Appearance Electronic Bill of Lading as a New Innovation in Maritime Trade

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Abstract- This paper deals with an urgent topic today the challenges of implementing electronic bills of lading in international trade. Lots of advantages can be gained from introducing them, for example a better environment, lower prices of documentation and an easier contractual procedure. In the paper, the legal method is combined with interviews and enquiries with different interested parties in this line of business banks, shipping companies and forwarding agents. The results show that the lack of success for the electronic bills of lading is attributable to the general resistance and a conservative view among the aforementioned parties and that the legislation often is either obsolete or that the provisions do not support the new technology in a way that is appropriate. The work has predominantly been focused on a number of features that are compared between the electronic bill of lading and the paper based bill of lading. These features are the written document, the signature, the original and negotiability. A development towards incorporating the rules governing electronic bills of lading and electronic letters of credit could increase the pace of the change towards a more common use of electronic transport documents.

Key words: electronic, Bill of Lading, Maritime Trade.

1. Introduction

The computerized system currently developed for trading purposes is electronic data interchange (EDI). Shipping industry needs badly swift communication between all parties of the transportation process, therefore marine transport is believed to benefit substantially from adoption
of EDI. The replacement of traditional bills of lading with the electronic equivalent has slowed down due to a number of legal and technical problems. In attempting to solve them the legal essence of bill of lading must be explored. In this respect, bill of lading is known to serve:

1) As a receipt for the cargo by the carrier;
2) As the contract of carriage itself (This issue is debatable. The other point of view regards bill of lading merely an evidence of the contract of carriage.)
3) As document of title to the goods which enables the holder to exercise the number of rights, including delivery of the bill of lading.

Most jurisdictions contain provisions imposing or implying the requirement for bill of lading to be a written and signed document. Hague-Visby and Hamburg Rules are also based on presumption of paper document. The computerized system which is currently developed for trading purposes is electronic data interchange (EDI). For example, an EDI system called ‘SWIFT’ is used in international commerce by the banking industry for the communication of commercial letters of credit among banks worldwide [1]. In the shipping industry, EDI systems have been developed in order to replace traditional paper shipping documents, in particular bills of lading, because the most important advantages of EDI lies on its speed. However, there are a number of obstacles to the use of EDI for electronic bills of lading, both in terms of computer technology development and legal issues. The major obstacle to the use of electronic bills of lading is the legal requirement of paper-based documentations. A related issue is in what way electronic messages must be conveyed in order to meet the requirements of bills of lading which, at present, must be signed documents.

Moreover, since a bill of lading has an important function as a document of title to the goods shipped, there is value in itself as security to banks and it entitles its holder to sell the goods while in transit. This function of paper bills of lading is not easily incorporated in electronically generated documents. This paper discusses the legal obstacles to the use of EDI systems for electronic bills of lading, in particular, problems concerning the function of paper bills of lading as a negotiable document of title. The first part of the paper will examine the proposals by the UNCITRAL Working Group on EDI to overcome this problem, known as ‘the functional equivalence approach’ [2]. Secondly, the paper will look at other attempts to facilitate the use of electronic bills of lading, such as the CMI Rules and Bolero Project. Lastly, solutions to the problems which may arise from the use of electronic bills of lading will be discussed.

