Inte-Transit

Newsletter // Issue 3

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EDITORIAL

Welcome to the third issue of the INTE-TRANSIT project newsletter!

INTE-TRANSIT is a MED project of strategic value for the Mediterranean ports, that runs from 2013 through 2015, implemented by 8 partner organisations from 4 Mediterranean countries. The basic aim of the project is to achieve a better organization of the MED ports and their logistic activities areas and establish a cooperation framework between relevant stakeholders in the MED countries.

Moreover, large knowledge exchange and information sharing will be achieved during the whole project runtime and is highly expected to be of strategic impact not only for the participating ports, but also for the rest of the Mediterranean ports, operators and logistic parties.

Inside this issue you will find more on the INTE-TRANSIT project achievements during the 2nd year of its runtime, and specifically the latest advances on both INTE-TRANSIT Group Pilot activities as well as on the INTE-TRANSIT Open, Modular and Interoperable Management System. In addition, information on the organization of the INTE-TRANSIT final conference, to be held in Athens, on 23-24 June 2015 under the theme: *"Multimodality and intermodality as drivers of change of ports and logistics operations"* are also provided.

Furthermore, readers will also have the chance to learn about the results of the project's 3rd Training activity, 1st International Workshop and the 5th INTE-TRANSIT plenary meeting.

We wish you a happy and prosperous 2015!

Mrs Geli Latsa
Dissemination Manager
SEAbility Ltd.

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An Open, Modular and Interoperable INTE-TRANSIT Management System

Athanasia Tsertou, ICCS

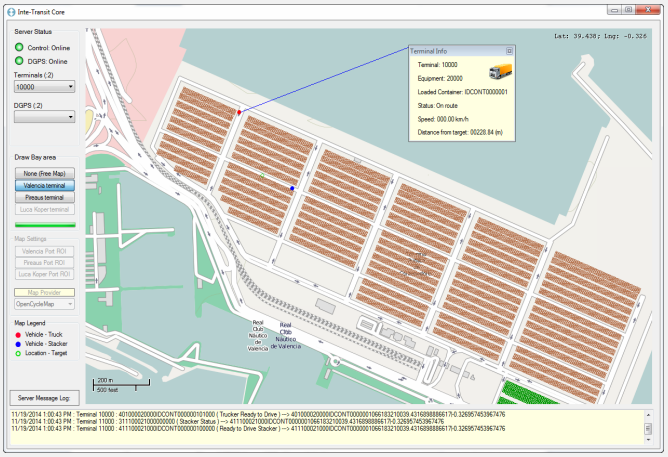
Within the INTE-TRANSIT project, ICT technologies are used for containers' tagging and yard equipment monitoring, enhancing their traceability in the terminal yard and beyond. The INTE-TRANSIT Management System (ITMS) has been designed with the purpose to obtain/store/retrieve/monitor all corresponding information from relevant communication endpoints (container identification, yard equipment identification and positioning), such as DGPS receivers, RFID readers, GEO-location servers. In particular, the ITMS manages the storage procedure of a container inside the yard and also keeps a detailed inventory of the stored containers, while also providing the ability to a operations personnel having all this information properly displayed and visualized inside a GUI.

Particular emphasis was given to the ITMS software architecture both at the client and server sides, but especially at the server side. An open, modular and interoperable methodology was followed at the specification phase, both for functionality and communication protocols such as type of messages exchanged, message format, message sequences. To meet the ports' technical requirements both at the current stage such as by installing a new system or interfacing at the existing system or in the future such as changing/upgrading, the ITMS was designed as a four-tier software architecture, with each layer operating independently, while also having the ability to robustly communicating with its neighbouring layers, designed to ensure efficiency and reliability under heavy workloads.

he User Management endpoints consist of all GUI enabled client software or web based client software, designed to support all management and monitoring activities of the ITMS remotely or locally through a secure connection to the ITMS.

A Middleware gateway that maintains all information exchange activities between the user management endpoints and the core software of the ITMS through the utilization of secure web service calls.

A Core Software agent which implements the "business" logic of the ITMS, maintains a connection to a DBMS for storing and retrieving identification and positioning information and also implements all the required communication interfaces for supporting the exchange of data between all known data sources.



