The Logistics Action Plan and the Commission’s current research on Freight Logistics

eFreight Conference, 17th February 2009

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Keep Europe moving

Mid-term review of 2001 White Paper:

• Sustainable mobility
• Protection of the environment, energy, resources and citizens
• Innovation
• International connectivity

Co-modality:

• Complementary and efficient use of modes in an optimal European transport system
• Looking at each mode individually and their integration in logistics chains

Directorate-General for Energy and Transport
The EU Freight Transport Agenda

On 18 October 2007 the EC adopted the Communication: “The EU freight transport agenda: boosting the efficiency, integration and sustainability of freight transport in Europe”

- Communication on the Freight Logistics Action Plan
- Communication on a freight-oriented rail network
- Communication on a European Ports Policy
- Commission Staff Working Paper « Towards a European maritime space without barriers »
  Action plan aimed at creating a maritime transport area without borders in Europe (21 January 2009)
- Commission Staff Working Paper on Motorways of the Sea
Logistics Action Plan

- ICT in Freight Transport and the E-Freight initiative
- Sustainable Quality and Efficiency
- Simplification of Transport Chains
- “Green” Freight Transport Corridors
- Urban Freight Logistics
- Vehicle Dimensions and Loading Standards
ICT in Freight Transport and the E-Freight initiative

What is it?

A policy initiative aiming to improve the efficiency and sustainability of freight transport in Europe, containing concrete actions for all modes of transport, individually and collectively as a drive for a competitive and sustainable European freight transport system.
ICT in Freight Transport and the E-Freight initiative

What does it include?

A standard interfaces within the various transport modes so that interoperability across modes is assured.

Establishment of a single window (single access point) and one stop-administrative shopping for all modes.

Identify the opportunities for standardising information flows to ensure the Integration and interoperability of modes at data level (such as EDI/EDIFACT or XML), and provide an open, robust data architecture primarily for Business to-administration, administration-to-administration and business to business data flows.

Once identified, act accordingly.
How do we do it?

Work actively with stakeholders towards the application of ICT in Freight Transport through the E-Freight initiative and identify the problem areas where EU action, such as standardisation, is required.

Identify the added value and obstacles to creating an "Internet for cargo" with appropriate follow up.

Encourage the standardisation of a uniform way to electronically describing freight transport services.

Open ICT systems are needed to support booking, invoicing, tracking, transhipment and crucially to allow the user to be fully informed.
ICT through legislation

the Commission has made a number of attempts to create a European consensus for information management systems through directives

- Creation of a harmonised river traffic information system (European Commission, 2004),
- a joint European system for road user charges for heavy vehicles (European Commission, 2003).
- In the railway sector, TSI (Technical Specification for Interoperability) standards, which prescribes a number of essential requirements for individual subsystems to enable information exchange.
# E-Freight type initiatives

<table>
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<th>Initiative</th>
<th>Description</th>
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<tr>
<td>e-logistics</td>
<td>Service from ICT applied to production, transport and distribution</td>
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<tr>
<td>e-freight</td>
<td>Part of e-logistics dealing with cargo transport</td>
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<td>e-freight/IATA</td>
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<tr>
<td>e-maritime</td>
<td>Service from ICT applied to marine, maritime and coastal management</td>
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<tr>
<td>e-navigation</td>
<td>Part of e-maritime dealing with the vessel and its navigation route</td>
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E-Freight relationships
The proposed Directive, which is under discussion in EP and Council, foresees the establishment of an ITS Committee and an Advisory Group. The main target is the issuing of common specifications to arrive at continuous and interoperable freight ITS services, in particular:

"the definition of the necessary measures to use innovative ITS technologies (RFID, Galileo/EGNOS) in the realisation of ITS applications for freight transport logistics (eFreight)"
ICT in Freight Transport

Link with technology platforms
Operations

Technology
Services
Development

RTD
INFSO
TREN

Legislation
B2A
Deployment

Directorate-General for Energy and Transport
Some of the main, current EU research projects in freight transport logistics communication

- **FREIGHTWISE** (Management framework for intelligent intermodal transport) -- DG TREN
- **EURIDICE** (data acquisition, data analysis, )--DG INFSO
- **SMART-CM + INTEGRITY** (door-to-door container management / secured lanes)--DG RTD
- **Good route** (Dangerous goods routing and monitoring) --DG INFSO;
- **SMARTFREIGHT** (ICT in urban area)--DG INFSO
- **Marnis** in support of eMaritime initiative—DG TREN.
- **SHORTSEA XML** (Standardised Messages for Door-to-door Shortsea Based Logistics Chains)-- Marco Polo
- **Chinos** (Container handling in intermodal nodes)—DG RTD
- **KOMODA** (supports an e-Logistics platform; open standards, ems and future developments)--DG RTD
- **Good road** (urban freight systems)--DG RTD
Overall aims and objectives

Ability to track and trace freight in transit regardless of transport mode.

- Paper-free electronic flow of information associating the physical flow of goods.
- Secure way of making information available on-line to customs and businesses.
- Connects businesses and administrations (customs).
- Standardizes information exchanges relating to location and other cargo info.
- Practical way of implementing the above via use of emerging technologies (RFID, GPRS).
- Assures interoperability across modes by developing a transport mode independent platform.
- Facilitates administrative simplification.
- Facilitates maritime transport’s integration with other transport modes (“e-maritime”) by providing more expedient logistics operations.
FREIGHTWISE develops a freight transport management framework that aims to facilitate interoperability between all stakeholders in transport.

