Certain legal aspects of electronic bills of lading

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1. Introductory remarks

A solution to the 'paper-related' problems international trade faces, has not nearly been reached. It is estimated that 7 percent of the value of international trade is the cost of paper administration. It is further estimated that in transport, the cost of conventional documents, constitutes 10 to 15 percent of total transport costs.(1) The bill of lading is one of many(2) documents that causes these problems. For centuries documents such as bills of lading have been written on paper, for lack of alternative. Now that recent computer technology has enabled commerce to develop 'electronic bills' that can emulate practically all features of tangible bills of lading, the question arises whether international or domestic maritime law stands in the way of paperless bills of lading.

Traditionally, the bill of lading is envisaged as a *tangible* document issued by the carrier on the shipper's demand. The bill serves not merely as proof of receipt of the goods and proof of the contract of carriage, but first and foremost as a negotiable document of title.(3) Thus, at least in theory, the bill

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(1) *See* Amelia H. Boss, *The International Commercial Use of Electronic Data Interchange and Electronic Communications Technologies,* 46 The Business Lawyer (1991), pp. 1787-1802, at p. 1787, Boris Kozolchyk, *Evolution and present state of the ocean Bill of Lading from a Banking Law Perspective,* 23 J.M.L.C. (1992), pp. 161-245, at p. 212.

(2) For figures on the ever increasing number of documents involved in simple trade transactions, *see* Richard Brett Kelly, *The CMI charts a course on the sea of electronic data interchange: Rules for electronic bills of lading,* 16 Tul.Mar.L.J. (1992), pp. 349-366, at p. 349, footnote 2. *See* also K. Grönfors, *Simplification of Documentation and Document Replacement,* E.T.L. 1975, pp. 638-647, at p. 638. On the efforts to simplify documents and procedures, *see* R. Goode, *Commercial law,* 2d Ed. London 1995, p. 900. Compare also the successful efforts by the Society for Worldwide Interbank Financial Telecommunications – SWIFT for short – to dematerialize the Letter of Credit. On that subject, *see* Boris Kozolchyk, *The paperless Letter of Credit and related documents of title,* 55 Law and Contemp. Probl. (1992), pp. 39-101. Note however that SWIFT is not a means to transfer title.

(3) On the three functions of the bill of lading, *see* Clive M. Schmitthoff, *Schmitthoff's Export Trade,* 9th Ed. London 1990, p. 561-562, Goode, *supra* note 2, p. 902-905, J. Wilson, *Carriage of Goods by Sea,* 2d Ed. London 1993, p. 126 *et seq.,* and Stasia M. Williams, *Something old, something new: The Bill of Lading in the Days of EDI,* 1 Transn. Law & Contemp. Probl. (1991), pp. 555-587, at p. 560-561. *Compare* D.J. Markianos, in: D.J. Markianos e.a., *Le transport maritime sous connaissement à l'heure du marché commun,* Paris 1966, p. 20, and P. Winship, *Current developments concerning the form of bills of lading - United States,* in: A.N. Yiannopoulos (ed.), Ocean Bills of Lading: Traditional Forms, Substitutes, and EDI Systems, The Hague 1995, pp. 263-296, at p. 264.

of lading is the perfect instrument for transfer of title to the goods in transit. In practice, the actual process of handing over of the paper by, e.g., a seller in country A to a buyer in country B infers by necessity the services of a string of middlemen such as agents and banks. These middlemen have to deal with the paperwork, which causes considerable delays.(4) Moreover, it may even happen that the goods arrive earlier than the bill of lading itself.(5)The costs incurred by these delays surely are considerable.

The time-consuming formalities which are involved in trading with tangible bills of lading have stimulated the search for alternatives.(6) One of these alternatives was found in the sea waybill. Over the past decades the sea waybill has proved to be very successful, even though it is generally considered not to be a negotiable document.(7) Its success lies primarily in the absence of formalities such as signatures and the compulsory handing over of (all copies of) the document by the holder upon delivery of the goods. The absence of these formalities makes it possible for the waybill to be legally telexed, telefaxed, or even transmitted electronically.(8)

Most recently, a project has been initiated to revive the advantages of the concept of the bill of lading on the one hand, and to turn away from the drawbacks of the trade in tangible documents on the other. This project, named BOLERO, provides for a system of electronic bills of lading. The idea of an electronic bill of lading in itself raises a vast amount of questions. Therefore, BOLERO is a perfect 'guinea pig' for legal research on the possibilities and limitations of paperless commerce. This article sets out to deal

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(4) *See* Kelly, *supra* note 2, p. 353, Patricia Brumfield Fry, *Introduction: negotiating bit by bit: introducing the symposium on negotiability in an electronic environment,* 31 Idaho L. Rev., pp. 679-687, at p. 680.

(5) Goode, *supra* note 2, p. 920, K. Grönfors, *Towards Sea Waybills and Electronic Documents,* Gothenburg Maritime Law Association, Gothenburg 1991, p. 19, Kozolchyk, *supra* note 1, p. 241, Winship, *supra* note 3, p. 278-279.

(6) One of these alternatives is the use of Letters of Indemnity between subsequent sellers and buyers in lieu of the subsequent transfer of the Bill of Lading. *See* R.I.L. Howland, *l'Avenir du connaissement et les connaissements électroniques mai 1994,* 13 Annuaire de droit maritime et aéro-spatial (Paris 1995), pp. 201-219, at p. 218. Another alternative is to give a bill of lading to the Master with instructions to deliver it to a specific agent, who will in turn transfer the bill to whoever is entitled to receipt. *See* Wilson, *supra* note 3, p. 170.

(7) *See*, e.g., K. Grönfors, *The Paperless Transfer of Transport Information and Legal Functions,* in: Clive M. Schmitthoff and Roy Goode (eds.), International Carriage of Goods - Some Legal Problems and Possible Solutions, London 1988, pp. 19-34, at p. 33, Wilson, *supra* note 3, p. 158, p. 163, Thomas J. Schoenbaum, *Admiralty and maritime law* (Hornbook), St. Paul 1994, § 8-11, at p. 511, H. Boonk, *Zeevervoer onder cognossement,* Arnhem 1993, p. 43-51.