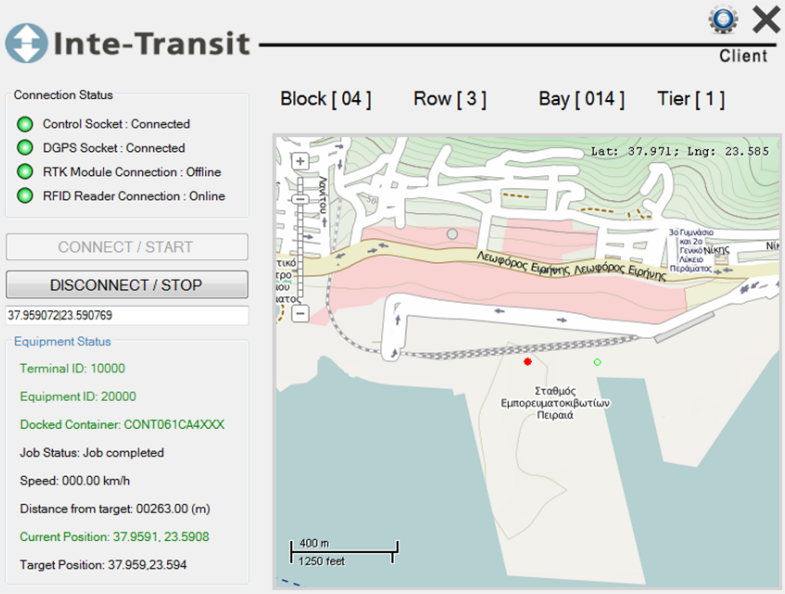
Last advances in the Group A pilot activities

John Kanellopoulos , PCT

Pilot Group A is focusing on the improvement of monitoring and tracing containers and yard equipment that will allow the members of the group to pursue the objectives of this program. As already described in the previous newsletter, this will be achieved by developing a GIS based application, the INTE-TRANSIT Management Server, client applications, and by installing DGPS and RFID devices on yard equipment.

The INTE-TRANSIT Management Server has been developed in such a manner so that it can be used in all three ports participating in the pilot without any modifications. The client applications, on the other hand, have been developed based on the specific requirements of each port regarding the equipment used and the software that is already in place. Piraeus Container Terminal and Valencia NOATUM Terminal have completed the software development and integration phase and are currently in the testing and data collection phase. The port of Koper has completed the software development phase and is currently working on the integration. All three ports are expected to have solid versions of the pilot in place early next year and focus on the analysis of the collected information and the comparison of the results with the objectives of the pilot.

Piraeus Container Terminal is running the pilot using yard trucks and straddle carriers. The client has been developed to allow the driver to see the position of his truck in the yard and the proximity of the point he should go to deliver the container (red and green dot respectively).



There are also indications about the health of the modules installed on the truck as well as some info regarding the container carried, speed, distance and Block-Bay-Row-Tier information of the target point. All these data are captured and stored in the central database of the INTE-TRANSIT Management Server for further analysis.

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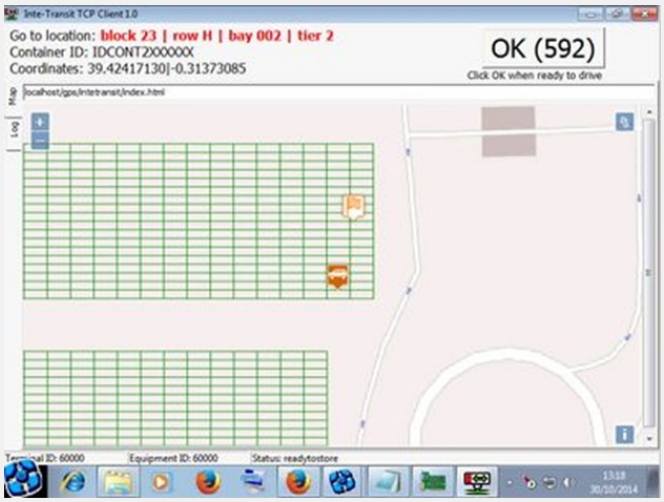
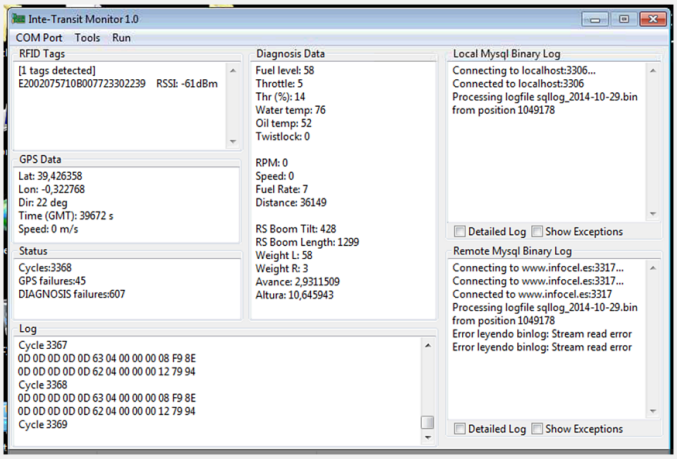
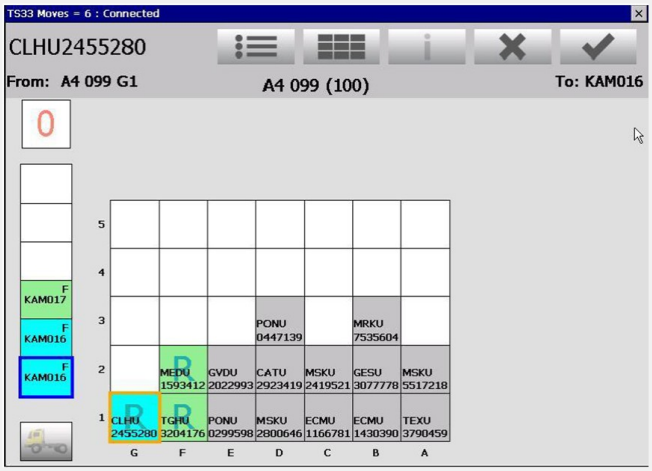
Valencia NOATUM Terminal is running the pilot using yard trucks and reach stackers. The challenging part of the location of the RFID reader on the reach stacker has been solved. The software client has been developed in a similar manner but has also added visibility of the truck operations on the client part. This way the operator will also be able to monitor diagnostic data of the equipment that can prove crucial for the smooth operation of the port.

