www.efficiensea.org

EfficienSea
Efficient, Safe and Sustainable Traffic at Sea

E-NAVIGATION MAKING WAY

- THE FUTURE GLOBAL E-NAVIGATION CONCEPT DEVELOPED HERE AND NOW

Status on the development of e-Navigation in November 2011 as developed in the "Efficient, Safe and Sustainable Traffic at Sea" project, co-funded by the Baltic Sea Region Programme 2007-2013.

The EfficienSea project's achievements in the field of e-Navigation are regularly conveyed to the ongoing discussions on the matter in international maritime forums such as IALA and IMO. The aim is to contribute to the development of a global standard for e-Navigation.

In the field of e-Navigation, the EfficienSea project has achieved the following results as of fall 2011:

- Development of the test bed comprising e-Navigation prototype systems on ship and shore as well as the necessary communication infrastructure.
- Deployment of the ship side prototype on twenty vessels in the Baltic Sea.
- Development and test of a number of services, including Maritime Safety Information, Meteorological and Oceanographic information and possibilities for exchanging route information.
- Setting the agenda in relevant international maritime forums by convening annual international conferences on the way ahead for e-Navigation
- Development of a test bed infrastructure which is transferable to other regions of the world.

The aim of EfficienSea is to improve maritime safety and the environmental state of the Baltic Sea region.

EfficienSea is a project of the Baltic Sea Region Programme 2007-2013 priority *"the Baltic Sea as a common resource",* and a Flagship Project in the EU Strategy for the Baltic Sea Region.

The e-Navigation services developed in EfficienSea contributes to the EUSBSR Priority Area 13 on maritime safety and security.

The role of EfficienSea in EUSBSR is to make the Baltic Sea "become a pilot region for e-Navigation".

E-NAVIGATION UNDERWAY 2012

There is certainly a need for a forum where policy makers, industry and academia can stay tuned with the overall e-Navigation process, share experiences, get an update on test bed results, and discuss the future of e-Navigation. The 2011 conference proved to be a great success with representatives from the maritime community including international organisations, industry, research institutes, and authorities.

On 18-20 January 2012 the EfficienSea project will host a second "e-Navigation Underway" conference in cooperation with the International Association for Marine Aids to Navigation and Lighthouse Authorities. Test bed results from all over the world are presented onboard the cruise ferry Crown of Scandinavia, highlighting different aspects of e-Navigation.

The EfficienSea e-Navigation development is a regional contribution to the ongoing development of a future, global standard for e-Navigation as developed by the International Maritime Organization (IMO), the UN agency responsible for the safety and security of shipping.

Baltic Sea Region
Programme 2007-2013

FURTHER EFFORTS

Enhanced Racon tests, October 2011
Photo: Palle Bo Nielsen

As part of the e-Navigation test bed exercises of the EfficienSea project, trials on Enhanced Radar Positioning were completed during the first two weeks of October 2011. The trials demonstrate how an Enhanced Racon service in the future could enable vessels to navigate critical passages completely independent of satellite positioning systems like the GPS, using a position derived automatically from an Enhanced Radar.

"The results are indeed very promising," says Jens K. Jensen from the Danish Maritime Authority. "A future strategy for the use and required performance of Racon in relation to new technology radars is already under debate.
The outcome of these trials will demonstrate that enhancing Racon and Radar technology could be one easily achievable gap-filling development, supporting the needs for reliable and resilient positioning technologies for safe and efficient transport at sea."

NB: EfficienSea is as of November 2011 lead by the Danish Maritime Authority (www.dma.dk) following a governmental decision to reorganize the Danish maritime sector.

In order for e-Navigation to assume its full potential, it is required to develop more services and to test those in larger scale test-beds: parts of the TEN-T project Monalisa is based on EfficienSea results and the proposed EU North Sea Region project ACCSEAS will to a significant extent continue the work started in EfficienSea.
On another level, ensuring political support from the EU Member States in negotiations leading to the definition of a global standard is another important undertaking.

It is important, however, to note that even if the EfficienSea project has brought about significant progress in e-Navigation, additional funding efforts are required to fulfil the overall ambition of making the Baltic Sea Region a leading region in e-Navigation, not to mention the need to facilitate that the Baltic Sea States will be ready to invest in the necessary infra-structure, once a formal global standard for e-Navigation has been adopted in IMO.

Keys to success

- Transferability of results through standardization and an Open Source strategy

- A close cooperation between industry, administrations, academia, and regulators

- The iterative process with testing in simulators, on the bridge and at the shore side

- A unique expertise, leading the global development

- An unmatched network

- A good standing in organisations such as IALA and IMO

... Nevertheless, the necessary resources must be made available also further on.

Against this background, the EfficienSea project would like to encourage that e-Navigation remains a priority, and ideally a flagship project, within the priority area on Maritime Safety and Security of the EU Strategy for the Baltic Sea Region, in order to increase the opportunity that new projects will build on the achievements of the EfficienSea project.