(8) Schoenbaum, *supra* note 7, § 8-11. The possibility of dematerialization of the waybill was – as early as in 1979 – reason for Working Party 4 of the E.C.E. to adopt Recommendation 12, promoting the use of waybills in order to facilitate electronic commerce. *See* Jeffrey B. Ritter, Judith Y. Gliniecki, *Symposium: electronic communications and legal change: international electronic commerce and administrative law: the need for harmonized national reforms,* 6 Harv. J. Law and Tec, pp. 263-285, at p. 279 footnote 46, and Winship, *supra* note 3, p. 279 footnote 114, p. 293.

with only a very limited number of these questions (§ 3 et. seq.). First however, a brief outline of the contents of the BOLERO project will be given.

2. Structure of the BOLERO project

In practice, international trade involving bills of lading is performed by a number of parties. Slightly simplified put, these parties are the seller (shipper), the carrier, one or more banks, and the buyer (consignee, holder of the bill). The BOLERO Bill of Lading is prepared and issued entirely electronically. No paper is required.(9) All parties involved, through their workstations, have access to a global computer network. At the heart of this network is a *central registry*.(10) Whenever a seller wants to conclude a contract of carriage, the BOLERO system allows him to electronically book the space needed on a specific sailing. The shipper will electronically instruct the carrier on the specifics of the goods concerned. The carrier will issue the electronic bill of lading and deposit it at the central registry. The registry will store details of shipping documents in a so-called consignment record. Users with the appropriate authority have access to this record, either to read or to alter the document (if authorised to do so). The registry will validate and authenticate messages and will, if appropriate, generate messages and send them to other users that are involved in the transaction.

The technology presently at our disposal, makes it possible to ascertain the origin of messages, their integrity and their receipt. For this purpose the system requires a so-called certification authority that holds record of all persons ('authorised signatories') having authority to initiate and authorise messages. The certification authority provides the members (and their agents, employees etcetera) with 'digital signatures'. These signatures enable the registry to authenticate messages. The registry will for example allow exclusively the registered holder to transfer the bill of lading to a third party.(11) This party will then receive his own private key to access the registry. The registry will subsequently inform the carrier of the transfer.

In order to guarantee global success for BOLERO, not only a large number of shippers, carriers and consignees will have to be committed to this system, but trade banks as well. The need for financing trans-oceanic com-

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(9) In the mid-80s SeaDocs experiment, initiated by Chase Manhattan Bank and INTERTANKO, paper bills of lading were used. These bills were, upon issue, deposited under a central registry. Of course, this was a rather elaborate process, since all transfers had to be physically indorsed on the registered bills. *See* further on the peculiarities of the SeaDocs experiment A.N. Yiannopoulos, *Current developments concerning the form of bills of lading,* General Report for the XIVth International Congress of Comparative Law (Athens 1994), in: A.N. Yiannopoulos (ed.), Ocean Bills of Lading: Traditional Forms, Substitutes, and EDI Systems, The Hague 1995, pp. 3-54, at p. 22-24, Wilson, *supra* note 3, p. 166-167, Kozolchyk, *supra* note 2, p. 89-90, and Howland, *supra* note 6, p. 215.

(10) Or, as the case may be, several central registries will be operative. Cf. BOLERO Rulebook July 1995, p. 2 (§ 2.3).

(11) Rulebook, rule 8.

merce infers the services of issuing and (advising or) confirming banks. Therefore the banking world has been involved in the BOLERO experiment as well.(12) A participating bank can view consignment records electronically and check whether or not, e.g., the bill of lading tendered by the seller corresponds to the instructions of the buyer. Therefore, all parties associated in the process of issuing, selling, financing and transferring bills of lading, can connect with the registry.

As far as the technical architecture of the system is concerned, standardization on a global scale is essential. The use of the UN-EDIFACT based standards in electronic messages(13) and a standard message handling system guarantee world-wide acceptance of and access to the system. Cryptography is used to secure the integrity of messages and to authenticate 'electronic signatures'.

The legal framework of BOLERO – which is only partially based on the 1990 CMI Rules for Electronic Bills of Lading(14) – is as follows. The parties that accede to BOLERO, agree on their relationship to be governed by a so-called *Rulebook*. The Rulebook is binding to all trading partners (shippers, carriers and consignees) that accede to the BOLERO system. Whenever they trade over the BOLERO system, this Rulebook applies. The Rulebook deals with standardisation of messages, evidentiary provisions and further contractual duties of the parties. The Rulebook also contains clauses on dispute resolution and a choice of law in favour of English law.

The BOLERO electronic bill of lading has been defined as follows:

> an instrument, created and evidenced by the transmission into the System of Messages, which operates as a receipt for a consignment of goods shipped and/or received for shipment by the Carrier and *as evidence of a negotiable contract of carriage,* which instrument has the legal effect described in these Rules. (emph. added)(15)

All parties furthermore agree to be satisfied with the issue of an electronic bill of lading or the use of a digital signature whenever international or

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(12) Needless to say that part of BOLERO's expected success lies in its self-regulatory character. Experience with SeaDocs has learned that an organisation that is not owned and driven by the users themselves has a greater chance of failing. For possible explanations for the failure of the SeaDocs experiment, *see* Yiannopoulos, *supra* note 9, p. 22-24.

(13) On the subject of UN-EDIFACT and more in general on the technological aspects of EDI, *see* Yiannopoulos, *supra* note 9, p. 31-32. Compare 17 Mededelingenblad N.V.Z.V. (1995), Howland, *supra* note 6, p. 208, and Winship, *supra* note 3, p. 281-282.