2. Uncitral Model

The United Nations Commission on International Trade Law (UNCITRAL) is attempting to develop uniform international rules that would validate and encourage the use of EDI. In 1995, UNCITRAL adopted the draft Model Law on Legal Aspects of Electronic Data Interchange (EDI) and Related Means of Communication [3]. The Model Law is intended to serve as a model to countries in order to create uniform law and practice involving the use of computerized systems in international trade. The objectives of the Model Law are essential to improve the efficiency in international trade since it will, if adopted by a large number of countries, enable and facilitate the use of EDI and the related means of communication and providing equal treatment to users of paper-based documentation and to users of computer-based information. The Model Law was finalized and approved in the UNCITRAL twenty-ninth session, 28 May to 14 June 1996. The
Model Law is before the United Nations General Assembly and is currently awaiting approval. The Model Law is intended to serve as a model to countries in order to create uniform law and has no legal force of its own. Ocean bills of lading are reckoned as key issues within the scope of the Model law; therefore it includes provisions, addressed specifically to carriage of goods. The Model Law is based on the recognition that EDI itself cannot be regarded as a document, both in nature and legal aspects. The UNCITRAL Working Group on Electronic Commerce noted that attempts to introduce such concepts as “electronic bill of lading” or “electronic document” would be flawed (See J. Clift “Electronic commerce: The UNCITRAL Model law and Electronic Equivalents to traditional bills of lading/ International Business Lawyer Vol 27 (1999), p 313). The approach, proposed by Model law involves analyzing the purposes and functions of traditional paper documents and providing that EDI, though different in nature, can produce the same legal effect. The functional equivalence is established not only of information about certain actions but of the fulfillment of those actions as well. The “functional equivalence” concept was also implemented in UNCTAD/ICC Rules for Multimodal Transport Documents, which state that multimodal document “can be replaced by electronic data interchange messages” (CMI rules).

2.1 Application of Legal Requirements to Data Messages

‘Electronic Data Interchange’ or ‘EDI’, as defined by the Model Law, means the electronic transfer from computer to computer of information using an agreed standard to structure the information [4]. The main issues related to EDI which have been discussed internationally and solutions proposed by the Model Law are:

(a) Legal recognition of data messages;
(b) Writing or a ‘document’ requirement;
(c) Signature requirement; and
(d) Document of title and negotiability.

The Model Law is based on the recognition that legal requirements for the use of paper documents are the main obstacle to the development of EDI. EDI itself cannot be regarded as an equivalent of a paper document, both in nature and legal aspects. Therefore, the Model Law introduced a new approach known as ‘functional equivalence approach’ which is based on an analysis of the functions of paper-based requirements and determining how those functions could be fulfilled through EDI.

2.1.1. Legal recognition and evidential value of data messages

The first question is whether a data message can be treated as a document and whether it be accepted as evidence in courts. In many countries, (both civil law and common law systems), computerised records are generally admissible as evidence. For example, the English courts have recognised other means of passing on information than paper documents. In Derby & Co v. Weldon (No 9) (1991) Vinelott J. held that the database of a computer, in so far as it contained information capable of being retrieved and converted into readable form and whether stored in the computer or record in backup file, is a document for the purposes of the High Court rules governing discovery of documents.
The ‘best evidence rule’ requires presentation of the best available evidence. In the case where there is an original document, a data message may not be accepted as the best evidence and may be considered as hearsay evidence. However, in the case where there is no original document, a data message or a computer print-out could be considered as the best available evidence [5]. A solution to the problem given by the Model Law is provided in article 4 that information should not be denied effectiveness, validity or enforceability solely on the grounds that it is in the form of a data message [6]. Article 8 also provides in reference to admissibility and evidential value of data messages in any legal proceedings, that nothing in the application of the rules of evidence shall apply so as to prevent the admission of a data message in evidence on the ground that it is a data message, or if it is the best evidence that the person adducing it could reasonably be expected to obtain, on the grounds that it is not in its original form. Article 8 is intended to make it clear that no matter how the ‘best evidence’ or ‘hearsay’ rules apply to data messages, they will not alter the legal recognition and evidential value of such data messages.

2.1.2. The requirement of a ‘writing’ or a ‘document’

The requirement of ‘writing’ or a ‘document’ is imposed or implied by laws in most jurisdictions. In Australia, for example, the Carriage of Goods by Sea Act 1991 (Cwlth) defines the term ‘contract of carriage’ as ‘a contract of carriage covered by a bill of lading or any similar document of title …’ The definition of ‘document’ provided in Section 25 of the Acts Interpretation Act 1901 (Cwlth) includes:

(a) Any paper or other material on which there is writing;
(b) Any paper or other material on which there are marks, figures having a meaning for persons qualified to interpret them; and
(c) Any article or material form which sounds images or writings are capable of being reproduced with or without the aid of any other article or device.’

