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New Attempts at Electronic Documentation in Transport Bolero – The end of the experiment, the beginning of the future?

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I. Introduction

What is remembered of history are the changes of different measures in all areas of life and business. The most dramatic changes in the area of shipping, amounting to ‘revolutions’¹, were caused by the invention of the steam engine and its adaptation to the propulsion of ships in the early 19th century, and by the invention of the container as medium for the transportation of goods in the 1960’s.

The third revolution of the shipping industry is currently in progress in the form of computerisation, electronic commerce and the change from paper documentation to electronic documentation of the carriage of goods by sea². Many steps have been taken already, but there can be no doubt that more will follow. Projects in this field have come and gone, such as SeaDocs, others are being launched, are in use, and/or expanding.

Bolero was launched as a project of the European Community in the early 1990’s and is still current, now perhaps more than ever, as it has been commercially in force since September 27th 1999 more than one and half years. Since its first steps as an experiment it was of interest to various parties involved in the documentation of transport of goods by sea, and its development to commercial application was the reason to make Bolero the subject of this work.

The aim of this work is to investigate, to what extent Bolero has become an alternative, or even the replacement of the “old fashioned” paper documentation of the carriage of goods by sea. The fact that Bolero has been developed to a commercial application might show that that the description of Bolero as an ‘experiment’³ could have become outdated.

In the first more general part of this work the overall situation will be examined of sea-transport documentation in general and the bill of lading in particular. This is followed by an overview on EDI and the historical development of its application to paperless sea transport documentation.

In the second part of this work the Bolero-system will be examined. This includes the investigation of the preparatory work undertaken before launching Bolero in its current form and the contractual relations entered into for becoming a Bolero User. The position of Bolero in the surrounding legal framework in national South African and international context will also be investigated.

¹ Hare, § 12-5, p. 464

² Hare, § 12-6, p. 467

³ From the perspective in 1997 see Muthow ch. 10; and Greiner at fn 53; and still in 2000 Lockwood, Conference Papers, at p. 438

Lastly an outlook on the future of Bolero and similar projects is attempted. The results of this work will be summarised and recapitulated in the conclusion.

II. The paper Bill of Lading and other forms of shipping documentation

A. The functions of the paper bill of lading

The paper bill of lading has in history undoubtedly been the main document in comparison with other forms in the documentation of carriage of goods by sea. It was developed to acknowledge that the goods were received by the master when the owner of the goods did not want to travel with his property⁴. Through the centuries the legal implications of issuing a bill of lading have developed and by the 16th and 17th centuries the English law ascribed to the bill of lading the three functions which it has retained until today⁵:

- Receipt for the goods shipped or received for shipment
- evidence of the contract of carriage, but not of the contract itself
- a document of title so that the right of possession of the goods can be transferred by transfer of the bill of lading.

The bill of lading in its function as a receipt for the goods shipped or received for shipment is under the Hague-Visby rules⁶ prima facie evidence as to the quantity, the condition and, possibly to the quality⁷ of the goods.

The bill of lading in its function as a receipt for the goods received is conclusive evidence when it is transferred to a third party in good faith (Art. III r. 4 Hague –Visby rules).

The bill of lading also functions as good evidence of the contract of carriage, but is not normally the contract itself⁸. The contract of carriage is concluded when it is agreed between the carrier and the shipper that cargo is to be transported against a certain stipulated payment, and this is usually confirmed by a booking note issued by the carrier. The bill of lading is normally issued later, either when the cargo is shipped or received for shipment.

⁴ For the history of the bill of lading see Wilson, ch. 5.1, p. 125; Hare, § 14-1, p. 540 et seq.

⁵ See detailed to the functions of the bill of lading Hare, § 14-3, p. 543 et seq; Wilson, ch. 5.2., p. 128 et seq

⁶ Art. III r. 4

⁷ upon this doubtful aspect of the function as a receipt see Hare, § 14-3.1.3, p. 548 et seq; Proctor, 2.7, p. 51

⁸ Hare, § 14-3.2, p. 549

It is most likely that the then issued bill of lading reflects the terms of the contract of carriage, but the shipper can challenge this⁹. This option does not exist for the consignee once the bill of lading has been transferred, because then it is regarded as containing the complete contract of carriage between the carrier and the transferee¹⁰.

The third, and possibly most distinctive and unique function of the bill of lading is usually referred to as being a “document of title”. This function was first recognised by the courts in *Lickbarrow v. Mason*¹¹ and it means that by transferring the paper bill of lading the right of possession of the goods represented by it is transferred. This “transferability”¹², respective to the degree of transferability of the bill of lading, depends on the form the bill of lading is issued in.

It might be issued “to order” of the shipper or in blank, then it is transferable by endorsement or by naming a consignee. The other possibility is to issue the bill of lading with a named consignee without any option “to order”, then the bill of lading is non-negotiable or “straight” and as a consequence it lacks the transferable function.

B. The advantages of the paper bill of lading

The main advantage of the paper bill of lading system is that it is established and has been working for centuries, and sets of prepared standard contract clauses are available along with lots of comments as well as case and statutory law.

Some aspects of this working system as a whole can be taken as separate advantages as well¹³, such as the high degree of uniformity in the international use of bills of lading due to the Hague-Visby rules for example.

The function of the bill of lading as a document of title cannot be undervalued and is still widely used as it makes the transfer of rights in the goods covered by the bill of lading easy by endorsement and delivery of the paper bill of lading¹⁴.

⁹ see for example *The Ardennes* [1950] 2 All ER 517

¹⁰ *Leduc v. Ward* (1888) 20 QBD 475

¹¹ (1794) 5 T.R. 683

¹² *Hare*, § 14-3.3, p. 553

¹³ *Yiannopoulos*, p. 17

¹⁴ See Appendix A of the Bolero Business Requirements Specification, issued September 24th 1997, p. 52. The statistic issued by Bolero in the preparatory phase of its commercial application is based on data of the International Chamber of Shipping from 1995 and shows, that negotiable shipping documents (= the bill of lading) is still in global use, although the degree varies. According to this statistic negotiable shipping documents cover only 0 to 10% of the shipments on

But also apart from its functions in the sea transport documentation, the bill of lading plays an important role in the international trade, in maritime insurance and international financing, e.g. the documentary credit¹⁵.

C. The disadvantages of the paper bill of lading

The system of the paper bill of lading requires that the goods are delivered at the port of destination only against the presentation of the document, or to be more exact one of its usually issued three originals.

