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***A proposal for solutions to be tested in the
test bed***

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Document History

Revision	Date	Organisation	Initials	Revised pages	Short description of changes

Introduction

This report is intended to describe the solutions / e-Navigation services to be tested in the test beds. The entire suite of services that are candidates to be tested are described in detail in the report 'W_WP4_2a_2 Description of identified e-Navigation services'. Thus, that report covers all services that have been proposed during the initial user requirements identification phase.

This report will attempt to prioritise the solutions described in 'W_WP4_2a_2 Description of identified e-Navigation services', based on what we at this stage of the project expect to be feasible to implement, based on the user feedback we have obtained from the exposure of the mock-up so far and based of the specific interests of the project partners.

The priorities given are the status at the end of RP1. It is expected that these will change during the planning of the tests.

The individual services will not be described / explained in detail in this report. Please refer to W_WP4_2a_2 Description of identified e-Navigation services ' for a full description.

Proposed solutions

Mandatory solutions

As an e-Navigation enhanced Integrated Navigation System (ee-INS) or ee-VTS system, there are a number of features that are mandatory. These would be:

Display of ENC's

This would be the core information layer that everything else build upon.

Position fixing (in case of the ship based system)

Obviously a must for a ships navigation system.

All information mentioned below is intended to be shown in an integrated display (obviously)

High priority solutions

Display of radar information

Something many systems can do today, and difficult not to include.

Display of AIS information

As above.

METOC (Meteorological and Oceanographic) data

SSPA Dynamic predictor (ship and VTS)

The exchange of this information would be a unique feature, and we thus give it a high priority.

SSPA Manoeuvre margin index

Same as above.

Exchange of routes (ship and VTS)

This is something that was rated high in our user feedback.

Virtual AtoN's

This is also a feature that we see as an important new area within e-Navigation. Something that could have both financial, safety and environmental benefits.

MSI, chart corrections, notices to mariners etc.

Above medium priority solutions

No-go areas and maybe-go areas

Zones and lines

Lighthouses / conspicuous landmarks

Buoyage (visibility)

Also a feature that we think would have a significant value, and probably with a high degree of uniqueness.

Fusion of objects; mainly AIS and radar

As e-Navigation will integrate an increasing amount of information, fusion of objects will become an important feature in order to avoid information overload.

CPA/TCPA and collision avoidance tool

In our opinion, the proposed solution is a significant improvement to the available solutions today.

3D view and presentation of objects

Lighthouses / conspicuous landmarks

AtoN's - theoretical visual observation range

Risk assessment tool (ship and VTS)

WP4 will not be developing any risk algorithm, but if we can use an existing algorithm, or get one from WP6, then it would be an obvious feature to implement as an e-Navigation service.

Efficiency module

In our minds, future e-Navigation services must be able to give the ship owners a financial benefit. Otherwise, the impact of the whole e-Navigation concept will be very limited. If the ship owner can see a financial "carrot" then he will be more willing to make a substantial investment in e-Navigation to the benefit of the safety, security and environment.

Automatic and/or simplified exchange of administrative information

Same comment as above.

S-mode

This is one of the cornerstones of the e-Navigation concept. Would hardly be e-Navigation without an S-mode. However, the test services to be developed in this project will be so simple, that the presence of a s-mode perhaps will make little sense.

VHF communication and identification

We got very positive feedback from potential users on this feature.

Below medium priority solutions

Well, as the project progresses we may need to lower the priorities of some of the features, but for now, there are no items with this priority.

Conclusion

As stated in the introduction, this document describes the current priorities. The document will be subject to change, as further information is obtained, during the course of the project.