

«APPLICATIONS DEVELOPMENT AND PILOT PROJECT OF THE SECURITY SYSTEM “ADRION”»



IMPETUS was the contractor (Union of Companies) of the port of Patras for the ADRION project. The project focused on the development of the applications, and the pilot implementation, of the security system in ports of chosen areas (Patras, Igoumenitsa, Corfu) for combined transport issues. In addition, Dr. Nick A. Theofilopoulos, the Director of Research and Development of IMPETUS, was the Coordinator (Project Manager) of the project. IMPETUS provided an integrated and comprehensive solution for the ADRION project as well as an experience that was gained from the implementation of other major projects. These made Impetus' offer a credible and responsible solution that combined –state of the art- technologies and solutions.

This project was a system that would assist the work of port administration bodies in port management and would inform the passengers who travel abroad by sea via the ports of Western Greece (Patras), Epirus (Igoumenitsa), Ionian Islands (Corfu) and Puglia (Bar, Brindisi) for combined transport.

To summarize, in the context of the ADRION project, the following were offered:

- ❖ Installation of electronic billboards (VMS & LCD) in the ports of Patras, Igoumenitsa and Corfu to inform passengers on the arrivals-departures of ships.
- ❖ Installation of Infokiosks in the ports of Patras, Igoumenitsa and Corfu to inform passengers on arrivals-departures of ships.
- ❖ Development of a web site that provides information on ship schedules as well as additional information. The information and services provided by the Internet Portal will be a superset of the contents and functions that are provided by other media such as Information Kiosks, information tables, etc.
- ❖ Optimal management of berths through the development of a software that manages schedules and anchoring.
- ❖ Development of information and notification software through multiple channels (panels, kiosks, Internet).
- ❖ Setting up an Intranet.
- ❖ Linking the ports of Patras - Corfu - Igoumenitsa by developing the network infrastructure thus resulting in the distribution of information through information Kiosks and electronic billboards. Real-time data information such as ship positions and expected time of arrival etc.
- ❖ Information services via call centre, SMS and voice portal services.



- ❖ E-learning education services in ISPS safety issues.
- ❖ Possibility of connecting the ADRION system with other information systems that operate, or will operate in the future, in Greek and Italian ports.
- ❖ Ensuring the authenticity of the information regarding the project (services) by interconnecting with other organizations, institutions, companies and with a careful definition of the information.
- ❖ Security, maintenance and system support services
- ❖ Education services for port personnel



The offered solution contributed to the development of an appropriate infrastructure (hardware and software) for the distribution of electronic information and the availability of automated information services and internet security in the area of maritime transport. This was necessary in order to improve the services and quality offered to those passengers visiting our country. The modernization of the ports in conjunction with passengers turning to marine transport, requires the support and automation of the maritime security infrastructure, information and optimum service of the passenger.

The solution was characterized by its functionality, as it's based on cutting edge technologies and products that have been implemented on similar-scale projects and are

supported by their manufacturers on a regular basis.

The solution's architecture ensured sustainability and scalability, even if new electronic services need to be added, whilst the system can be readily extended to support more ports that need to use these services.

An important feature of the solution, especially the applications providing information on Gates and Schedules, was the use of open standards to allow future expansion of the system through an interconnection with a 'third' system. The system implemented interconnections with systems of other shipping companies by importing XML files, while its design anticipated the possibility of a future development of web services for the exchange of XML files as well as additional systems, such as the system implemented in the port of Brindisi in Italy.

One file for each Destination Port was created with the following data:

- The created date
- The Port Arrival ID
- The Port Arrival Name
- Shipment Companies sub-section
 - Shipment Company Information
 - Shipment Company ID
 - Shipment Company Name
 - Port Departure Information
 - Port Departure ID
 - Port Departure Name
 - Ship Information
 - Ship ID

- Ship Name
- Departure Date in format MM/DD/YYYY
- Departure Hour in format HH:MM:SS
- Arrival Date in format MM/DD/YYYY
- Arrival Hour in format HH:MM:SS

The primary purpose of the project was to develop a system that provides accurate and timely information to passengers 24 hours a day, wherever they may be, by various means so as to improve the service level of the ports involved in this project. To achieve this goal it was necessary to develop an effective system that would manage the schedules as well as the anchoring of the vessels. The system also manages the appropriate infrastructure so as to allow the functionality of the whole system.

Upon completion the project offered the following:

- Efficient supply of information for passengers through Infokiosks, especially for passengers in waiting areas. Providing general information to the traveling public as well as displaying other services provided by the port (e.g., exhibition centers, waiting rooms, events etc) and means to make passengers make the most out of their time while in the port.
- Quick and easy service of the passengers as well as valid display of information via infokiosks and electronic billboards.
- Showing the ports that have been proposed to be included in this project.
- Strengthening the management of ports.
- Savings on money and staff.
- Provide an information service with information on departures - arrivals that will respond to specific questions made from the user, such as:
 - To what destination can I travel to from a specified port?
 - From which ports do ships arrive today and how many are they?
- The ability for public announcements-information and for efficient management in cases of emergency for all services between Greece - Italy.