The purposes of this system are on the one hand to protect the holder of the bill of lading from misdelivery, and on the other to give the carrier certainty about the person being entitled to claim the goods, especially after the bill of lading has been negotiated once or more often¹⁶.

But it is obvious that this system is in trouble if the goods shipped arrive earlier at the port of destination than the set of the paper bill of lading belonging to the endorsee does.

Delayed arrival is the major problem occurring with paper bills of lading¹⁷.

The reasons for the delay of the paper bill of lading compared to the cargo it represents are firstly the sometimes long and complicated banking procedures that bills of lading have to pass through in order to achieve documentary credits. Second, the speed of sea transport has increased due to containerisation, multimodal transport (being mostly possible only because of the containerisation) and more effective working procedures in general.

The second big disadvantage of paper bills of lading are the high costs caused by this form of sea transport documentation. But the estimated sum or percentage of transportation costs in total spent each year in the context of bills of lading varies.

intra European Routes and 10 to 25% between Europe and North America, but on the other world wide routes they are very predominant (mainly 90-100%) in comparison with non-negotiable documents.

¹⁵ This is indicated by the variety of issues covered by the legal feasibility study in course of the investigation, what influence the electronic form of the bill of lading would have on the legal surrounding framework; see chapter VI, p. 18 et seq.

¹⁶ Wilson 5.3. p. 154

¹⁷ This is shown by the review of the national reports prepared for the 14th. International Congress of Comparative Private Law by Yiannopoulos, p. 18, with reference to the respective national reports; see also Wilson, 5.4., p. 156, Myburgh, New Zealand Law Journal, 1993, p. 324 and for example the cases *The Houda - Kuwait Petroleum Corporation v. I & D Oil Carriers Ltd.* [1994] 2 LLR 541; *The Sormovskiy 3068 – S.A. Sucre Export v. Northern River Shipping Ltd.* [1994] 2 LLR 266

Kozolchyk¹⁸ estimated the annual costs of producing paper-shipping documents to about 10% of the invoice value of the goods transported.

According to another estimate¹⁹ “the cost of raising conventional documents and the attendant delays involved in their issuance and verification constitute 10 to 15% of total transportation costs”.

The UN and the WTO estimate the annual expenses on paper transport documentation to be US \$ 420 billion²⁰.

Another figure says that paperless bill of lading documentation results in savings of about US \$ 90 per bill of lading²¹.

Another disadvantage of paper bills of lading is that fraud is easy to commit by changing the contents of or even faking complete sets of bills of lading²².

Problems with paper bills of lading further occur because of inaccurate or insufficient information that can lead to amendments of bills of lading and/or the ship’s manifest being necessary, that in turn can result in delay of releasing the goods and in subsequent additional costs²³.

D. Solutions and other forms of Documentation

A solution to the first, and most frequent, problem of the paper bill of lading, that it arrives later than the cargo represented by it does at the port of destination, is to some degree the letter of indemnity. Once the cargo is delivered, without the production of a bill of lading, against a letter of indemnity (possibly backed by a bank guarantee), this means a breach of the contract of carriage and the carrier would be liable for any damage occurring as a consequence thereof, possibly even without cover of his P & I Club²⁴.

¹⁸ Kozolchyk (1992) JMLC 23 at 197

¹⁹ Yiannopoulos, p. 18, citing indirectly a report of the Commission of European Communities from September 1989

²⁰ see for this number for example the homepage of the ttclub at <http://www.ttclub.com> and the report of Beatrice and Robin Arnfield, Opportunities and Challenges for Banks in Business-to-business E-commerce, p.2, citing an UN study, the report is available at http://www.bolero.net/overview/what_say/articlep2.php3

²¹ Chandler, Tulane Maritime Law Journal, 1998, p. 485 fn. 44

²² Yiannopoulos, p. 18, for details see for example Bernauw, in Yiannopoulos (Ed.), p. 112 et seq; see further as an example the recent case of Motis Exports Ltd. V. Dampskibsselskabet AF 1912 A/S [2000] 1 LLR 211

²³ Yiannopoulos, p. 19

²⁴ Hare, § 12-1.2.4, p. 445

The letter of indemnity would then only make it easier for the carrier to seek cover for its liability, but the indemnity is only as good as the financial situation of the guarantor. Furthermore the problem of a bank-backed letter of indemnity is its costs, because banks usually require more than adequate cover in respect of time as well as in respect of the amount that has to be deposited with them²⁵.

So the letter of indemnity only helps a little with the symptoms of the disadvantages of the bill of lading, but neither goes to the root of the disadvantages nor is it itself unproblematic. Also the other problems of the paper bill of lading stay untouched.

Another solution to the delayed arrival of the bill of lading could be to make contractual agreed precaution for this case. This is done for example in the GAFTA 100 form, which is used in the grain trade²⁶. It reads:

“In the event of the shipping documents not being available on arrival of the vessel at destination, sellers may provide other documents or an indemnity entitling Buyers to obtain delivery of the goods and payment shall be made by Buyers in exchange for same.”²⁷

This contractual provision does not eliminate the other problems existing with the paper bill of lading, but creates a delay itself because of the communication necessary in the event of delayed documents.

The invention of the short form bill of lading²⁸ only meant that the printed terms were removed from the back of the paper bill of lading, but were incorporated by reference, that led to legal problems in certain jurisdictions²⁹. In any other respect the short form bill of lading did not differ at all from the usual long form bill³⁰. The only purpose of the short form bill of lading was to simplify the shipping documentation by reducing the amount of information contained in the bill of lading and thereby increasing the speed of production. The lesser amount of information also meant that the electronic transfer of the bill of lading was easier to undertake.

But the general principle, as well as all the outlined problems of the paper bill of lading, stayed unchanged so that other solutions had to be sought.

²⁵ Wilson, 5.4, p. 157

²⁶ Wilson, 5.4, p. 157

²⁷ GAFTA 100, line 100

²⁸ for an example form see Wilson, appendix 12, p. 434; Mitchelhill, appendix J, p. 111

²⁹ Wilson, 5.4.1, p. 158

³⁰ Mitchelhill, p. 43

E. The Waybill

The search for alternative sea transport documentation led to the development of the Sea Waybill, after the model of the Air Waybill³¹.

The main characteristic of the sea waybill³² is its non-negotiability so that the goods are to be delivered by the carrier to the named consignee, who does not have to produce the sea waybill to be entitled for delivery but only has to prove his identity. As according to this no negotiation of the document is possible or intended, the sea waybill is open to electronic transmission, that is made use of to a large extent and represents a great advantage of this document³³.