(14) CMI Rules for Electronic Bills of Lading, adopted at the June 1990 Paris Conference of the *Comité Maritime International,* reprinted in 22 J.M.L.C. (1991), pp. 620-625. *See* on these rules, which are binding upon agreeing partners, Howland, *supra* note 6, p. 216, Ph.H.J.G. van Huizen, *Vervoer en EDI,* in: R.E. van Esch and C. Prins (eds.), Recht en EDI, Deventer 1993, pp. 127-140, Paul Todd, *Dematerialisation of Shipping Documents,* 10 J.I.B.L. (1994), pp. 410-418, at p. 412 *et seq.,* Kozolchyk, *supra* note 1, p. 229 *et seq.*.

(15) Rulebook, p. 8.

national law requires a bill to be in writing or to be signed.([16]) It can be assumed that this provision implies a waiver of the right to a tangible bill of lading.

Another provision states that the holder of the electronic bill has all the same rights and privileges under and in relation to the contract of carriage evidenced by the electronic bill, and in respect of the goods to which the electronic bill of lading relates, as he would have enjoyed had he been the holder of a tangible bill.([17]) This provision aims at emulating the proprietary effect the conventional bill has. It can however be doubted whether this provision has any binding force vis-à-vis third parties. In the paragraphs hereafter (§ 4 *et seq.*) we will, from a general perspective, deal with this question.

But first a more general issue must be considered, namely whether the definitions used in national and international (mandatory) law stand in the way of electronically issued bills of lading such as the BOLERO Bill of Lading.

3. Definitions of 'document', 'writing', 'signature' and 'bill of lading'

The more limitless computerized telecommunication has become during the past decades, the more fossilized the legal framework seems to become. For instance, at the time of the enactment of the Hamburg Rules (1978), paperless telecommunication was confined basically to telephone, telegraph and telex. Needless to say that telecommunication in the 1920s – when the Hague Rules were conceived – was even less sophisticated. Most western nations are party to, and/or have converted one of these treaties into national law. Therefore it is important to ascertain whether these treaties reject the use of computerized telecommunication. One way of doing this, is by scrutinizing the definitions in the various Rules.

The description to be found in the Hamburg Rules states that the bill of lading is a 'document'. Furthermore, it is commonly understood that a bill must be 'written' and – in most cases – 'signed'.([18]) The question is whether or not 'writing' by necessity is to be on paper and whether or not 'signatures' are by necessity in manual writing. The Hamburg Rules state that 'writing' includes, *inter alia*, telegram and telex.([19]) This definition leaves room

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([16]) Rule 7.

([17]) Rule 8.2.

([18]) Yiannopoulos, *supra* note 9, p. 33. *See* also the diagram on the various 'writing' requirements in transport-related treaties, stated by Judith Y. Gliniecki, Ceda G. Ogada, *The Legal Acceptance of Electronic Documents, Writings, Signatures, and Notices in International Transportation Conventions: A Challenge in the Age of Global Electronic Commerce,* 13 Northwestern J. of International Law & Business (1992), pp. 117-143, at p. 124.

([19]) Art. 1 (8) Hamburg Rules. *Compare* § 1-201 (46) of the United States U.C.C., that defines 'writing' as including any 'intentional reduction to tangible form', on which R. David Whitaker, *Letters of credit and electronic commerce,* 31 Idaho L. Rev. pp. 699-717, at p. 705. *See* also § 1-201 (39) U.C.C.. *Compare* the English 1978 Interpretation Act that defines 'writing' as including 'representing or reproducing words in a visible form' (Sch. 1).

for the acceptance of new technologies as 'writings'. It has, e.g., been suggested that facsimiles satisfy this definition, which brings us closer to the admissibility of 'electronic writings'.([20]) The definition of the bill of lading in Art. 1 (7) Hamburg Rules does however not use the word 'writing', but the word 'document'. It is unclear whether 'document' may include an electronically generated and maintained record. In my opinion, the electronic bill of lading might not have been contemplated upon as being a 'document', but the non-exhaustiveness of the definition of 'writing' implies that the Hamburg Rules as a whole are open to extending interpretation as a consequence of technological progress and the implementation of this progress into maritime law. In any case, the Hamburg Rules *do* facilitate the use of electronic bills of lading, for Art. 14 (3) states that

> 'the signature on the bill of lading may be in handwriting (...) 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'.

This provision was drafted deliberately to enable the transfer of documents by electronic means.([21]) It can therefore be concluded that the Hamburg Rules allow the use of intangible bills of lading, as long as national law does not (explicitly or impliedly?) bar the use. The Hamburg Rules might therefore be called *media-neutral*. However, the little hope that the Hamburg Rules might give us on this point, vanishes when we recognize that these Rules have a slim chance of ever becoming broadly accepted.([22])

When we turn to the Hague(-Visby) Rules or their national counterparts, and ask ourselves whether those Rules are as media-neutral as the Hamburg Rules, a more reserved answer comes to mind. The Hague(-Visby) Rules do not define the bill of lading. As these Rules were drafted in an age that knew practically none of the technological possibilities we presently have at our disposal,([23]) it can be argued that the Hague(-Visby) Rules do not allow the

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([20]) Christof Lüddeke, Andrew Johnson, *The Hamburg Rules,* 2d Ed. London 1995, p. 5.

([21]) UNCTAD comments on the Hamburg Rules, as quoted by Lüddeke and Johnson, *supra* note 20, p. 95. *See* also Gliniecki and Ogada, *supra* note 18, p. 129, p. 140, and Williams, *supra* note 3, p. 571 *et seq.*. It will be clear that I do not agree with the conclusion drawn by J. Ramberg, *Documentation: sea waybills and electronic transmission,* in: F. Berlingieri e.a. (eds.), The Hamburg Rules: a choice for the E.E.C.?, Antwerpen 1994, pp. 101-115, at p. 115 *sub* 1. *See* also Art. 8:44 of the Dutch Civil Code, that allows a signature on a CT-document to be replaced by any 'mark of origin'. On this subject, *see* R.E. Japikse, *Current developments concerning the form of bills of lading - the Netherlands,* in: A.N. Yiannopoulos (ed.), Ocean Bills of Lading: Traditional Forms, Substitutes, and EDI Systems, The Hague 1995, pp. 229-236, at p. 230.