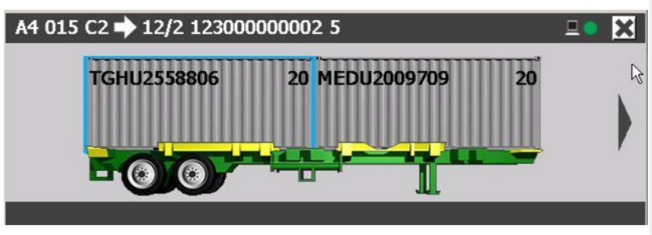




The port of Koper will run the pilot using yard trucks and reach stackers. Both software and hardware components have been tested in the lab and are operating smoothly. Once the integration challenges have been resolved, the yard pilot will take place. The port of Koper has decided to modify the current Tideworks client to connect with the DGPS receiver and the RFID reader. The information captured is transmitted back to the INTE-TRANSIT Management Server.

The first data captured in this pilot phase appear quite promising especially in regards to the opportunity of optimizing job allocation depending on truck position and direction data. By the end of the pilot, analysis on a larger sample of data will determine the potential to install components or the full pilot port-wide in an effort to capitalize on the findings of this project.





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INTE-TRANSIT Group B Dashboard for process mapping

Gracia Buiza Camacho, IAT

After defining the process mapping associated to the logistics processes in CONATECO and APPA pilots, and the definition of the Key Performance Indicators (KPIs) linked to them, the Group B partners of INTE-TRANSIT have worked on the development of a web platform to host the former. This was achieved through applying a Business Intelligence tool.

The web platform is a system which:

- Keeps KPIs linked to the studied processes in CONATECO and APPA.
- Is based on the open source Business Intelligence platform Pentaho.

Business Intelligence (BI) is the set of techniques and tools for the transformation of raw data into meaningful and useful information for business analysis purposes in order to improve and optimize decisions and performance.

INTE-TRANSIT Group B partners have used **Pentaho** to design the web platform due to numerous reasons: it is a leader in the range of Open Source BI solutions; it integrates different existing projects of recognized solvency (Kettle, Mondrian, etc.); it is characterized by great usability and a user friendly interface; the existence of an Enterprise version could provide a high-quality support to the companies; the integration into in-house applications is easy, and finally it can be used with independent modules as well as contains wizards for performing operation.

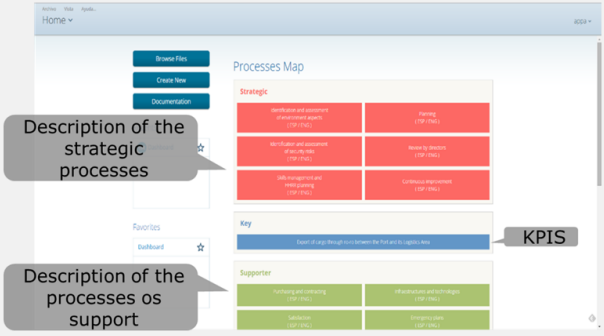

Figure 1. Screen of the INTE-TRANSIT dashboard.