Apart from its lacking negotiability the sea waybill has in common with the bill of lading the functions as a receipt and as evidence of the contract.

On the other hand the Hague-Visby rules are not applicable to sea waybills as they refer to “documents of title” (Art. I (b) HV) and so there is a principle lack of legal uniformity and the contracts covered by sea waybills would be open to contractual freedom. The Hague-Visby rules are, however, incorporated quite frequently by a reference clause contained in most standard sea-waybill forms³⁴.

Although the Hamburg rules (Art. I (6)) are applicable to sea waybills this does not create a uniform internationally applicable regime for sea waybills because of the international irrelevance of the Hamburg Rules. The CMI has tried to fill this gap with the CMI Uniform Rules for Sea Waybills³⁵.

As the Sea Waybill has its advantages in the absence of the need for production of the document at the port of destination and is electronically transmittable, the problem of fraud remains³⁶. Above all it is not the proper form of documentation in cases where transferability of the document is required.

³¹ About this parallelism see Kozolchyk, JMLC 1992, p. 212 et seq

³² Also described as ocean waybill, liner waybill, data freight receipt or cargo key receipt. All of them are, because of their non-negotiability, similar to the “straight” bill in terms of the US Pomerene Act: Hare, § 12-1.2.4, p. 445, fn. 18; Proctor, p. 87

³³ see Hare, § 12-1.2.4, p. 446

³⁴ Wilson, 5.4.2, p. 159

³⁵ Available at <http://www.comitemaritime.org/rules/ruleseaway.html>, along with an introductory comment available at <http://www.uctshiplaw.com/cmi/cmiwaybl.htm>

³⁶ Yiannopoulos, 4.3., p. 19/20, gives an example: “A buyer who has prepaid for the goods faces the risk that the seller may direct the carrier to change the identity of the consignee while the goods are in transit.”

Further, although Sea Waybills are accepted by banks for documentary credits they offer less security to the bank than traditional paper bills of lading³⁷.

As the Sea Waybill is electronically transmittable but does not have the function of a document of title, one might ask why the ways of modern communications should be inaccessible for a form of transport documentation offering the transferability of the paper bill of lading as well as its functions as evidence of the contract and as a receipt.

The invention of such a form of sea transport documentation would mean a more radical change than those that have been made so far.

Since EDI was introduced in the early 1970's to transmit sea transport documents³⁸ attempts have been made to develop an EDI system to a stage where it performs all three functions of a paper bill of lading, including its negotiability.

But before these systems shall be dealt with more detailed, EDI and how it works shall be briefly examined.

III. How EDI works

Definitions of EDI, abbreviation for **E**lectronic **D**ata **I**nterchange, exist in great variety.

The UNCITRAL Model Law on Electronic Commerce defines it as

“the electronic transfer from computer to computer of information using an agreed standard to structure the information”³⁹.

The Simplification of International Trade Procedure Board (SITPRO) defines EDI to be⁴⁰

“the replacement of the paper documents relative to an administrative, commercial, transport or other business transaction, by an electronic message structured to an agreed standard and passed from one computer to another without manual intervention.”

What is already shown by the number of definitions is the lack of uniformity governing EDI⁴¹. As both of the quoted definitions say, EDI uses “**an** agreed standard” to structure the information, and

³⁷ Yiannopoulos, 4.3., p. 19

³⁸ see Kozolchyk, JMLC 1992, p. 220

³⁹ Definition in Art. 2 (b), see also the further comment on this definition in the Guide to Enactment of the Uncitral Model Law on Electronic Commerce, at 33/34. Model Law and Guide are available on the homepage of UNCITRAL at <http://www.uncitral.org/english/texts/electcom/ml-ecomm.htm>

⁴⁰ Document (88) 06 as quoted by Muthow, 4.1.; see for yet another definition Chandler, Fundamentals of Maritime Electronic Commerce, p. 5

unfortunately there is more than one document content standard existing. The most important are the ASC X 12⁴², brought into use in by the American National Standards Institute (ANSI) in the early 1970's, and the EDIFACT-Standard (EDI for Administration, Commerce and Trade) which was launched by the UN, or to be more exact by the Economic Commission for Europe, in 1987⁴³.

How EDI works is that a message in one of the standards, for example EDIFACT, is sent from one computer to another via a connection, usually a telephone line. If both of the computers use the same standard no problems should occur and the message is available on the receiving computer in the same condition as it was sent. If both computers do not use the same standard a Value Added Network (VAN) Service Provider plays the role as a translator between the standards so that the usage of different standards has no influence on the messages transferred⁴⁴.

A message sent on an EDI standard between two linked computers usually consists of several parts. First there is the information representing the document transferred, e.g. the bill of lading. This part of the message is embedded in information being necessary to make the main part, the mentioned document sent in EDI format, 'understandable' for the computers involved.

The message can consist of further parts as well, for example an electronic signature, but this depends on whether such is used or not.

The specific content of a Bolero EDI message will be dealt with at V.B.2., p. 18.

IV. Developments in paperless sea transport documentation

It has been mentioned supra at II.E. (at Fn 33) that paperless sea transport documentation is already quite common in the usage of Sea Waybills.

The bill of lading has not stayed untouched by this development, although it has remained printed on paper almost without exception.

A. SeaDocs

In 1986 SeaDocs Registry Limited (SeaDocs), a London-based Delaware corporation, was formed on the initiative of INTERTANKO, the International Association of Independent Tanker Owners, as

⁴¹ An impressive list of abbreviations on the field of EDI from the perspective of 1989 is given by Chandler, JMLC 1989, 572

⁴² Accredited Standards Committee X 12

⁴³ for general information see <http://www.unece.org/trade/untdid/welcome.htm> or <http://www.edifact-wg.org>

⁴⁴ on the technical side of EDI see more detailed Muthow at 4.

a joint venture with the Chase Manhattan Bank. The objective of INTERTANKO in setting up the SeaDocs project was to protect the parties involved from fraudulent alterations of tanker bills of lading⁴⁵. As in the oil trading business it is quite common that cargo underway on the tanker is sold and resold numerous times, it is clear that without the usage of modern communication paper documents could not keep pace with the transfers of ownership. Therefore the permanent introduction of the SeaDocs concept would have been adequate and useful.