([22]) *See* the outcome of the survey performed by the CMI, published in CMI Newsletter 1995 no. 1.

([23]) Cf. Gliniecki and Ogada, *supra* note 18, p. 130, p. 137, and Paul Myburgh, *Bits, Bytes and Bills of Lading: EDI and New Zealand maritime law,* New Zealand Law Journal 1993, pp. 324-330, at p. 328.

extension of definitions such as 'document', 'writing' and 'signature' to *immaterial* documents, writings and signatures.(24)

Some national courts will tend to interpret words such as 'writing' in a conventional way. Others might tend to take a more purposive approach. It is however most unclear whether a purposive approach will lead to the acceptance of an electronic bill as a 'real' bill of lading. Paper-based documents are valued for the comforts they provide, such as the *evidence* they entail of the terms under which a contract of carriage was entered into, the *proprietary* legitimation they hold and the *prima facie* authority of the holder they encompass. If modern technology does indeed allow us to duplicate all these functions of paper-based documents with the same (or even a higher) level of reliability, than – so it seems – no legal barriers should be held against recognizing the electronic bill as a genuine bill.(25) Unfortunately however, this kind of reasoning is not generally accepted in legal thinking. Whether domestic law will attach all functions of conventional bills of lading *per analogiam* to electronic bills, will largely depend on the willingness of the national judiciary to interpret a given definition in a way that could *never* have been conceived by the draftsmen that were responsible for the definition in question.(26) This willingness will vary from legal system to legal system. Such a factor is highly unpredictable and should, if possible, be avoided.

4. Can the electronic bill emulate all features of a conventional bill?

If we were to approach the problem not from a definition-oriented viewpoint, but from the perspective of the *functions* of a conventional bill of lading, we would experience even more obstacles.

The three main features of the conventional bill of lading are commonly considered to be 1) evidencing the contract of carriage, 2) evidencing the receipt of (and the quality and quantity of) the goods and 3) containing a transferable instrument of the title to the goods. According to most treaties, a shipper has the *right* to request a bill of lading. As a rule the carrier is obliged to issue a bill on first request.(27)

If one were to regard an electronic bill as a genuine bill, various problems would arise. For example: if the term 'bill of lading' would include the *electronic* bill, might a carrier refuse to issue a *paper* bill? The answer must be negative. As the use of electronic bills is currently far from widespread, a shipper must not, against his explicit wishes, be presented with an electronic

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(24) Kozolchyk, *supra* note 1, p. 231. For a more lenient view, *see* the Report of the International Sub-committee to the CMI, as quoted by Gliniecki and Ogada, *supra* note 18, p. 139. *Compare* Ritter and Gliniecki, *supra* note 8, p. 275.

(25) For a similar line of reasoning, *compare* Donald B. Pedersen, *Electronic data interchange as documents of title for fungible agricultural commodities,* 31 Idaho L. Rev., pp. 719-746, at p. 708.

(26) *Compare* Grönfors, *supra* note 7, p. 23-24, Grönfors, *supra* note 5, p. 68-69.

(27) Art. 3 (3) Hague-Visby Rules; Art. 14 Hamburg Rules.

bill. This does however not prohibit the use of an electronic bill, as long as the parties concerned *agree*.

It therefore seems that the electronic bill of lading is, at least for the time being, not a bill of lading in the conventional sense, but an explicitly agreed-upon form. The concept of *consensuality* permits this form in itself. In many ways, freedom of contract can help to emulate the functions of the conventional bill in an electronic one. For instance: most legal systems will allow shipper and carrier to agree upon evidencing the contract of carriage, receipt of the goods and quantity and quality of the goods without paper.([28]) Most legal systems will even tolerate a contractual waiver of the right to a conventional bill of lading.([29]) But can the agreed-upon paperless bill also be considered to be a *negotiable document of title?* As far as that goes, it is exemplary that the BOLERO Rulebook avoids the wording 'document of title'. Instead, it states that the holder of an electronic bill of lading

> 'shall be deemed to have all the same rights and privileges under and in relation to the contract of carriage (...) and in respect of the goods to which the (electronic bill of lading) relates as he would have enjoyed had he been the Holder of a conventional paper bill of lading in respect of those goods'.([30])

It is however unclear whether the right of the shipper to 'transfer the right of control and transfer in respect of the goods', as laid down in Rule 8.5 of the BOLERO Rulebook,([31]) also entails the authority to transfer *ownership* of the goods concerned. Whether or not the Rulebook intends to do so, it is in itself highly questionable whether the electronic bill can be used for the transfer of the title to the goods. At this point the freedom of contract may well collide with the interests of third parties (such as creditors of the transferor) that are involved in such a transfer.([32]) Most authors hold the view that in the present state of legislation, the electronic bill of lading is not a document that can be used to transfer ownership and assign rights and duties under

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([28]) *See*, e.g., Art. 11 CMI Rules for Electronic Bills of Lading as well as the English 1968 Civil Evidence Act (as mentioned by Kelly, *supra* note 2, p. 355 footnote 38, and I. Carr, *Current developments concerning the form of bills of lading - Great Britain,* in: A.N. Yiannopoulos (ed.), Ocean Bills of Lading: Traditional Forms, Substitutes, and EDI Systems, The Hague 1995, pp. 165-183, at p. 182), and the U.S. Federal Rules of Evidence (as mentioned by Whitaker, *supra* note 19, p. 707-708). *Compare* Pedersen, *supra* note 25, p. 735 footnote 64, and Grönfors, *supra* note 7, p. 24, Grönfors, *supra* note 5, p. 72. Note however that not all domestic legislations are receptive to evidence by means of computer print-outs. *See*, e.g., Myburgh, *supra* note 23, p. 327, and Ritter and Gliniecki, *supra* note 8, p. 274.

([29]) *See*, e.g., Todd, *supra* note 14, p. 418. *See also* Ramberg, *supra* note 21, p. 111. Compare the contractual waiver in Rule 7.1 BOLERO Rulebook.