The FREIGHTWISE goal is to provide a blueprint reference architecture for the development of an effective management and IT infrastructure for setting up, monitoring, and managing intermodal chains.

This infrastructure will support the interaction with other service partners in the chain, but also with external actors such as traffic management services, customs offices, and other relevant public bodies.
Freightwise was the first of these projects to start and, based on the ARKTRANS system framework for the transport sector, developed a Framework comprising a set of superior roles (representing all stakeholders) and the information that needs to be exchanges between these roles
Worlds' largest terminal operators, Logistic Service providers, Shipping companies, Technology providers and national customs organisations are cooperating within SMART-CM aiming at:

Using State-of-the-art technology for making improved security for container transport beneficial for business and logistics while responding to the challenges of the future i.e.:

- Achieving interoperability of Container security technologies (single window approach)
- Increase supply chain visibility (by achieving efficient exchange of information among the industrial actors and between industry and the customs authorities)
- Achieve faster throughput in transport corridors (by supporting implementation of AEO & “green lanes” concepts)
- Accomplish high level chain security (through continuous control of containers)
- Improve productivity in chain operation (by handling of “events”, min. Processes cost & time, support transactions, better chain planning etc)
SMART-CM, how it will work

- Enable interoperable B2B co-operation in door-to-door container transport security.
- Develop compliant application of B2B and B2A container security data solutions with international Customs operations.
- Develop a neutral approach and service platform for secure and interoperable data communications.
- Define & implement added value services and chain visibility enabling techniques for fulfilling operational requirements of the actors in managing global container chains.
- Develop prototypes of advanced applications in global container management, such as dynamic scheduling at the containers’ chains, resulting from innovative concepts such as “The Internet of Things” and other research activities’ results.
- Assess wide applicability of the project solutions by considering costs and benefits through implementation in global demonstrators.
- Contribute to standards development for advancing of interoperability of technologies currently applied to safe container chain management at global level and for messages exchange and process implementation between customs and actors and among actors of the global container transport industry.
INTEGRITY aims at creating supply chain visibility by evaluating information from various types of sensors, portals and other information sources, partially pre-processed by intelligent algorithms.

The full scale integration of IT systems will enable the creation of a Shared Intermodal Container Information System (SICIS) containing either the data itself or links to the data providers.

SMART-CM, will interface with the SICIS platform to prove the interoperability and neutrality of the SMART-CM approach by establishing common web based interfaces.

Specific set of common functional user requirements and technological components for the platforms’ operation are identified and will be validated in a common demonstrator for the efficient monitoring and controlling of containers.

The demonstrators’ and the platforms’ common functional components will be evaluated under a common evaluation framework.
Synergy

- SMART-CM will utilise the FREIGHTWISE outcomes in particular the XML format messages devised by the project. The FREIGHTWISE Transport Execution Plan (TEP) is one of the messages considered for being used in the context of the SMART-CM platform services.

- SMART-CM also relies on the wide adoption of the Transport Service Description (TSD) message by the industry stakeholders as a means of publicising alternative transport services. Such an information availability is crucial for the realistic implementation of the SMART-CM advanced value added services.
Euridice concentrates on establishing an automatic mobile web services infrastructure using so-called smart tags (RFID etc.) to facilitate direct interaction between cargo items such as individual packages, loading units (pallets, containers etc.), vehicles and the infrastructure.
Euridice’s aim

Euridice aims to trigger a paradigm shift for the whole freight transport sector to the concept of “Intelligent Cargo” that connects itself to logistics service providers, industrial users and authorities to exchange transport-related information and perform specific functions whenever required along the transport chain.
**Synergy**

**EURIDICE** will combine existing technologies in a central platform (ORPHEUS) in order to provide:

- Cargo information services such as identification, positioning and some standard processes.
- Advanced services such as integration and orchestration according to needs.

- SMART-CM is positioned on the advanced services layer combining information coming from container security devices and positioning of cargo coming from ORPHEUS.
SMARTFREIGHT

- The main aim of SMARTFREIGHT is to provide ICT solutions that integrate urban traffic management systems with the management of freight and logistics in urban areas.
- The actual transport operations carried out by the freight distribution vehicles will be controlled and supported by means of wireless communication infrastructure and on-board and on-cargo equipment.
Planned eFreight project

European e-Freight capabilities for Co-Modal transport

This research covers a major Action Plan item that is: "Together with stakeholders, develop a roadmap for the implementation of e-freight, expanding on the concept of the "Internet for cargo" and identifying the problem areas where EU action such as standardisation is required."
Planned eFreight project

- The concept of e-Freight denotes the vision of a paper-free, electronic flow of information associating the physical flow of goods with a paperless trail built by ICT. It includes the ability to track and trace freight along its journey across transport modes and to automate the exchange of content-related data for regulatory or commercial purposes. Hence, a necessary condition will be that standard interfaces within the various transport modes are put in place and their interoperability across modes is assured.
Planned eFreight project

- e-freight is a three year project and should start around September 2009. The inception report will sketch out a roadmap for implementation and the rest of the project will set about its development and verification.
- This project will complete the jigsaw of Commission eFreight type research and will have the added role of developing the eFreight roadmap and coordinating the research outputs to that end.
Thank you for your attention

http://ec.europa.eu/transport/logistics/index_en.htm