



European e-Freight capabilities for co-modal transport

Single European Transport Document

e-Freight receives funding from the EC's FP7 Sustainable Surface Transport Programme

Introduction

Transport documents (such as waybills, bills of lading, packing lists and so on) play an important role in the exchange of information between stakeholders involved in the transport of goods. The current situation is characterised by a conglomeration of various national and international, often mode-specific, regulations, conventions and standards.

To cope with this situation, a large number of companies and organisations have developed their own version of a waybill, some suitable only for a single mode, others for multiple modes. As a result, there is no uniformity in type, function or content and there is no legal certainty or predictability for multimodal transport chains. Transaction costs are thus increasing and the move towards multimodality is hampered. Multimodal transport operators in particular are burdened by the need to fulfil requirements differently grown for each separate mode over many decades.

One aim of the e-Freight project is to ease this burden by providing a flexible solution for sharing transport document information between stakeholders, irrespective of mode. The proposed *Single Transport Document* solution will constitute a standard, multimodal waybill and is being developed by undertaking an analysis of current practices, as well as using results from prior research regarding legal, political and technical issues. Furthermore, transport documents play an important role in facilitating international trade, which is becoming more and more electronic, so the Single Transport Document will be in an electronic format designed to replace current paper documents.

The process of developing the end solution is divided into three phases. The first phase is focussed on analysis to define the boundaries and scope of the Single Transport Document. During the second phase (commencing July 2011), different options for implementation will be explored and validated by stakeholder representatives. The processes surrounding the use of waybills will also be analysed. At the end of the second phase, the Single Transport Document solution will be finalised and the results will be validated and refined in the third phase (commencing January 2012), in which reference solutions for Single Transport Document will be tested in various real-world business cases.

This paper summarises the work carried out so far in defining the scope and refining the concept of the Single Transport Document. Work on the analysis of the information requirements is also reported.

Information Content

At present, waybills take many different forms which vary from mode to mode, country to country and organisation to organisation. Initially, a diverse sample of existing waybills was studied to obtain an overview of the sort of information that they contained. Three widely used waybills from different trade associations were then chosen to form the foundation of the new information model¹ that would be created for the Single Transport Document:

1. the IATA *e-Air Waybill*²
2. the FIATA *Non-Negotiable Multimodal Transport Waybill*³

¹ An information model (or data model) defines the information *content* and the *structure* in which the information should be presented

² <http://www.iata.org/whatwedo/cargo/Pages/eawb.aspx>

3. the BIMCO *Multimodal Transport Waybill*⁴

Based on this analysis of real-world information requirements, the first version of the information model for an electronic, multimodal waybill was devised. Information elements that occur in all three of the documents listed above can be seen as required; those which appear in just two out of the three are also candidates, but with need for further discussion. Elements occurring in only one of the waybills were collected, but not incorporated in the new information model.

To ensure that the results of this process were consistent with the rest of the e-Freight domain, the real-world information requirements were mapped to existing structures in the e-Freight Framework⁵. The information elements were compared and aligned with existing Framework concepts and renamed in some cases to ensure a consistent nomenclature. The end product is a definition of the information content and the structure in which the information should be presented.

An Electronic Waybill

Moving away from paper-based documents opens up greater possibilities for information exchange. A document can be thought of as a collection of information in a specific format, but an electronic document can manifest itself in a variety of ways. Examples include HTML files for online access, an XML file for electronic transmission, or a PDF file to be sent as an email attachment. Phase 2 of the work will study the different forms that the electronic waybill could take and their advantages and disadvantages.

Furthermore, there are numerous ways in which electronic documents can be handled, manipulated and transformed, endowing them with functionality and flexibility beyond that of paper documents. A particularly appealing feature of digital information systems is the fact that information must be entered once and only once. Phase 2 of the work will also evaluate different mechanisms for generating, accessing and transmitting electronic waybills. As an example, accessing the information online each time it is needed would be an effective way of implementing such an information system, but this solution presents problems if no internet access is available (e.g. at sea).

As it is electronic in nature, the creation and subsequent handling of the Single Transport Document will be supported by a set of software applications. The e-Freight project will develop reference software components which integrate with existing systems to generate electronic waybills from operational data. These will be tested in a number of real world business cases to evaluate the Single Transport Document and obtain feedback from stakeholders.

Involvement of the Stakeholders

Stakeholder groups, both internal and external to the project, will be involved from an early stage to provide feedback and validation of the work. A number of e-Freight workshops are planned and these will be used to gather feedback from a diverse audience. More focused consultations with smaller targeted groups will also be arranged. The purpose of these consultations will be to validate

³ <http://www.fiata.com/index.php?id=104>

⁴ http://www.bimco.org/Chartering/BIMCO_Documents/Waybills_and_Cargo_Receipts/MULTIWAYBILL95.aspx

⁵ The *e-Freight Framework* defines a framework for business interoperability through standardised information exchange, driving alignment on all levels of interoperations from planning transportation services to executing and completing a contracted service

the first version of the information model and to enable a more detailed study of the processes involved.

Liability

Transport documents not only contain information about the parties, locations and goods relating to a transport, but also information about liability. In some cases, transport documents may themselves be directly implicated in issues relating to liability. This is an area where expert legal knowledge is essential and so the decision was made to harmonise the work in phase 2 with results from the INTERTRAN project, a Finnish initiative examining the legal aspects of European transport logistics policy.

Conclusions

The main outcome of the first phase of the work was a clearer understanding and definition of the concept of the Single Transport Document and its relationship to other aspects of the e-Freight Framework. At the end of phase 1, the concerted, high-level definition of the Single Transport Document is “a standardised, electronic, multimodal waybill”. Initial feedback from the e-Freight project Advisory Committee⁶ has indicated that stakeholders will react positively to this proposed concept.

The first version of the information model has been developed and will be used in phase 2 to obtain feedback and validation from stakeholders and to refine the process models surrounding the use of waybills. Proposals for more efficient processes will be made, based on electronic, rather than paper-based, information exchange. Phase 2 of the work will also see close co-operation with the INTERTRAN project to tackle the issues of liability surrounding waybills and other transport documents.

To test the suitability of the final Single Transport Document design, the e-Freight project will develop reference software components which support the creation, handling and management of Single Transport Documents. These components will integrate with existing systems and be tested in various real-world business cases in phase 3 of the work (commencing January 2012).

⁶ The e-Freight Advisory Committee exists to provide an external expert opinion on the project relevance. It is comprised of a well-balanced group of ‘advisors’ representing institutions, and research and business interests spread across Europe, embracing interests and knowledge across the whole transport chain. Its membership is drawn from key players in the transportation field to provide the geographical, modal and thematic coverage required to adequately address the project objectives