([30]) Rule 8.2.

([31]) This Rule was obviously derived from Art. 7 sub a (3) of the CMI Rules for Electronic Bills of Lading.

([32]) Myburgh, *supra* note 23, p. 328. *Compare,* on the transferability of electronic warehouse receipts, Pedersen, *supra* note 25, p. 733.

the contract of carriage.(33) These authors argue that the list of (negotiable) documents of title is closed. In their view only a *paper* bill of lading can serve as a document of title that enables the shipper to transfer ownership of the goods *in transitu*.

Two questions can be derived from this: is the electronic bill indeed not a negotiable document of title? And if so, can the electronic bill in any way be construed so as to imitate, or better still, simulate the conventional bill in this respect?

5. Is the electronic bill of lading a negotiable document of title?

First, we need to elaborate on the question whether an electronic bill of lading can be considered to be a negotiable document of title. In England, prior to the Bills of Lading Act 1855, the transferee of a bill of lading could not acquire rights or duties under the bill. With the coming into force of the 1855 Act, this impractical consequence of the common law was eliminated.(34) Furthermore, the succeeding Factors Acts provided for the transferability of the title to the goods mentioned in the bill of lading. The 1889 Factors Act implies that the list of negotiable documents is not closed, for it states that the expression 'document of title' includes 'any document used (...) as proof of the possession or control of goods, or authorising (...) the possessor of the document to transfer (...) goods thereby represented'.(35) Though the list as such might not be closed,(36) one should however note that the list *is* restricted to 'documents'. So in a sense, the list really is closed. Can the expression 'document', as it has been used in 19th and early 20th-century legislation, be extended to intangible 'documents'? We saw in an earlier stage, that this largely depends on the willingness of a national judiciary to interpret a given definition in a way that could *never* have been conceived by the draftsmen that were responsible for the definition in question. Most legal systems will be hesitant to allow such a stretched interpretation of the meaning of 'document'.

However, several German authors(37) have argued that those documents that do not fit the German *numerus clausus* of negotiable documents, should *per*

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(33) *See* the authors mentioned by Yiannopoulos, *supra* note 9, p. 37-38.

(34) R. Colinvaux, *Carver's Carriage by Sea,* 13th Ed. London 1982, vol. I, para. 90, Goode, *supra* note 2, p. 1074-1075, Wilson, *supra* note 3, p. 147. On the limitations of the 1855 Bills of Lading Act, *see* G.H. Treitel, *Bills of lading and third parties,* L.M.C.L.Q. 1986, pp. 294-305. The 1855 Bills of Lading Act has been repealed by s. 6 (1) of the 1992 COGSA.

(35) Although this definition might include the sea waybill as a 'document of title', this does not render the waybill 'negotiable'. *Compare* A.M. Tettenborn, *Transferable and negotiable documents of title - a redefinition?,* L.M.C.L.Q. 1991, pp. 538-542, at p. 539 footnote 12.

(36) According to German law the list of negotiable documents is closed. *See* Heymann-Horn, *Handelsgesetzbuch* (4), Berlin 1990, § 363 paras. 6 and 38. The same can be said for the United States U.C.C., § 7-104 (2), although the definition of 'document of title' (§ 1-201 (15)) *seems* to refer to mercantile custom for an exact demarcation of the definition. It could therefore be argued that the U.C.C. holds a neutral position on the subject.

(37) *See* the authors mentioned by Heymann-Horn, *supra* note 36, § 363 para. 39 footnote 48.

analogiam be treated as negotiable documents, if it is clear that the document at hand (1) was unknown at the time of the enactment of the German Code of Commerce, (2) had, as a consequence, not been contemplated upon by the legislator and (3) serves similar goals as (one of) the listed document(s). This line of reasoning can – in my view – very well be stretched to cover the recognition of electronic bills of lading as negotiable documents. English law has recently experienced a leap forward on the subject at hand. With the enactment of the 1992 Carriage of Goods by Sea Act (COGSA), the English have dealt with the proprietary problems of the intangible bill of lading in a most practical way. S. 1 (5) COGSA 1992 authorises the Secretary of State to extend the Act, by regulations, to paperless transactions.([38]) For the time being no such regulations are in force. *A contrario*, it should be argued that English law at present does not allow an electronic bill to be construed as a negotiable document of title.

6. Can the electronic bill simulate the conventional bill?

In order to achieve global acceptance of the electronic bill of lading as a negotiable document of title, it is essential that the world's leading trade nations accept the electronic bill as being equal to the paper bill of lading. This, it must be concluded, is not yet the case. If we admit that neither uniform law nor the various domestic legal systems will, at least for the time being, treat the electronic bill of lading as a negotiable document of title, our 'quest' continues on a different level: can domestic law help the electronic bill to *imitate* the proprietary functions of the conventional bill? I would like to make a subdivision into three questions. First, what law should apply according to private international law? Second, can ownership of goods in transit be effectively transferred in a manner similar to that applied in the transfer of the tangible bill of lading? And third, can the contractual rights and duties of the shipper vis-à-vis the carrier be assigned to a third party without a conventional bill?

Which law should apply according to the conflict of law rules? The contractual frame that enables parties to waive their right to a paper bill and

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([38]) *See* Yiannopoulos, *supra* note 9, p. 26, and Carr, *supra* note 28, p. 179-183. The New Zealand legislator has recently followed the English 1992 COGSA in this respect. *See* P.A. Myburgh, *Current developments concerning the form of bills of lading - New Zealand,* in: A.N. Yiannopoulos (ed.), Ocean Bills of Lading: Traditional Forms, Substitutes, and EDI Systems, The Hague 1995, pp. 237-261, at p. 256, and p. 259. Recently, the American Maritime Law Association has proposed a carriage of goods by sea bill, in which the expression 'electronic bill of lading' is used. *See* MLA document no. 716, May 5, 1995, p. 10715 *et seq.*, s. 1 (g), s. 3 (3). Compare the introduction to the beforementioned document, p. 10686 *et seq.*, and p. 10691. The proposal is – as Winship, *supra* note 3, p. 290-291, p. 296 observes – however quite vague as far as the question concerns whether such a bill is a negotiable 'document'. On the MLA proposals, *see* in general Jean-Michel Morinière, *Le projet de réforme du 'Carriage of Goods by Sea Act (COGSA)' des Etats-Unis, Neptunus* nr. 4 (to be obtained at Internet site http://palissy.humana.univ-nantes.fr/CDMO).