Even though the meaning of document is not limited only to a paper document, in so far as ocean bills of lading are concerned, the Australian bills of lading legislation may cover bills of lading in paper form since the law requires them to be signed [7]. As already noted, the English court has held that the database of a computer is a document for the purposes of the High Court rules. This, however, may not satisfy the requirement of ‘writing’. Since the definition of ‘writing’ in the Interpretation Act 1978 (UK) includes ‘typing, printing, lithography, photography and other modes of representing or reproducing words in visible form’, an electronic message itself is not visible and cannot be included in the meaning of ‘writing’. Therefore, if a document is required to be written, such an electronic message is not a document. One observer presents a view that since electronic communication is more common, the word ‘document’ should be more generously construed [8]. The Model law expressly gives electronic transmissions the same legal status as writings. Article 5 provides that where a rule of law (national laws) requires information to be in writing or to be presented in writing, or provides for certain consequences if it is not, a data message satisfies that rule if the information contained therein is accessible so as to be useable for subsequent reference.
2.1.3. Signature and other authentication

The most common form of authentication required by domestic and international law is a manual signature. The function of signature is very significant not only because it authenticates parties to a contract but also evidences an intention to be legally bound. Authentication of a transmission by a signature is an indication to the recipient and third parties of the origin of the document and the intention of the party who issues that document. The Hamburg Rules provide for signature ‘in writing, printed in facsimile, perforated, stamped, in symbols, or made by any other mechanical or electronic means, if not inconsistent with the law of the country where the bill of lading is issued’. Most provisions of the Australian bills of lading legislation require a signature. The word ‘signature’ appears to be restricted by the courts to manual signatures. Consequently it is not certain that the courts will include an electronic form of authentication as a ‘signature’ so that this uncertainty could only be resolved by legislation. A facsimile signature was accepted as a signature by the High Court of Australia in Electronic Rentals Pty Ltd v. Anderson (1971). The area is not entirely clear. In Molodyski v. Vema Australia Pty Ltd (1980) the issue was whether a fax of a signed document amounted to a document signed by the sender (the offered) which was then signed by the recipient (offeree) amounted to a binding signed agreement. Cohn J (obiter) stated that whether delivery by fax of a signed document is as effective as delivery of the original signed agreement depends on the intention of the signatory. If the signatory intends the facsimile signature to be used to authenticate the document and regarded as one’s signature, then the document is to be regarded as a copy duly signed. In Twyman Pastoral Co Pty Ltd v. Anburn Pty Ltd Young J assumed, not deciding, that a fax could not meet both the writing and signature requirements. In contrast to these two decisions, in NM Superannuation Pty Ltd v. Baker and Others (1989) Cohen J (obiter) suggested that a faxed signature was not the original signature and so might not be adequate where a signature was required. In this case the issue did not require decision as there was no signature required in the matter at issue.

In the context of EDI systems, signature or other authentication can be done in many ways, for instance,

1. By using secret digital codes, similar to PIN numbers used for automatic teller machines;
2. By using more complex systems of public keys cryptography which provides a mathematical scheme for arranging computer data;
3. By using ‘digital signature’ as in the Utah Digital Signatures Act 1996 (see 3.4); or
4. By using a specific computer software such as ‘Pinup’ <http://www.penop.com> where a person signs the computer screen and the software encrypts the signature.