The first screen when accessing the web platform (after login) shows the processes map of the company and the possibility to link them to the description of the strategic and supporter processes as well as to the operational processes´KPIs.

The platform allows the management of filters to select the year and month for which we want to consult the KPIs´values and the language (Spanish/English).

When the selection is made, a window with the KPI values is shown. For each KPI, the information available includes (Figure 2):

- Value of the KPI in the month and year selected.
- Values of KPI in the two months preceding the month selected (in the selected year).
- Value of the KPI in the month after the month selected (in the selected year).
- Value of the KPI in each trimester of the year selected.
- Value of the KPI in the selected year.

Figure 2. Screen of the INTE-TRANSIT dashboard. KPIs values (test values, not real).

Now, Group B is planning the integration of this platform with their own Information and Communication Systems and the new technologies (OCR, GPS) they have implemented.

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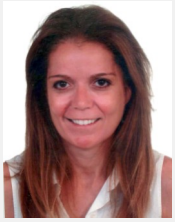
2nd International Conference - Save the Date!

Geli Latsa, SEAbility Ltd.



INTE-TRANSIT- "*Integrated and Interoperable Maritime Transit Management System*" is a MED project that runs from 2013 through 2015, implemented by 8 partner organisations from 4 Mediterranean countries. After 3 years of leading innovation, the INTE-TRANSIT consortium cordially invites you to find out more about the project's developments in adopting ICT technologies for container and yard equipment tracking as well as business analysis tools for the efficient monitoring of logistics processes. These tools are the basis for enabling multimodality and intermodality in large logistics hubs as are the port terminals.

The **INTE-TRANSIT Final Conference** will be held on
23-24 June 2015, in **Athens**, **Greece** , under the theme:
"*Multimodality and intermodality as drivers of change for ports and logistics*"

During this unique showcase, you will be able to network with lead experts and discover the latest developments on ICT tools, including innovative automation technologies which are key enablers of multimodality and intermodality, on the challenges that MED ports are currently facing towards becoming multimodal hubs, as well as on the policy and legislation issues which are involved in this process.

This is a first **'Save the Date'** invitation for every interested person. Participants may include port authorities and operators, freight forwarders, Shipping and Logistic Companies, Shipping/Container Lines, Transporters, Consultants and Maritime Organizations etc.

Don't miss this event - Save the Date and pre-register. We are very much looking forward to welcoming you at the INTE-TRANSIT final event in Athens.

Pre-registration is now open. Please fill in the conference pre-registration form available here and send it via email to Mrs Geli Latsa, (adm@seability.eu). Your reservation will be confirmed via email.

Additional information and details on the programme will follow shortly.

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A Successful Third Training Activity for INTE-TRANSIT

Gracia Buiza Camacho, IAT / Luisa Escamilla Navarro, VPF

After the success of the 1st and 2nd training activities held in Seville and Naples respectively, the INTE-TRANSIT Consortium organized the project's third training event in Valencia on 19th November focused on "*Strategic planning in ports and logistics & related security frameworks for container transport and ro-ro*".

During this training activity, which was hosted by Valenciaport Foundation, approximately 40 attendees had the opportunity to learn more on how strategic planning and secure logistics frameworks impact and may improve port competitiveness and transit capacities, to understand ICT role to get competitive and secure ports, to familiarise with emerging ICT protocols and software tools for secure, safe & efficient logistics organization and activities and to get acquainted with logistics management models & standards to improve the efficiency and transit capacities in freight transport. Specifically the topics that were discussed, among others, are:

- Smart, Energy Efficient and Adaptive Port Container Terminals;
- Prevention, Preparedness and Consequence Management of Security-Related Risks by addition of novel ICT technologies;
- Ports as actors of the future smart grid;
- Management systems based on international standards for ports;
- Importance of operational, environmental and energy related factors in ports logistics processes" or "ICT challenges to improve container traceability in Port Container Terminals.

The training session included the participation of trainers from Valenciaport Foundation, PCT S.A. (Piraeus Container Terminal S.A.), Seability Ltd. (Group HQ), IAT and PESYR I+D,SL. A poster and demo session took place in parallel in the framework of which the INTE-TRANSIT management server was showcased to the participants. All training presentations are available for download here: http://www.inte-transit.eu/index.php/en/information-center/publications

The next INTE-TRANSIT training events will be organized in Algeciras and Athens within 2015. For more information on these upcoming activities you may contact the Project Coordinator, Dr. Angelos Amditis (a.amditis@iccs.gr) or the project Dissemination Manager, Mrs Geli Latsa (adm@seability.eu). Relevant announcements will be also included in the project website shortly.