agree on the form in which their electronic bill will be moulded, will – according to the Rome convention(39) – be governed by the parties' choice of law.(40) Article 4 (1) of the Rome convention provides that, in absence of a choice of law, the applicable law is the law of the country with which the contract is most closely connected. As a rule this is presumed to be the country where the party resides that is to effect the performance which is characteristic of the contract. In case of a contract of carriage, that specific performance would be carriage of the goods.(41) As long as we consider the agreement to use an electronic bill to be part of the contract of carriage itself, it can be argued that issue of an electronic bill is part of that specific performance. The law of the country in which the principal place of business of the carrier is situated, would apply. However, the aforementioned presumption does not apply to contracts of carriage (Art. 4 (4) Rome convention). As a result it is open to debate which national law is closest connected to the contract at hand (unless the specific presumptions stated in Art. 4 (4) Rome convention apply).(42)

If we were not to qualify the agreement to issue an electronic bill as being part of the contract of carriage, the presumption of the closest connection *would* apply. In that case it would be fair to say that the law of the 'characteristic performer' would be applicable. One might suggest that this 'performer' is the carrier, since he is to issue the electronic bill. However, this is not beyond dispute.(43) The conflict of laws unfortunately leaves much open to debate if parties do not make their own choice of law.(44)

Furthermore, the scope of the Rome convention is limited.(45) The convention does not deal with proprietary matters such as ownership and the

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(39) Convention on the Law Applicable to Contractual Obligations 1980.

(40) Art. 3 (1) Rome convention. *See* L. Collins (ed.), *Dicey and Morris on the conflict of laws,* 12th Ed. London 1993, vol. II, p. 1211, and P. Mankowski, *Seerechtliche Vertragsverhältnisse im Internationalen Privatrecht,* Tübingen 1995, p. 27 *et seq.*.

(41) *See* A.G. Guest e.a. (eds.), *Chitty on Contracts,* 27th Ed. London 1994, Vol. I, para. 30-047.

(42) *See* J.G. Collier, *Conflict of Laws,* 2d Ed. Cambridge 1994, p. 194, W. Tetley, *Bills of Lading and the Conflict of Laws,* in: F. Berlingieri e.a. (eds.), The Hamburg Rules: a choice for the E.E.C.?, Antwerpen 1994, pp. 49-82, at p. 56, and Mankowski, *supra* note 40, p. 47 *et seq.*, p. 68 et seq..

(43) If one were to split the contract up into a waiver of the right to a conventional bill on the one hand and the obligation to issue an electronic bill of lading on the other hand, even *two* characteristic performers could be discerned. On 'dépeçage', *see* art. 4 (1) Rome convention, and Dicey and Morris, *supra* note 40, p. 205 *et seq.*.

(44) The BOLERO Rulebook contains a choice of law clause in favour of English law (Rule 23).

(45) Excluded from its ambit are negotiable instruments, or at least the obligations arising from the negotiability of such instruments (Art. 1 (2)). Since it is highly questionable whether an electronic bill can be filed under 'negotiable instrument', this provision does not exclude the matter subject, for it was not included in the first place. It has been argued that even the conventional bill of lading does not satisfy the definition of *'instrument'* in Art. 1 (2) (c) Rome convention. *See* Tetley, *supra* note 42, p. 65-68.

validity of transfer of property.(46) As a consequence, it does not concern itself with the validity of the transfer of goods *in transitu*.

Generally speaking, most legal systems would apply the *lex situs* of the movable tangible good at the time of transfer of title.(47) It could therefore be argued that the question whether the title to the goods in transit has passed by means of transferring the electronic bill, is governed not by the applicable law of the contract between transferor and transferee (in most cases this contract would be a sale of goods), but by the *lex situs* of the goods.(48) However, as far as carriage of goods by sea is concerned, the high seas as a rule do not have a 'lex'. And even if a *lex situs* at the time of the transfer of the electronic bill could be ascertained, it would most certainly be a coincidental 'lex'. Therefore application of the substantial law of the destination harbour to transfer of title to the transported goods, is a known phenomenon as well.(49) Some authors hold the view that the port of despatch should be the law applicable to the transfer of goods *in transitu*.(50)

Whether assignment of the contractual rights and duties can take place by means of the transfer of an electronic bill of lading, must be decided according to the *lex causae*, i.e. the law that applies to (the rights and duties of) the contract of carriage itself.(51) As a rule, the choice of law clause in the contract of carriage will also rule the assignability of the contractual claim.

We can conclude that a number of conflict of laws rules are involved in the issue of electronic bills. A distinction can be made between the law that rules the contractual relationship of the carrier and the shipper or his transferee on the one hand and the law that rules the proprietary aspects of the electronic bill on the other.

Can *ownership* of goods in transit be effectively transferred in a manner similar to the transfer of a *tangible* bill of lading? According to various legal

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(46) *See* Goode, *supra* note 2, p. 1126-1127. The Vienna Sales convention 1980 (CISG) does not address these issues either (Art. 4).

(47) Dicey and Morris, *supra* note 40, p. 965, Chr. von Bar, *Internationales Privatrecht,* zweiter Band, besonderer Teil, München 1991, p. 545, B. Audit, *Droit international privé,* Paris 1991, p. 586.

(48) *See* Collier, *supra* note 42, p. 243.

