WORKGROUP H1 – Electronic Services and Applications in Maritime Industry: Present State and Prospects

DELIVERABLE'S EXECUTIVE SUMMARY

In the course of the 6th framework of eBusiness Forum, the Workgroup H1 ''Electronic Services and Applications in Maritime Industry: Present State and Prospects'' was formed in order to deal with the promotion and adopting of telecommunication, software solutions and services in the Maritime industry, particularly for shipmanagement companies endeavoring in the ocean going shipping. The forum was organized and run by Dr. Nikitas Nikitakos, Associate Professor in the Department of Shipping, Trade and Transport of the University of the Aegean, by Dr. Dimitrios Lyridis, Assistant Professor in the Department of Naval Architecture and Marine Engineering of National Technical University of Athens and by Dr. Maria Lambrou, Lecturer in the Department of Shipping, Trade and Transport of the University of the Aegean. The Workgroup' s Rapporteurs were Mr. Evangelos G. Stratakos, PhD Candidate in the Department of Shipping, Trade and Transport of the University of the Aegean and Mr. Costas Dimitriou, PhD Candidate in the Department of Naval Architecture and Marine Engineering of National Technical University of Athens. The workgroup consisted of 138 members representing different groups of the maritime sector and Greek shipping industry, such as telecommunication providers, software solution providers and institutions. The workgroup focused on the assessment of critical factors of demand and supply on satellite communication and electronic services and solutions.

The workgroup met the following targets:

- The study of characteristics of telecommunication and maritime software solutions that are recommended by Greek and International Market.
- The analysis of the global market on maritime electronic services and solutions, their present state and prospects.
- The present use of the electronic services and solutions in Greek shipping industry and the potential for further development according to international practices.

- The study of the necessary business processes and actions that are required, as well as the mechanisms of promotion of the technological solutions in the maritime industry.

In the telecommunications market, the workgroup identified that a variety of alternative satellite communication services are offered by new providers to ocean going shipping industry, in a market that the leading role was played for many years by Inmarsat. Iridium and Globalstar present competitive products in voice services, whereas VSAT systems provide broadband connections to the ship.

Systems based on geostatic satellites like Thuraya, in combination with land mobile telephony systems comprise an alternative solution with lower cost of use in specific geographical areas. The choice of the suitable / convenient service depends both on the specific user requirements/needs and equipments' acquisition cost.

The fast pace of Satellite telecommunication developments during the last years, resulted in new innovative technologies that will provide broadband connections to the maritime industry. On the other hand, the competition between the providers will minimize costs and offer the opportunity to many companies to adopt new services. This will result in the efficient exchange of data, the support of total solutions and finally the incorporation of vessels into the corporate network permanently.

The market of electronic services deals with the facilitation of critical maritime business tasks and processes, including among them, chartering, procurement, planned maintenance systems, technical and operational monitoring of the vessels, manning, quality and safety. The workgroup concluded that providers of electronic maritime services and solutions are fulfilling more and more the present needs of their customers and are getting prepared to cover the emerging ones. Additionally great efforts are made by software solution providers in order to link applications, gain competitive advantage and provide continuous support. On the other hand, a lot of shipping companies that have the size and know-how appeared to develop their own applications in-house and in certain cases to commercialize their products.

The workgroup noted that there is a differentiation in products provided; this happens in order software solution providers to attract greater number of customers and thus, to acquire a bigger portion of the market by customizing the software / solutions,

targeting to ''lock them in''. Providers are also trying to give added value services by creating shipping e-markets and interconnecting applications of their competitors.

By examining the current trends from users' perspective, the Greek-owned ocean going fleet is ranked in the first place globaly with 2,923 vessels greater than 1000 Gross Registered Tones, and shows continuous adjustment to the changing conditions of the shipping market by developing infrastructure, increasing efficiency and quality of services. Moreover, its investment program in newbuildings exceeded USD20 billion during the last five years.

In the sector of communication and software solutions, the investments are not following the same trend in the Greek ocean-going shipping. The major obstacles for the adoption of electronic services according to the shipmanagement companies are summarized to the following: start up cost or cost of acquisition, lack of reliability and efficient technical support, as well as the high cost of satellite communication services, the compatibility problems into the present framework of processes and the lack of standardization in digital forms and documents that constrain the advantages coming from the adaptation of electronic software solutions. In any case the oncoming use of common standards (such as MTML) for transactions will be standardized, thus the use of internet based applications will flourish in maritime practices, processes and transactions, leading to a modernization of shipping companies in all respects and levels of operations between ship and shore.

Based on the above-mentioned conclusions, the workgroup suggests to the Greek ocean-going shipping the followings:

- Based on the strategic planning, every shipmanagement company that focuses on new building projects is recommended to give special attention to the installation and development of information systems and new technological equipment for communications.

- The adoption of new communication developments will decrease the operational costs and in the mean time will increase the speed of communications, offering new potential to the organizational and operational framework of the shipping companies.

- Shipping companies should aim to achieve interoperability between the already installed applications, if possible, in order to fully unite them into one integrated information system.

- To increase the use of Internet, personnel to be familiarized with the Internet applications and to improve the corporate website of the shipping company, as it is used for marketing purposes.

- In any case the support of the shipping company with key personnel specialized in Information Systems and Information Technology is very important.

Considering the present state and the accustomed way of operations processes in a Greek shipping company, as well as the limited participation of the State in their operations and according to the ebusiness forum meetings taken place, the workgroup made the following recommendations to the State:

The creation of a regulatory/supervisory body controlled by the Ministry of Mercantile Marine, which will deal with/contribute to issues concerning communication and information systems in Greek Shipping, as well as the support of the Greek flag in International Maritime Organization on electronic standards, in order to support Greek interests. In this body the participation of active members of the Union of Greek Shipowners and of the Association of Maritime Managers of Information Technology and Communications (AMMITEC) is required in order to express their needs and demands and to provide their expertise.

The issue of Greek Seafarers' education on computer literacy is very essential to the Greek Shipping Industry. Special care should be given by the State in order to pinpoint the market's needs in the Greek and international shipping industry on communication and software solutions in order to adjust and enhance the educational seminars (in all levels and respects of marine education) as well as academic programs in order to enable graduates to provide qualitative services.