Although SeaDocs used a central electronic registry it was not based on EDI as communication was done by means of telex⁴⁶, but in spite of this SeaDocs is of interest for this work because it tried to establish a system replacing the paper bill of lading.

The central element of SeaDocs was the Chase Manhattan Bank acting as the central registry and as agent for all parties involved⁴⁷.

SeaDocs worked as follows:

- The carrier issued to the shipper a paper bill of lading, which was at once deposited with the bank. In exchange for the paper bill of lading the shipper received a code, similar to a commonly known personal identification number (PIN).
- When negotiating the deposited bill the shipper (= seller) had to notify SeaDocs of the endorsee's (buyer's) name. The shipper would also provide the buyer with a portion of the code originally issued to him. Both parties then had to notify the registry of the purchase.
- The SeaDocs registry then first tested the message received from the seller before entering into any communication with the endorsee (=buyer). After the shipper's message passed the test SeaDocs tested the message received from the endorsee (= buyer) and accepted it if it contained the portion of the shipper's (=seller's) test key. By these checks it was ensured that the correct messages had been received.
- When compliance with the checks was confirmed the name of the new owner of the bill was recorded in the electronic registry as well as entered on the paper bill of lading deposited with the bank.
- When the goods arrived at the port of discharge SeaDocs would have already transmitted an identifying code number to the carrier as well as a similar code to the endorsee or owner of the goods currently recorded in the registry and on the paper bill of lading.

⁴⁵ Chandler, JMLC 1989, p. 574, fn. 7

⁴⁶ Chandler, Tulane Maritime Law Journal, 1998, p. 468

⁴⁷ Chandler, JMLC 1989, p. 574, fn. 7

- Using the identifying code number the last recorded endorsee could claim delivery of the goods from the carrier who could check the authorisation of the endorsee by comparing it with the code issued to him.

SeaDocs lasted for about a year and, although no operational difficulties were reported, failed due to various reasons⁴⁸:

- It was difficult to assess the risks of liability for the parties involved resulting from running such a kind of central registry, and therefore the cost of insurance, in case there would have been any available, would have been immense. The example is given⁴⁹ that even only one mistake in 10.000 transactions, which would have meant a very good quality control, could have created a loss of US \$ 20.000.000 or more.
- The costs of US \$ 500 or more per transaction would have had to be added to the documentation costs already existing. Further there was the question who would have paid them. The benefit of the central registry was only marginal for the carriers and from their point of view in no way equivalent to the costs. Although the trading companies would have been interested in the improved degree of security they were reluctant to pay the resulting fees too.
- Another reason for the lack of success for SeaDocs was the doubtful extent of neutrality of the Chase Manhattan Bank. The major trading companies were unwilling to have all of their trade transactions, possibly along with their terms and conditions, recorded in a central registry maintained by a competitor (from the perspective of the banks involved), and possibly accessible to unscrupulous competitors or intrusive governments / tax authorities.
- Being a private registry SeaDocs was not open to interested third parties, trading partners for example, interested to know whether a certain shipment was sold, pledged or had taken place at all. Therefore the registry function of SeaDocs was considerably reduced, although, of course, the privacy of contract should have stayed respected⁵⁰.

⁴⁸ upon which see Chandler, *Tulane Maritime Law Journal*, 1998, p. 468 et seq; Kozolchyk, *JMLC* (1992) p. 228

⁴⁹ Chandler, *Tulane Maritime Law Journal*, 1998, p. 468

⁵⁰ for a more detailed discussion of this problem see Kozolchyk, *JMLC* (1992), p. 229

For the named reasons SeaDocs was not successful and was abandoned after less than a year by the Chase Manhattan Bank⁵¹, but it at least had showed, “that an international, centralised, largely electronic bill of lading system could work reliably on a world wide basis”⁵².

Critically it has to be commented that SeaDocs did not replace the paper bill of lading totally, but still made use of it as it was deposited and worked with at the central registry. This system may have decreased the possibilities of fraud, which is what SeaDocs was intended for, but it cannot retrospectively be looked at as a model for the paperless solution that is sought today.

B. Bolero – history of development and structure of ownership

1. History of Development

In 1993 the European Union studied the short life of SeaDocs and set up –against this background– an own initiative – Bolero (abbreviation for: **Bill of Lading Electronic Registry Organisation**). It was part of the INFOSEC program⁵³, which generally aimed at the development of secure electronic exchange of data. The aim of Bolero as an aspect of this program was to develop a secure system for the transfer of negotiable documents with a focus on the bill of lading because of its relevance for the transport industry. Technical trials took place from July to September 1995⁵⁴ and involved eight trading chains in Europe, the US and Hong Kong and 26 pilot users⁵⁵.

When the project under the INFOSEC program came to an end the European Community sought to hand over the project to the development of its commercial application. S.W.I.F.T. and the TT-Club took over Bolero as an independent joint venture. A lot of preparatory work was undertaken, such as the legal feasibility study⁵⁶ and practical tests⁵⁷, before the commercial launch of Bolero took

⁵¹ INTERTANKO seems to have not given up its project but has found no partner yet to take over the place the Chase Manhattan Bank had, Chandler, Tulane Maritime Law Journal, 1998, p. 469

⁵² Kozolchyk, JMLC (1992), p. 229

⁵³ abbreviation for ‘Security of Telecommunications and Information Systems Programme’, see on the web <http://www.cordis.lu/infosec/>

⁵⁴ Faber, LMCLQ 1996, p. 232, 242

⁵⁵ Proctor, p. 152 with reference to the UNCITRAL document A/CN.9/WG.IV/WP.69 of 31 January 1996, of the United Nations General Assembly, p. 22, available at http://www.uncitral.org/english/workinggroups/wg_ec/ml-ec-bckdocs/wp-69.pdf

⁵⁶ on which see infra chapter VI, p. 18 et seq.

⁵⁷ for details see <http://www.bolero.net/decision/casestudies/back.php3>

place on September 27th 1999. A lot of important companies⁵⁸ have signed so far as customers to become Bolero Users, but only one transaction or practical application of the Bolero system has been reported yet. A consignment of knitwear was bought by a division of Federated Department Stores, carried by APL and financed by Citibank Global Cash and Trade⁵⁹. Even if there have been some more transactions on the Bolero system now, the practical use made of the system is surely not in those measures as Bolero had hoped or expected.

Currently the number of owners has increased due to the first institutional round funding in Bolero by the Investment companies Apax Partners, Baring Private Equity Partners and Palio Portfolio Ltd.