The question as to which electronic signatures technology is appropriate for electronic bills of lading is beyond the limited scope of this paper. However, one point to be made is that these methods of authentication may technically verify the origin of the messages but may not meet the legal requirement for signature. The Model Law explicitly gives appropriate technical solutions the same legal validity as a traditional signature and allows the parties to agree on specific means. Article 6 of the Model Law provides:

‘Where a rule of law requires a signature, or provides for certain consequences in the absence of a signature, that rule shall be satisfied in relation to a data message if:
A. method is used to identify the originator of the data message and to indicate the originator’s approval of the information contained therein; and
B. that method is reliable as was appropriate for the purpose for which the data message was generated or communicated, in the light of all circumstances, including any agreement between the originator and the addressee of the data message.’

According to this article, the Model Law does not require a specific technique of signature, any electronic signature technologies can be introduced in the future as appropriate without changing the law.

2.1.4. Document of title and negotiability

Negotiable document of title is a key function of bills of lading. A question concerning document of title and negotiability in an electronic bills of lading context is whether negotiability and transferability of rights in goods can be accommodated in electronic bills. The UNCITRAL Working Group on EDI has not yet finished its study on this problem. A planning of future work on EDI is a discussion on negotiability and transferability of rights in goods concerning maritime bills of lading. This study will consider a number of recommendations and proposals by countries and international organizations. An interesting proposal was noted by the United States of America and raised as an issue for the consideration of the Working Group.

‘It should be borne in mind that what is being ‘transferred’ is not the paper or EDI message (that being just the medium), but the rights and/or title to the subject of the transaction. The outcome of the last and most important issue of the functional equivalence approach is still awaited and should be added to the final text of the Model Law.

3. Project Bolero (Bills of Lading for Europe)

The most recent project on electronic bills of lading is a pilot project called Bolero (Bills of Lading for Europe) [9]. The project is being operated by a business consortium of shipping companies, banks and telecommunications companies and aims to replace paper-based shipping documents with an online computerized registry. The project attempts to address the special legal issues that arise when paper negotiable documents are converted into electronic form. In particular, Bolero’s initial focus is the use of EDI systems as negotiable bills of lading. The processes used in the project are based on the CMI Rules for Electronic Bills of Lading. The replacing of paper-based international trade documents with EDI messages will result in saving time and costs and also increase levels of security against fraud and a reduction in the possibility of error [10]. The Bolero services are based on the exchange of EDI messages between a central service known as the ‘registry’ and users. The users, normally are carriers, shippers, freight forwarders and banks, will send and receive messages from the central registry by means of a computer workstation. Users also will be able to exchange messages directly between themselves. The central registry will contain details of shipping documents contained in a ‘consignment record’. Access to these details will validate and authenticate messages received, and automatically generate messages to other users in response to messages received. Under the Bolero project, there are strong security controls and procedures to protect the integrity and prove the authenticity of electronic messages. The particularly important security feature is the use of digital signature techniques. These authenticate the message sender and prevent modification of transactions in transit.
4. Conclusion

International efforts to replace traditional paper bills of lading with an EDI system still have a long way to go. Even though there are a number of rules that support the use of electronic bills of lading and also projects that actually operate electronic bills of lading in practice, there is still a lack of international confidence in the use of electronic bills. This is because one of the distinguishing features of international trade is that a large number of parties may be involved in a single shipment of goods. In addition to the buyer and the seller, contracts of carriage can easily involve several banks in different countries, insurance companies, carriers, forwarders, and port and customs authorities. Each of these parties may have a documentary requirement so that it is particularly difficult to devise a comprehensive EDI system for bills of lading. In relation to electronic bills of lading, it remains a question whether a centralized registry approach, such as the Bolero project, can work on more than a limited basis. However, the UNCITRAL Working Group on EDI considered that the work undertaken within the CMI, or the Bolero project, was aimed at facilitating the use of EDI transport documents but did not, in general, deal with the legal effect of EDI transport documents. Thus, particular attention needs to be given to the future work of UNCITRAL which could bring legal support to the new methods being developed in the field of ‘electronic transfer of rights.

References


