panel 2: Shipping on Baltic Sea
(based on AIS data)


Short introduction to AIS data

Figure 1. Snapshot of ships' traffic in the Baltic Sea (October 2007)

- increasing ship traffic – especially oil transportations
- existing hydrographic surveys not sufficient – lacking full coverage
- survey scheme needed (HELCOM) and approved (IHO Baltic Sea Hydrographic Commission)
- to speed up the major routes survey




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Action 1

▼ outsourcing specifications on hydrographic surveys (on open sea, S-44 Order 1)

- consultancy from Admiralty Consulting services (UK HO)
- restricted procedure to have more time to write invitation to tender documents and to be able to select able tenderers
 - > sample invitation to tender documents

▼ Milestones in tendering process

- 28.10.2005 EU invitation to tender: 2005/S208-205204: 15 companies interested
- 02.12.2005 due date to send interest and references: 8 companies
- 21.12.2005 final invitation to tender documents were sent to 6 companies
- 19.01.2006 contract clarification day: 5 companies present
- 31.01.2006 due date for filing in tenders: 5 tenders received [~1.200 – 3.900 km²]
- 01.03.2006 decision on the service provider
- 03.04.2006 contract signed [€ 1.350.000]
- 15.06.2006 calibration and start of survey
- 28.09.2006 completion of field surveys, delivery of raw data and survey documents
- 29.11.2006 delivery of the last parts of processed data
- 20.02.2007 validation completed: used 5,2 manmonths work of experienced personnel



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Action 2

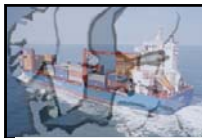
▼ Outsource hydrographic surveys

- market information on hydrographic operators to survey on open sea
- survey area open sea, also at EEZ to ease up permission bureaucracy
- a valid contract as a sample to be used
- possibility for EU TEN-T financial support
- field survey from mid June to the end of September 2006
- some rough weather in Sept



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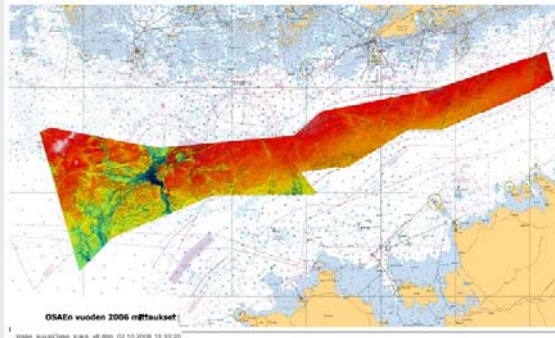


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Action 2 (continued)

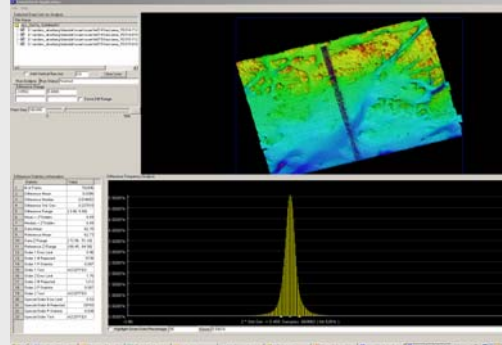
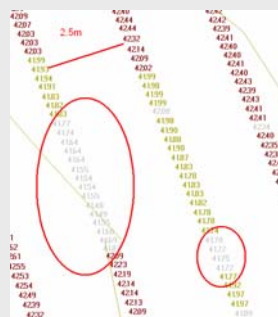
▼ Outsource hydrographic surveys

- successful and professional field surveys required a continuous SVP profiler and about 20-24 km long lines max, problems with late start and MBES equip
- suitable vessel with able crew and quality system based operation
- survey area about 3.897 km²
- sample data evaluated and process tested in the beginning (early July)
- data delivered (although delayed, penalty levied)
- experiences within the Baltic Sea for HO chart surveys
- > invitation to tender and contract specifications
- > further commercial surveys on various areas to reveal more on cost level



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Action 3



▼ Evaluate data processing procedures

- data analysis comparisons within Estonia, Finland and Sweden, results & recommendations for HO chart survey specifications, HOs work through
- automated data processing technique studied, difficult on the Gulf of Finland with variable bathymetry and bottom softness, easily resulting holidays



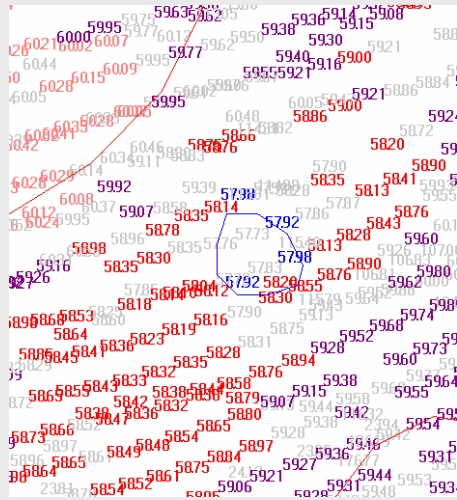


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Action 3 (continued)

▼ Evaluate data processing procedures

- automated filtering used by the contractor introduced holidays as valid points were flagged
- combining two MBES systems caused extra validation work
- > invitation to tender and contract specifications
- > experience may not be automated
- > a more informative (metadata) format as survey data format is needed to introduce automated processes
- > data reduction for chart production

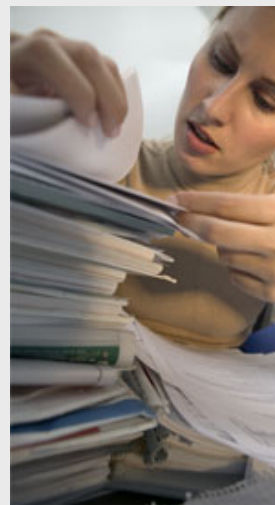


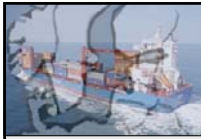
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Action 4

▼ Evaluations

- Report, financial statements
- Conclusions, suggestions, experiences
- Co-operation within technical specialists at Baltic Sea HOs





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Action 4 (continued)

▼ **Main conclusions:**

- Found that markets for open sea surveys on the Baltic Sea exists;
- Common data analysis experiences were found within HOs;
- Findings and recommendations in a new data format for MBES surveys, automated bathymetric data processing techniques, as well as data thinning for chart production purposes; (working group to be formed)
- Updates in data validation process and descriptions, when outsourced surveys;
- Recommendations to a move towards a common Geoid Model based (and land tied) vertical reference system for the Baltic Sea;

▼ **Deliverables of the project:**

- Sample specifications for invitation to tender, with national exceptions;
- Sample contract documents;
- A common survey data format is proposed and to be studied further;