2. The Owners in detail

a) SWIFT

SWIFT, the Society for Worldwide Interbank Financial Telecommunication, is a bank-owned co-operative founded in 1973 in Brussels with the aim of creating a common world wide data processing and communications link as well as a common language for international financial transactions⁶⁰. It took until 1977 when Albert, Prince of Belgium, sent the first message on the system. By this time the number of members had grown to 518 commercial banks in 17 countries. In its first year of usage 3.400.000 messages were sent on the system.

SWIFT has continued to develop rapidly and today supplies secure messaging services and interface software to some 7000 financial institutions in more than 190 countries. Nowadays over five million messages valued in trillions of dollars are sent on the system every business day amounting to over one billion messages a year.

⁵⁸ such as K Line, Evergreen, Mitsui-OSK Line, NYK Line, Maersk Line, APL; banks having signed Bolero include ABN Amro, Bank of America, Bank of Tokyo-Mitsubishi, BNP Paribas, Chase Manhattan, Citibank, Commerzbank, Dai-ichi Kangyo Bank, DBS, Fuji Bank, HSBC, National Westminster Bank, OCBC, Sakura Bank, Sanwa Bank and Societe Generale. Further customers are the German world No. 1 mail order group Otto-Versand, Hitachi, Statoil, Cargill and four of Japan's largest trading houses, Itochu, Marubeni, Mitsui and Nissho Iwai. Sources: <http://www.bolero.net/decision/casestudies/> and the report of Beatrice and Robin Arnfield, Opportunities and Challenges for Banks in Business-to-business E-commerce, available at http://www.bolero.net/overview/what_say/article1.php3

⁵⁹ Fairplay, February 24th 2000, p. 22. No more actual data was obtainable from Bolero, what leads to the presumption, that there were indeed no more transactions on the system than this single one.

⁶⁰ For general information see the SWIFT homepage at <http://www.swift.com>, for the history of SWIFT see http://www.swift.com/index.cfm?item_id=1243

Because of its experience in the corporate structure similar to the Bolero-association, SWIFT is owned by 3,000 shareholder banks, and with its huge paperless communication network, SWIFT seems to be a suitable partner for developing Bolero. Additionally its status as a trusted third party in its system could be beneficial for Bolero. With this background it seems logical, that SWIFT is the supplier and operator of Bolero's Central Messaging Platform and operates its Title Registry⁶¹.

b) TT Club

Established in 1968 the Through Transport (TT-) Club⁶² is specialised in insuring companies, institutions and persons in the transportation and logistics industry such as ship operators, stevedores, terminal and depot operators, port authorities, freight forwarders and other transport operators in more than 80 countries. The Club insures over 2/3 of the world's container fleet, 1.725 ports and terminals world-wide as well as 5.890 inter-modal operators and has a premium income of about US\$ 100 million a year⁶³.

The inclusion of the TT-Club in the owners of Bolero secures the connection to the transport industry, for which use Bolero was invented, and so the connection to its potential customers.

c) Investment Companies

It is a recent development and sign of the expansion ahead for Bolero that three investment firms joined the circle of owners of Bolero⁶⁴.

Apax Partners became joint owners of Bolero in September 2000 with a \$30 million investment.

Baring Private Equity Partners joined the circle of owners of Bolero in December 2000 with an investment of \$15 million.

The Swiss Palio Portfolio Ltd came on board in December 2000 by investing \$5 million.

This completed the USD \$50 million in total first institutional round funding of Bolero.

⁶¹ on which see more detailed infra at V.B.1., p. 17

⁶² For general information see the TT-Club homepage at <http://www.ttclub.com>

⁶³ See the annual report for 1999 currently available at [http://www.ttclub.com/ttclub.nsf/Files/AMIR-4KKKRO/\\$FILE/AR1999.pdf?OpenElement](http://www.ttclub.com/ttclub.nsf/Files/AMIR-4KKKRO/$FILE/AR1999.pdf?OpenElement)

⁶⁴ For more information and links to the homepages of the investment companies see <http://www.Bolero.net/aboutus/corporate/>

3. Expanding of Bolero

As a sign of current worldwide expansion Bolero has opened offices in several major cities, one of which is Johannesburg⁶⁵.

V. The Bolero system

Before coming to a detailed description of the current contracts which the Bolero system consists of, the preparatory work that led to them, it shall be briefly explained how Bolero is organised.

A. Bolero and its Users

First it has to be underlined that what so far has been described as ‘Bolero’ does not only consist of the Bolero International Ltd, and Bolero.net, the brand under which it trades⁶⁶, but also of the Bolero Association Limited⁶⁷, which is a non profit club, owned by its members, which are the users of Bolero. In broad terms, Bolero International Ltd. runs the commercial Bolero system in its daily application and the Bolero Association is responsible for administering and representing the users. Its tasks are representing its members in dealing with bolero.net, administering the admission-process of Bolero-users, in terms of Bolero “enrolment”, and controlling compliance with the Rulebook⁶⁸. Altogether the whole complex of contractual relations, the digital information system, business processes and methods is defined in the Rulebook (clause 1.1.) as the ‘Bolero system’ and is used in this meaning in the following as well.

The potential users of the Bolero system are all parties involved in dealing with trade information, such as:

importers, exporters, carriers, freight forwarders, banks, cargo insurers, terminal operators, port authorities and customs and other governmental authorities⁶⁹. All of them will enter into a multi-lateral contract with the Bolero-Association, the Rulebook. It replicates for paperless transport documentation the legal environment existing for paper documents. The Rulebook further governs the whole procedure of the Bolero system regulating the relations between the users as well as

⁶⁵ see the list of offices at <http://www.bolero.net/contactus/>

⁶⁶ Its website is www.bolero.net

⁶⁷ Its website is www.boleroassociation.org

⁶⁸ For the description of the Bolero-Association’s tasks see www.boleroassociation.org

⁶⁹ For a list of companies having signed as Bolero’s customers see supra fn. 58

between them, Bolero International and the Bolero-Association⁷⁰. The rulebook is the main result of the legal preparatory work, the legal feasibility study, which will be dealt with in chapter VI., p. 18 et seq.

The users also enter into a contract with Bolero International Ltd., the “Operational Service Contract”, of which different versions exist depending on the status the user wishes to acquire (Basic or Corporate User and Enterprise or Premier Founders). The different levels of status are intended to comply with the varying demands of potential users reaching from global trading-chain leaders to small businesses, and also mean varying levels of service offered by Bolero.net along with different fees⁷¹.