1st International Workshop-Results

Luisa Escamilla Navarro, VPF

The Valenciaport Foundation hosted the 1st international Workshop of the INTE-TRANSIT project under the theme: *"Information & Communications Technologies (ICTs) as enablers for improved operations in modern ports".* The principal objective of the event was to explain the role of information and communication technologies (ICTs) in rendering ports more competitive and efficient. The event was co-organised by VPF, SEAbility and ICCS in 20-21 November 2014.

The conference was inaugurated by Ramón Gómez-Ferrer, the director of the Port Authority of Valencia (APV), who explained how the INTE-TRANSIT initiative serves as a good example of the firm commitment of the APV to the continuous improvement of the role of ports in the transport chain. In addition, Fernando Liesa, the head of CNCLogística, who also chaired the opening session, presented the ALICE European logistics technological platform and explained how ALICE shares a global vision of logistics and the supply chain in which manufacturers, shippers, freight forwarders, distributors and logistics operators collaborate to develop innovative management models. Opening speeches were also performed by Vicente del Río, the director of the Valenciaport Foundation, Gustavo Ferrer, the director of Noatum Container Terminal Valencia, Athanasia Tsertou (ICCS), Blanca López (MED officer) and Fernando Fernández Melle, the deputy general director of the European Cohesion Fund and Territorial Cooperation and Urban Development of the Spanish Ministry of Finances and Public Administration.

During the 1st technical session the current need to trace and monitor containers in maritime transport were also presented from three different points of view: Ignacio Huet, the head of ICT of Noatum, presented the terminal containers view; Sherrie Orzechowski from INTTRA, an e-commerce leading software developer, presented the advances and services offered in terms of monitoring containers by maritime transport companies and finally José García, the head of ICT of the APV, presented the vision and needs of the port community and how the Valenciaportpcs.net platform responds to them.

During the 2nd session, the vision of the MED ports as well as the operational challenges that they face focusing specifically on Valencia, Koper and Algeciras ports where also presented to the attendees.

The afternoon the 3rd technical session took place during which various companies of the ICT sector presented the latest advances and tools developed to improve traceability and operations in the port domain. This included the automation of port and terminal processes and RFID technology applied to the logistics of vehicles.

The conference continued the next day with a round table where representatives from the three principal container terminals of the Port of Valencia (Noatum, MSC Terminal and TCV), the terminal of Piraeus (Greece) and the Italian terminal CONATECO participated and analysed the various ICT tools used in logistics, such as the Terminal Operating System, 'business intelligence' tools and automation and monitoring systems, among others.

The 5th and final technical session was dedicated to the progress being made in various European projects of the MED programme: Futuremed, MED-PCS, MEDITA, Smart-Port and Optimizemed. The presentations took place during this Workshop are available for download through the following link: http://www.inte-transit.eu/index.php/en/information-center/publications/1st-international-workshop

News and events

INTE-TRANSIT 5th Plenary meeting

After Valencia, the Port of Luka, Seville, and Naples the INTE-TRANSIT 5th Plenary meeting took place for a second time in Valencia, Spain on 21 November 2014 hosted by ValenciaPort Foundation. The project coordinator, Dr. Angelos Amditis (ICCS) welcomed the consortium and opened the meeting. Subsequently, the 26 project participants had the chance to discuss the progress of the work performed on the technical activities of the project and to agree on the next actions focusing on succeed all the project objectives.

INTE-TRANSIT @ Technological Innovation in Ports & Terminals Training 2014

June 5 - 6, 2014, Livorno Ancient Fortress, Italy

The INTE-TRANSIT project extensively presented by ICCS during the Technological Innovation in Ports & Terminals International Master class that took place in Italy, on June 5-6 2014. Specifically ICCS representative has been led the Workshop entitled: *"Exploring How Technological Innovation Improves Operations in Ports & Terminals*", which took place during the second day of the event. In the framework of this workshop the INTE-TRANSIT concept and solutions had been presented and widely discussed among the attendees. The respective INTE-TRANSIT presentations can be found here: http://www.inte-transit.eu/index.php/en/information-center/publications

CONSORTIUM

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Identification number: 2C-MED12-05, ERDF

MED Programme

Axe 3: Improvement of mobility and of territorial accessibility

Objective 3.1: Improvement of maritime accessibility and of transit capacities through multimodality and intermodality

Duration: 1 January 2013 – 30 June 2015

Total cost: 1.834.201,98 Euros

Coordinator: Institute of Communication and Computer Systems

Website: www.inte-transit.eu

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