The implementation of the project has contributed in:

- The immediate update of passengers, and in addressing any problems that may arise so as to avoid unnecessary movements of the passengers and to avoid any inconvenience.
- The immediate update of the traveling public and the companies that cooperate with the ports so as to effectively treat any problems that may arise in the Port

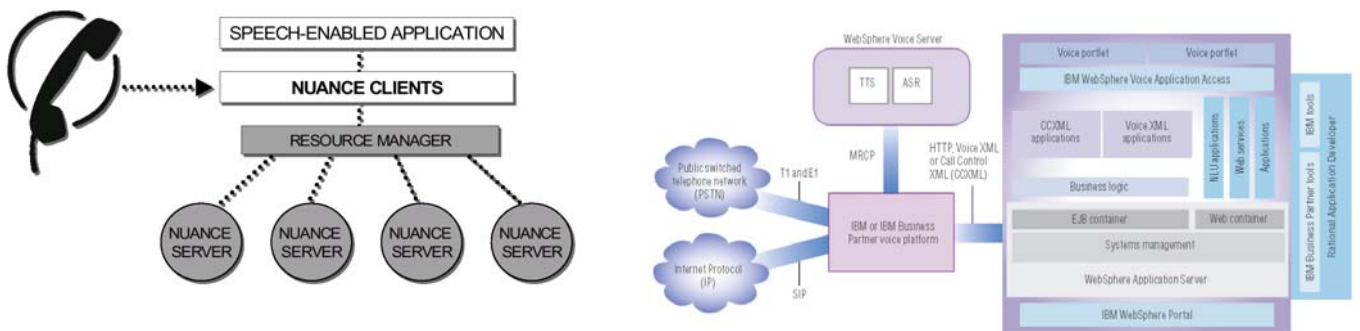


areas, coordinate port workers and companies. This contributed in managing emergencies and in preventing overcrowding and other problems that may arise.

- Training of individuals that are involved with the system at any time, 24 hours a day, on issues relating to ISPS that concern passengers.
- Preventing any discomfort that may be caused to the passengers by efficiently managing mooring.

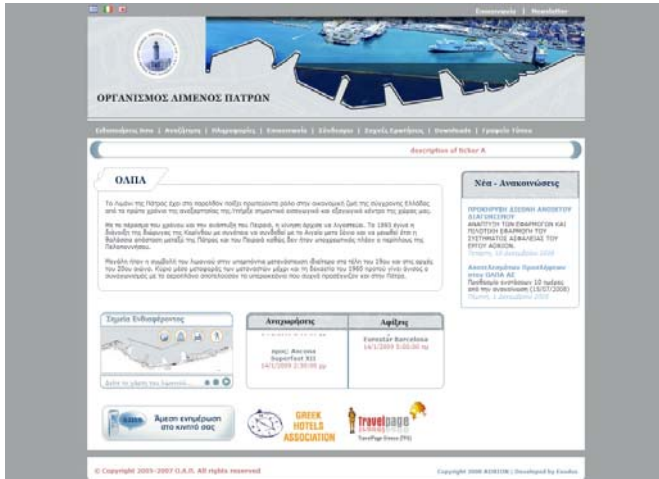
Specifically the following is accomplished:

- Better managing, monitoring and control over the departure-arrival of the ships in the port.
 - Optimal management of berths since the schedule of the ship and its schedule are taken into account
 - Timely knowledge of the location of ships depending on the berth that a ship moors.
 - Full exploitation and planning - depending on the time of arrival or departure time of a ship - of all the resources of the port (workers, port employees, cranes, etc.).
 - Observance of previous records over time.
- Effective communication and seeking of information that relates to the ports of Greece, whether it's the port itself, or any other individual that uses the port or even users that use other services offered by the port (or from someone that relates to these services).
 - Information for passengers, available 24 hours a day, 7 days a week, accessible through widespread communications mediums such as the phone (via voice or via SMS).



Project Implementation:

- Electronic billboards (VMS & LCD) were installed in the ports to inform passengers about arrivals-departures of ships.
- A website was developed with information on connecting schedules and public conveyance.



- The distribution of information via information terminals and electronic billboards and the distribution and exchange of information between ports was achieved.
- The network infrastructure at the ports of Patras, Ioumenitsa and Corfu, was developed in order for it to comply with the previously mentioned standards and with the development of specific applications
- Information services via service call centers, SMS, voice portals were provided.





- Long distance education services were offered in passenger safety issues (under the Port Facility Safety Plan ISPS Code) in cooperation with participating ports in Greece and Italy.
- The development of applications that manage berth allocation in real-time in conjunction with the bearings of Patras' port Basin.
- The development of applications for the interconnection of ADRION with other information systems that operate or will operate in the Greek and Italian ports.