The process enrolling as a User of Bolero is undertaken online⁷², although hard copies of the documents required need to be handed in as well⁷³. The process of enrolling includes not only the completing of application forms to Bolero International and also the Bolero Association, as well as the signing of the above mentioned contracts, but it also means that the applicant has to provide certain corporate information. As the process of enrolling is quite complex to ensure safety for all users, online guides exist to lead the future user through this⁷⁴.

Mention has been made already of the ambition of Bolero to replace the paper system of international trade administration, including the transport documentation and the bill of lading, by electronic equivalents. Currently 65 documents are available in electronic form⁷⁵. In spite of this number of documents it is continuously emphasised that the Bolero registry offers the possibility to

⁷⁰ See Paragraph 2.1.1. of the Rulebook for the agency-structure of the conclusion of contract: “The rulebook constitutes an agreement between Users, and between each user and the Bolero Association acting on its own behalf, and on behalf of all other Users from time to time, and, where necessary, on behalf of Bolero International.”

⁷¹ For an example of the extent to which the User status has influence on the service provided by Bolero see the description of the administration of the basic User’s account at Appendix to the Rulebook, p. 143

⁷² Online application forms are available on the website of Bolero at <http://www.bolero.net/enrol/>, to which a link is also provided on the website of the Bolero Association at <http://www.boleroassociation.org>.

⁷³ see the list of documents required at <http://www.bolero.net/downloads/eguide.pdf>

⁷⁴ Quick reference guide to Enrolment available at <http://www.boleroassociation.org/downloads/eguide.pdf> or at <http://www.bolero.net/downloads/eguide.pdf>, a short guide in steps is available also on both websites at <http://www.bolero.net/enrol/steps.htm> and at http://www.boleroassociation.org/enrol_steps.htm, a more comprehensive guide is available at <http://www.boleroassociation.org/downloads/enrolgde.pdf>

⁷⁵ See the list at <http://www.bolero.net/boleroxml/docdef/alphabetical.php3> See the Legal Feasibility study, chart 3, p. 28/29 for an older status of 26 documents available in 1999.

replicate the function of the paper bill of lading as a document of title⁷⁶. This is not without reason as the bill of lading is the most complicated document to replicate electronically for its three functions as described above⁷⁷.

B. Technical Aspects of Bolero

1. Technical Components

The technical side of the Bolero system consists of five main parts⁷⁸.

First there is the Core Messaging Platform, which is a special mail server for the electronic communication among the Users and between them, bolero.net and the Bolero-Association.

Second there is the Title Registry which is a special database containing information about the current status of the Bolero Bills of Lading, which are issued and in use on the Bolero system. An example for such data is the name of the actual holder of the BBL. The Title Registry is the instrument to replicate the functions in the electronic medium the paper Bill of lading has.

What is described as the User Database is a collection of information sets containing information about the Users of Bolero. It is used partly by Bolero International and partly by the Bolero Association.

The User Support Resources provide online communication with Bolero and assistance for its users, apart from sending messages (documents) to the Core Messaging Platform and the Title Registry. The User Support Resources allow the user to monitor the current status of messages in the Core Messaging Platform, access to the user's main account, online information and a helpdesk.

Apart from the components of the Bolero system centrally offered by Bolero, the user has to have locally computer hard- and software to enable him to communicate with the central Bolero components, above all the Core Messaging Platform and the Title Registry, and to create, receive and store Bolero messages. This software, along with service and training, is supplied by numerous computer firms world wide which are recognised and accredited by Bolero as 'partners'⁷⁹.

⁷⁶ See for example the Legal Feasibility Study p. 24 and the download Legal Aspects of a Bolero Bill of Lading available at www.bolero.net/decision/legal

⁷⁷ supra at II.A., p. 2

⁷⁸ upon which see as an introduction p. 1 ff of the Appendix to the Rulebook – Operating Procedures, as download available at http://www.boleroassociation.org/downloads/op_procs.pdf

⁷⁹ For an introduction to the partner-program see <http://www.bolero.net/developers/overview.php3> An example for a Bolero partner offering Bolero-based software and service is found at <http://www.ozdocs.com/bolero.htm>

2. The Content of a Bolero message

What a message to be sent on the Bolero system ‘looks’ like, that means, of what components it consists, is described in the Rulebook Appendix⁸⁰.

The message as a whole has a header, which contains mostly that information which is known from usual email headers as well, which is not surprising as the Bolero messages are a special form of e-mail. Accordingly the route of the message is shown (To and From which address it has been sent), its content type and subject.

The body of the message consists of parts into which it is divided according to the MIME – standard⁸¹. Each part in turn contains a general header determining the content and type of that message part to pass it through email-channels.

Each part of a message also has a Bolero Header containing data specific to the Bolero system and necessary to process it through the Bolero System. The data is tagged in accordance with the Extensible Markup Language (XML)⁸²

Then the message itself, consisting of one or more documents, for example the digital signature, follows. Each document/part of the message is introduced by a message part header. Documents might also be attached, which would be the case when a BBL Text / instruction concerning it is sent to the title registry. The form of these documents is also prescribed by the MIME standards.

The last part of a Bolero message indicates the end of that message and consists of a line with a single dot.

VI. Bolero’s preparatory work for and the impact on the commercial application - The Legal Feasibility Study and the Rulebook

A main part of the preparatory work before launching Bolero as a commercial application was to evaluate the legal surrounding it would be placed in.

This was done by a comprehensive legal feasibility study carried out by two major international law firms⁸³, which in turn made use of a network of national correspondent law firms⁸⁴ to gain

⁸⁰ See part 2.1., p. 6 et seq and especially the graphical illustration on p. 7.

⁸¹ Abbreviation for Multipurpose Internet Mail Extensions, standardised mainly in the RFC’s 1521 and 1522 of the Internet Engineering Task Force (IETF), for more information see the website of the IETF at <http://www.ietf.org>

⁸² For further information see the website of the Worldwide Web Consortium <http://www.w3.org/>

⁸³ Allen & Overy (at <http://www.allenoverly.com>) and Richards Butler (at <http://www.richardsbutler.com>)

⁸⁴ listed as appendix 2 of the Legal Feasibility Study, p. 120 et seq

information for the study by means of a legal questionnaire⁸⁵. The study was originally undertaken in 1997, but substantially updated in 1999 and laid down in a 120 page study⁸⁶.

The following part does not only deal with the legal feasibility study but also shows how the study's results mirror in the Rulebook.