(49) *See*, e.g., P. Bassenge e.a., *Palandt Bürgerliches Gesetzbuch,* 54th Ed. München 1995, Anh. zu EGBGB 38 (IPR), II (Sachensrecht), para. 10, Audit, *supra* note 47, p. 588 and F. Rigaux, M. Fallon, *Droit international privé,* tome II, Bruxelles 1993, p. 457. *See* also Art. 101 of the Swiss Private International Law Statute. Dicey and Morris, *supra* note 40, p. 969, refer to the proper law of the transfer itself. *Compare also* F. De Ly, *Zakelijke zekerheidsvormen in het Nederlandse internationaal privaatrecht,* 13 NIPR (1995), pp. 329-341, at p. 329 footnote 2.

(50) R. van Rooij, M.V. Polak, *Private international law in the Netherlands,* Deventer 1987, p. 159.

(51) *See* Art. 12 (2) Rome convention, Chitty on Contracts, *supra* note 41, vol. I, para. 30-072, Dicey and Morris, *supra* note 40, p. 979, Van Rooij and Polak, *supra* note 50, p. 148. Although proprietary aspects of assignment are not governed by the Rome convention (*see* Goode, *supra* note 2, p. 1126-1127), the debtor's position vis-à-vis the assignee *is*.

systems, a movable tangible good can be legally transferred from owner A to transferee B, even if a third party C, as a *détenteur*, has actual possession of the good.(52) Some legal regimes furthermore require for the transfer to be completed, a notification of C (or his representative).(53) This mode of transfer can easily be applied in an electronic environment: the transfer can be construed in a way that makes it possible for the transferee to identify himself vis-à-vis the carrier as being *prima facie* authorised to claim delivery of the goods and for the transferor to loose his authority. The *central registry* will play a intermediary role in creating and distributing the necessary messages and private keys that authorise the new holder. As mentioned, notification of the carrier might be required as well, but for this purpose the central registry can be appointed to act as a representative of the carrier.(54)

According to most legal systems however, such transfers can – if a negotiable document is absent – only be effectuated if the goods are sufficiently identified. As far as the transfer of a specific part of goods in bulk concerns, it is deemed possible under certain conditions to acquire proportional co-ownership of the bulk.(55)

Finally, can the addressee *acquire rights and duties* under the electronic bill of lading? In answering this question, one should distinguish between *the transfer* of contractual rights and duties and the *imposition* of original rights and duties on the addressee.

As far as *transfer* of contractual rights and duties under a contract of carriage – as evidenced by the bill of lading – is concerned, some domestic legislators have explicitly provided for such a transfer to be synchronized with the transfer of the bill of lading.(56) The negotiability of the bill thus infers not only transfer of ownership, but also the transfer of the shipper's contractual position. For the reasons set out *supra* para. 3, it should seriously be

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(52) *See*, e.g., § 931 German Civil Code, on which Palandt Bürgerliches Gesetzbuch, *supra* note 49, § 931 para. 4. Under English law this *'traditio longa manu'* would file under 'transfer of constructive possession', and possibly under the heading of 'attornment'. *See* Goode, *supra* note 2, p. 47-49, p. 902, and A.P. Bell, *Modern law of personal property in England and Ireland,* London 1989, p. 53, p. 55, and p. 57.

(53) *See*, e.g., Art. 3:115 (c) Dutch Civil Code.

(54) *See* 17 Mededelingenblad N.V.Z.V. (1995), p. 3-4. The usage of an intermediary is advantageous for the carrier. In this way he will not be burdened with administrating all transfers. The carrier's main concern is the proper identification of the rightful owner at the destination harbour. The use of an (independent) intermediary as trusted third party would also mean an improvement compared to the CMI Rules for Electronic Bills of Lading. According to these Rules (sc. Rule 7 (b)), the carrier plays a central role in distributing private keys to the successive transferees.

(55) *See*, e.g, Goode, *supra* note 2, p. 56, and p. 237-247, Wilson, *supra* note 3, p. 148-149.

(56) *See*, e.g., s. 2 (1) and s. 3 (1) of the English 1992 COGSA, and Art. 8:441 (2) Dutch Civil Code. Other domestic legislations *seem* to be silent on the subject. Possibly the consignee tacitly acquires the rights and duties under the bill of lading. *See*, e.g., Art. 89 of the Belgian Statute of 21 aug. 1879, *B.S.* 4 sept. 1879 (Belgian Maritime Act) and § 650 of the German Code of Commerce.

doubted whether or not the electronic bill can serve as a bill for this purpose. That is why the transfer of contractual rights can only be achieved by means of *assignment* of the claims arising from the contract. In most systems however, apart from a (written) notification of the debtor, a written document is required for completion of the assignment.(57) Again it can be argued that electronic messages do not suffice. Furthermore, the transfer of contractual *duties* is generally deemed not to be possible but with consent of the creditor (sc. the carrier).(58) This last obstacle however can easily be set aside in the contractual framework that is used for the issue of electronic bills of lading.(59)

Can the consignee or transferee *acquire* – apart from the *transfer* of rights and duties – any rights or duties under the contract of carriage, such as the duty to pay freight at the destination harbour? According to English *common law*, the consignee etc. cannot acquire rights or duties under the contract of carriage.(60) The COGSA 1992 therefore provides that the consignee of a bill of lading (or a sea waybill or ship's D/O) shall – apart from the transfer to him of already existing rights – have vested in him all rights of suit under the contract of carriage. The Act also imposes, under certain conditions, liabilities upon the consignee etc.(61) It can be argued that, since the electronic bill in itself does probably not qualify as one of the abovementioned documents,(62) the common law does not allow such an endowment of rights or duties for lack of privity. However, possibly one can construe the shipper to be acting as an agent of the consignee etc.(63)

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(57) *See* in general H. Kötz, *Rights of Third Parties. Third Party Beneficiaries and Assignment,* in: International Encyclopedia of Comparative Law, vol. VII, Ch. 13, p. 72 *et seq.*. S. 136 (1) of the English 1925 Law of Property Act allows the transfer of claims. The transferor must make a written statement of transfer and must notify the debtor *in writing*. Furthermore it is doubtful whether these formalities can be executed by an agent. These factors make assignment of claims in an electronic environment rather illusory. *See* Chitty on Contracts, *supra* note 41, vol. II, paras. 19-003 to 19-008, K. Zweigert and H. Kötz, *An introduction to comparative law,* 2nd Ed. Oxford 1987, p. 482, Bell, *supra* note 52, p. 365, and Robert Bradgate, Fidelma White, *The Carriage of Goods by Sea Act 1992,* 56 M.L.R. (1993), pp. 188-207, at p. 193-194. Note however that assignment i*n equity* does not always require a 'writing'. *See* Chitty on Contracts, *supra* note 41, vol. II, paras. 19-002 and 19-011 to 19-013. According to German law, assignment of a claim does not require a written document, nor a notification of the debtor. *See* § 398 Civil Code. Art. 3:94 (1) of the Dutch Civil Code requires apart from notification of the debtor, a written document, signed by the transferor.

