www.cysm.eu

A GOAL TO BE REACHED

The main goal of this two years project is to substantially enhance the protection of the ports' Critical Infrastructures (CII), on the basis of a holistic approach, which takes into account their dual cyber-physical view. Specifically, objectives are:

- To analyse the whole spectrum of ports' CII threats (physical and cyber), direct (from physical and cyber assets of the ports) and indirect (from interacting entities and other CII), identify their dependencies, correlations, diffusion and impact levels.
- Provide a dynamic risk management methodology (CYSM-RM) for the ports' CII considering their physical-cyber nature. It will evaluate physical and cyber risks against the requirements specified in the ISPS Code (physical) and ISO27001 (cyber).
- Develop a collaborative security management system (CYSM system) enabling ports' CII operators to: Model physical and cyber assets and interdependencies; Analyze and manage internal /external /interdependent physical and cyber threats /vulnerabilities; Evaluate/ manage risks (using CYSM-RM); Build crisis scenarios and prevention approaches; Forecast and monitor attacks, direct and indirect threats and their impact on operations and service provisioning; Automatically generate and update security docs; Increase collaboration among ports' CII participants towards sharing security/ safety/ maritime knowledge (standards / legislation / best practices / guidelines) and enabling collaborative resolution of issues.

LAST MEETINGS

CYSM started with the Kick-Off meeting in FEPORTS ' Headquarters in Valencia last 9th May 2013. The meeting was attended by representatives of FEPORTS, Valencia port Foundation, Piraeus Port Authority, Singular Logic, University of Piraeus and University of Genoa.

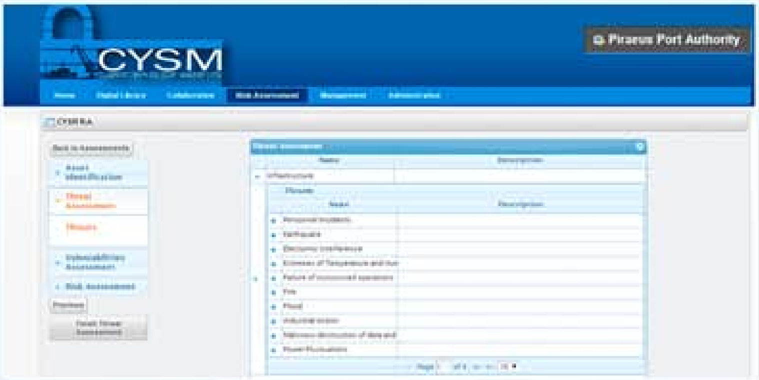
The first Steering Committee Meeting was held on 17th October 2013 also in Valencia, but this time in the Valenciaport Foundation Headquarters in Valencia Port Authority premises. In this meeting first deliverables of the project were presented:a research on the state of the art, the stakeholders requirements and the specifications of the system and its architecture. The second Steering Comittee Meeting wil take place next 29th May 2014 in Athens, in Singular Logic Premises. In this meeting ther is going to be a seminar addressed to partners with the aim to test the system functionalities and features in a first version of the CYSM system.

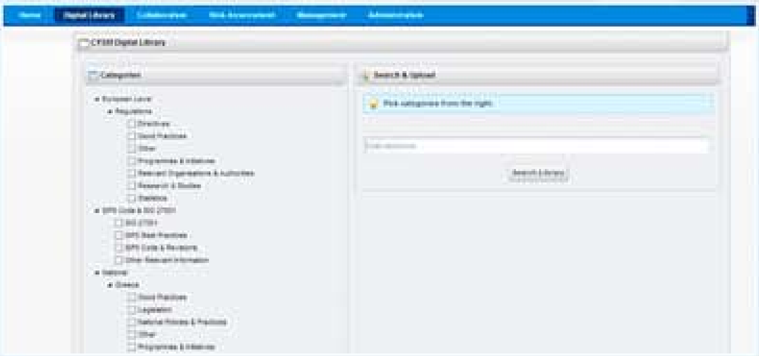
1st CYSM WORKSHOP

The 1st Project's Workshop is taking place next 7th July in Chania (Crete, GR) in the framework of the IISA Conference 2014.The workshop, called "Secure and Sustainable maritime digital environment" aims to bring together all maritime scientists, developers, operators and stakeholders in order to address challenges and propose solutions which will lead to a secure, sustainable and competitive maritime digital market leading to its trustworthiness, internationalization and growth. This workshop has been arranged within the the Fifth International Conference on Information, Intelligence, Systems and Applications (IISA 2014). This Conference offers a forum for the constructive interaction and prolific exchange of ideas among scientists and practitioners from different research fields – such as computers, mathematics, physics, biology, medicine, chemistry, experimental psychology, social sciences, linguistics, and engineering – having the goal of developing methodologies and tools for the solution of complex problems in artificial intelligence, biology, neuroscience, security, monitoring, surveillance, healthcare, sustainability in energy sources, governance, education, commerce, automation, robotics, optimization, image, speech and natural languages, and their integration. IISA-2014 is the fifth conference in the IISA series, technically co-sponsored by IEEE, BAIF, the University of Piraeus, and the Technical University of Crete.

THE CYSM SYSTEM

At present the technical team of the project is developing the solution for risks and cyber-risks management at ports. The work consists not only of the software development but also the layout design in order to be user-friendly and intuitive. Port Authorities will collaborate also in this task and in testing the system.





The CYSM system provides an innovative, open, collaborative, integrated, comprehensive and personalized framework that enables the ports to identify, assess and treat their cyber and physical risks. The proposed system adopts peak technologies and worldwide accepted and mature standards (i.e. SOAP, REST and AJAX) in order to build a bouquet of evolutionary, sophisticated and specialized security and safety management processes and tools (such as risk analysis and management mechanisms). The right balance between technical and technological innovation and usability is essential for the development of user-friendly services that can help them to solve their particular cyber and physical problems and issues.

THE MEDUSA PROJECT

Recently the DG Home Affairs of the EU has approved the project MEDUSA "Multi-ordEr Dependency approaches for managing cascading effects in ports' global sUpply chain and their integration in riSk Assessment frameworks". This project, led by the University of Piraeus Research Center (UPRC), is aimed at alleviating the various casdading effects that are associated with security incidents occuring from interacting entities at ports, through introducing, specifying and validating multi-dependency approaches to risk assessment, while also using them in the scope of riks assessment frameworks for ports' CIIs. MEDUSA will therefore open new horizons in the area of port security, through producing and sharing knowledge associated with the identification and assessment of cascading effects in the global ports' supply chain, with a view to predicting potential problems but also to minimize the consequences of diverge security incidents. The project will start in July 2014 and its partnership is composed by: EUROPHAR GEIE, A.E.I.E., Austrian Institute of Technology GmbH, Singular Logic and the University of Cyprus.

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