A. The jurisdictions investigated and the exclusions

The object of Bolero was and is to create a global and fully electronic environment for trade administration and especially paperless transport documentation. Though, according to this objective, all countries of the world could principally be involved in transactions over the Bolero system, the legal feasibility study does not deal with all jurisdictions of the world, which would have been a practically impossible task. Instead, it investigates the jurisdictions of 18 countries, which were selected according to the following criteria:

- Major trading countries
- Jurisdictions of countries being closely linked to major transport hubs
- Jurisdictions of countries being similar to others (not covered by the first two criteria) and therefore being indicative of the legal system as a whole.

The 18 countries, called in terms of the feasibility study the 'Initial Jurisdictions', selected according to this pattern are⁸⁷:

Europe:	United States of	Far East:	
Belgium	America:	China	Philippines
England	New York State and	Hong Kong	Singapore
France	US Federal Law	Indonesia	Republic of Korea
Germany		Japan	Taiwan
Ireland	Middle East:	Malaysia	Thailand
Netherlands	Abu Dhabi		

This list of jurisdictions investigated contains major exclusions and does not cover for example the whole of Middle and South America, large oil trading nations such as Saudi Arabia, Kuwait, Iran

⁸⁵ listed as appendix 1 of the Legal Feasibility Study, p. 116 et seq

⁸⁶ available at <http://www.bolero.net/downloads/legfeas.pdf>

⁸⁷ Legal Feasibility Study, p. 19

and Iraq, and in Europe Spain and Portugal⁸⁸. In respect of the first criterion, that major trading countries would be covered by the study, it is surprising at a first glance that member-countries of the G 8 such as Canada and Italy are not among the initial jurisdictions as well, but at least concerning Canada this could be due to parallels to similar jurisdictions.

Trading with countries not investigated in the legal feasibility study using the Bolero system could lead to unexpected incompatibilities with the Bolero contractual framework⁸⁹. Bolero leaves its customers alone in this situation as it advises its users to seek legal advice for themselves to assess, whether and in how far the rulebook complies with the laws of the country the user wishes to trade with, if not one of the initial jurisdictions⁹⁰.

Another major exclusion from the legal feasibility study is that in the context of governmental and administrative writing requirements, for example resulting customs and import/export controls, exchange controls, tax and VAT, port and health regulations, were not investigated, although

“[i]t is highly likely that there will be both legal and administrative requirements under customs rules that various documents be in writing and signed”⁹¹.

This undoubtedly leads to major uncertainty for the parties relying on Bolero, as they have to explore the uncertain problems resulting from these regulations and cope with these problems for themselves.

Further, in the context of documents being required to be in written form, requirements for specially controlled goods such as dangerous or agricultural goods or air transport were left out of the study.

B. Writing requirements investigated

1. General problems

One of the main issues dealt with in the legal feasibility study is the requirement of writing in national jurisdictions. Some aspects of this investigation undertaken in the study include the

⁸⁸ Lockwood, Conference Papers, p. 445, who further names wrongly also Japan and the Far East as excluded from the study.

⁸⁹ Lockwood, Conference Papers, p. 445

⁹⁰ See the answer to the question ‘How do I know if the Rule Book is compliant with the laws of the country that I am trading with?’ at <http://www.bolero.net/decision/faqs/legal.php3>

⁹¹ Legal Feasibility Study, p. 11

purposes of such requirements, the sanctions for non-compliance with them and writing requirements resulting from international conventions and trade terms⁹².

The writing requirements reviewed by the legal feasibility study only concerned some of the documents electronically available on Bolero at that time, which were the following⁹³:

- Contracts of carriage
- Contracts of sale
- Commercial invoices and usual trade certificates
- Insurances
- Letters of credit
- Bills of exchange and other negotiable instruments
- Transfer of goods and contracts
- Security agreements

In a first step it was summarised what the sources of writing requirements are. They typically arise from evidence statutes, statutes designed to protect weaker parties, international conventions, domestic transportation statutes, governmental or administrative statutes (for customs/tax reasons for example), International Trade Terms such as UCP 500 or Incoterms or other special statutes.

Consumer protection statutes as a possible source of writing requirements have not been investigated in the legal feasibility study, as consumers will not become involved directly with the Bolero system.

As already mentioned in the previous section (VI.A., p. 20) governmental writing requirements were not investigated in the Feasibility Study due to their complexity and lack of generalisation.

Second the sanctions for non-compliance with writing requirements were summarised. If the sanction of such requirement is that the contract cannot be produced in evidence in a court of law and is therefore unenforceable, it is possible to avoid this by choosing a court, which will ignore that specific foreign rule and sanction. A sanction nullifying any contract not complying with a writing requirement is a more substantive threat to the Bolero system as the contractually agreed rights and duties might be replaced by statutory rights and duties.

⁹² for another study of writing requirements in the context of paperless bills of lading see Muthow, 6.3.

⁹³ Legal Feasibility Study, p. 30

But generally there is a great amount of freedom in respect of formalities governing commercial contracts as they will be concluded on the Bolero system, therefore an electronically concluded contract on the Bolero system should not have too many obstacles in its way⁹⁴.

In a third step solutions for and aspects of these writing requirements were discussed, as it is clear that pure communication by computer does not fall under the definition of writing. A printout to satisfy the writing requirements was found not to be the right solution, as this would contravene Bolero's objective to establish a paperless electronic documentary environment. Further such printout would not be the contract itself, as this would be concluded electronically, but only evidence of the existing data, which forms the contract.

The solution for existing writing requirements was found to be a choice of law governing the Rulebook. It is governed by English law [paragraph 2.5. (2)], "which has a liberal attitude"⁹⁵ to the issue of writing requirements. This choice of law will be respected in most of the jurisdictions investigated⁹⁶.

2. Choice of Law and contract formalities

To categorise the global jurisdictions investigated for the issues of choice of law governing a contract and the contract formalities, the feasibility study has established five groups of jurisdictions. The categories reach from unallocated (such the whole of Southern Africa, the states of the former USSR and Mexico) or in this respect undeveloped jurisdictions (as the USA) over jurisdictions with a restrictive approach, mainly allocated in Latin America, to jurisdictions which accept the law contractually chosen and have a liberal approach to the formal problems arising (mainly western Europe, Canada, India and Australia). These categories therefore lead to the advice for the Bolero users to choose a suitable forum for the contracts entered into on the Bolero system and a corresponding jurisdiction, which avoids problems arising from writing requirements and accepts the choice of law.