(58) Chitty on Contracts, *supra* note 41, para. 19-043. *See* § 414 and 415 German Civil Code.

(59) The BOLERO Rulebook, rule 8, should be interpreted in this light.

(60) Goode, *supra* note 2, p. 905, p. 1075. *Compare* Bell, *supra* note 52, p. 361. Note however, that it has been decided that the consignee might act as the trustee of the original contractor (the shipper). *See* Carver, *supra* note 34, para. 63.

(61) S. 2 (1) and s. 3 (1) 1992 COGSA. *See* Wilson, *supra* note 3, p. 157, and Bradgate and White, *supra* note 57, p. 203.

(62) Unless 'regulations' as referred to in s. 1 (5) COGSA 1992 are in force.

(63) *See* G.H. Treitel, *The law of contract,* 8th Ed. London 1995, p. 570-571, Chitty on Contracts, *supra* note 41, para. 18-007, and Goode, *supra* note 2, p. 1079. *Compare* Art. 3 CMI

Other legal systems are more lenient towards (implied or explicitly drafted) contractual clauses between shipper and carrier *to the benefit* of the consignee etc.(64) Clauses *to the detriment* of the consignee etc. are generally considered ineffective, unless the consignee etc. has agreed to these clauses.(65) The contractual framework of those involved in the use of electronic bills might help overcome these obstacles.

6. Concluding remarks

As far as the electronic bill of lading is concerned, international unification is only feasible if nations and their international traders not only agree on the uniformity of the medium, and on form and content of the messages that can be registered, but also on uniformity of legal consequences.(66) From that perspective, technological uniformity is the least of our worries. As long as the rules governing evidence on national level require paper and as long as the closed list of (negotiable) documents of title impedes the use of intangible documents, there is little hope for a globally recognized negotiable electronic bill of lading. The alternative is a contractual framework, such as the BOLERO Rulebook, that provides for a choice of law, a waiver of the right to a paper bill, the transfer of contractual rights and duties, and the transfer of the title to the goods while in transit. Although freedom of contract might enable parties to agree to these provisions, proprietary aspects however may not always be in accordance with national law. It is furthermore doubtful whether the rights of third parties can be affected by these contractual provisions.

A project such as BOLERO constitutes an important contribution to unifying international paperless trade. However, there is still a long way to go. Legislative measures taken on a national level will not provide the necessary uniformity. Amending the Hague(-Visby) Rules in order to facilitate the electronic bill, would certainly help to achieve widespread accepted uniform law on this issue.(67) Unfortunately, such a change is not likely to be made in the foreseeable future. And even if the Hague(-Visby) Rules were to be changed, more persistent obstacles remain to be found on the bumpy road to a truly paperless international trade. Customs declarations, documents on dangerous

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Rules for Electronic Bills of Lading. Another construction under English law is that of the implied contract between carrier and consignee or transferee. *See* Wilson, *supra* note 3, p. 149 *et seq.*.

(64) *See* Zweigert and Kötz, *supra* note 57, p. 488 *et seq.*, and Kötz, *supra* note 57, p. 5 *et seq.*. *Compare* Bas Kortmann, Dennis Faber, *Contracts and Third Parties,* in: A.S. Hartkamp e.a. (eds.), Towards a European Civil Code, Nijmegen 1994, pp. 237-265, at p. 241-253. On U.S. law, *see* Schoenbaum, *supra* note 7, p. 501-502, and p. 516.

(65) Ramberg, *supra* note 21, p. 114. *See* in general Kortmann and Faber, *supra* note 64, p. 255-262. *Compare* also the implied contract theory, mentioned by Wilson, *supra* note 3, p. 149 *et seq.*.

(66) Kozolchyk, *supra* note 1, p. 244. *See also* Gliniecki and Ogada, *supra* note 18, p. 119.

(67) Todd, *supra* note 14, p. 418.

goods, insurance certificates, documents issued by Chambers of Commerce or Agricultural Boards and so on, are just a few of these paper hurdles.([68])

To conclude, there is much uncertainty. It is common knowledge that commerce does not thrive under uncertainty.([69]) One can however comfort oneself with the thought that the law of the bill of lading was for many centuries governed by *lex mercatoria*.([70]) If mercantile custom throws itself upon unifying the law of the paperless bill of lading for the next decade or so, the nationally determined differences in legal structure might well change into uniform trade custom. *Then*, the time is right for drafting a treaty.([71])

(April 1996).

([68]) *See* Ritter and Gliniecki, *supra* note 8, p. 264. *Compare supra* note 2.

([69]) *See* the opinion of the E.C. Commission, as quoted by Boss, *supra* note 1, p. 1795.

([70]) Schmitthoff, *supra* note 3, p. 561. *Compare* also A.A. Mocatta and M.J. Mustill, *Scrutton on Charterparties and Bills of Lading*, 19th Ed. London 1984, article 93-94, who frequently mention 'mercantile custom' when referring to the law of bills of lading, and Winship, *supra* note 3, p. 185-186.

([71]) Ritter and Gliniecki, *supra* note 8, p. 269-270, rightly observe that the process of (international) rule-making (or at least with relation to commercial law) is nearly always a response to the practitioners' call for rule-making.