⁹⁴ Legal Feasibility Study, p. 31

⁹⁵ Legal Feasibility Study, p. 37

⁹⁶ Legal Feasibility Study, p. 112

Special attention is paid to writing requirements for contracts of carriage. Concerning these contracts the legal feasibility study makes the distinction between Sea Carriage, which is mainly dealt with, and Air, Road and Rail carriage.

Concerning all contracts of carriage Bolero advises its users to generally choose a governing law with a liberal attitude to formalities but does not prescribe a choice of law to avoid interfering with the users' contractual freedom.

The contracts of carriage by sea are categorised according to the documents issued on the contract and analysed in how far these contracts and documents are electronically replicable. As the bill of lading is the most complex of the sea transportation documents existing, the feasibility study concludes that if it is possible to replicate the functions the paper bill of lading performs, the other documents and contracts will be reproducible as well⁹⁷. The functions the BBL will perform and which are intended to be electronically replicated are to

- be a receipt of the goods
- contain details of the consignment,
- incorporate the contract of carriage,
- contain the right of the holder of the BBL to give instructions to the carrier, to nominate a person entitled to receive the goods, and, in case the BBL is transferred, will include the novation of the contract of carriage as well as the right of the holder to pledge or transfer the goods and
- offer the possibility that the contents of the BBL is inspected by a possible future holder.

As most countries require bills of lading to be in a written form the electronic BBL will not meet this requirement. Instead the BBL will perform the same functions as a paper bill of lading on a contractually agreed basis, which is done by signing the Rulebook.

The regime, which in most cases, world-wide, applies to the paper-documented carriage of goods by sea, are the Hague or the Hague-Visby rules. They only apply if a bill of lading or a similar document of title is issued (Art. I a), but do not necessarily require, that a bill of lading is issued. However, one has to be issued when the shipper demands one (Art. III r. 3). As the users entered into the Bolero system to avoid paper documents being issued it is unlikely that a shipper will demand a paper bill of lading according to Art. III r 3 HV. If he does so in spite of that it results in the paper bill of lading having to be issued and handled outside of the Bolero system.

⁹⁷ Legal Feasibility Study, p. 41

The applicability of the Hague-Visby rules on BBL's does therefore lead to the question of whether the BBL is a document of title or not. The characteristic of being a document of title has developed historically for the paper bill of lading⁹⁸ and can therefore not be transferred on the BBL as this is a newly created electronic form of document, which is not acknowledged as being transferable. The Hague-Visby rules therefore do not apply on contracts entered into on the Bolero system and covered by BBL's. But the Hague-Visby rules are incorporated by reference into these contracts covered by BBL's in order to replicate the same legal system, which is applicable on paper bills of lading. Clause 3.2.(4) of the Rulebook reads:

“International Conventions. A contract of carriage in respect of which the Carrier has created a Bolero Bill of Lading shall be subject to any international convention, or national law giving effect to such international convention, which would have been compulsory applicable if a paper bill of lading in the same terms had been issued in respect of that contract. Such international convention or national law shall be deemed incorporated into the Bolero Bill of Lading. In the event of a conflict between the provisions of any international convention and the other provisions of the contract of carriage as contained in the BBL Text, the provisions of that national law or that international convention shall prevail.”

To ensure this legal construction

“it is recommended that Bolero Users replicate the Convention protections which would otherwise have applied since this is likely to enhance the judicial acceptance of the BBL and courts will have less reason to overturn the Bolero document in order to re-install Convention protections in favour of carriers.”⁹⁹

This recommendation might surely be a precaution, but it shows to some extent that Bolero seems not too sure about the legal construction chosen.

The Hamburg Rules of 1978¹⁰⁰ are the latest attempt to implement a new uniform regime on the carriage of goods by sea by means of an international convention. They state in Article 14.3. that

“the signature on the bill of lading may be in hand writing, printed in facsimile ... 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 does not help in the case of Bolero where not only the signature but the whole document of the bill of lading is not on paper but electronic. Apart from that the Hamburg rules are not internationally accepted (although in force since 1992), which is also indicated by the circumstance

⁹⁸ upon this see supra chapter II.A., p. 2/3

⁹⁹ Legal Feasibility Study, p. 43

¹⁰⁰ online available at <http://www.uncitral.org/english/texts/transport/hamburg.htm>

that none of the initial jurisdictions investigated in the legal feasibility study have incorporated the Hamburg Rules into domestic law.

As this work focuses on Bolero in the context of Carriage of goods by sea it shall only be dealt with briefly the other means of transport which might be covered by an electronic Bolero transport document as well. In the legal feasibility study the impact of the international transport regimes governing the carriage of goods by air has not been investigated in detail. The Study only states that the Warsaw Convention governing international carriage of goods by air has been updated and now allows air waybills to be electronic.

The carriage of goods by land has been investigated to some extent, which revealed that the CMR governing the international carriage of goods by road leads to problems when applied in the context of Bolero. For example whereas Art. 34 CMR states that in cases where more than one carrier is performing a single contract of carriage by road, each of the carriers becomes a party to the original contract of carriage and are themselves responsible for that subpart of the carriage, while under the Bolero system the original carrier remains responsible in respect of the sender until the goods have arrived at their destination¹⁰¹.

The carriage of goods by rail, governed by COTIF¹⁰² and CIM¹⁰³, is not investigated in detail in the legal feasibility study¹⁰⁴.

3. Specific problems concerning writing requirements

Some sources of writing requirements arise in the context of special clauses contained in contracts of carriage.

Arbitration clauses, for example, have to be in writing according to the New York Convention¹⁰⁵. Such clauses contained in contracts entered into electronically on the Bolero system would only be enforceable if the applicable domestic law does not have such writing requirements.

¹⁰¹ For a more detailed investigation of the problems resulting from the CMR see the Legal Feasibility Study, p. 45 et seq

¹⁰² Convention concerning International Carriage by Rail, 1980

¹⁰³ Uniform Rules concerning the Contract for International Carriage of Goods by Rail

¹⁰⁴ The text of COTIF is online available at <http://www.unece.org/trade/cotif/Welcome.html>, the Appendix B to which is CIM, available at <http://www.unece.org/trade/cotif/cotif09.htm#Appendix B>

¹⁰⁵ United Nations Convention on the Recognition and Enforcement of foreign Arbitral Awards (1958), Art II 1. and 2.; the text of the convention is online available at <http://www.uncitral.org/english/texts/arbitration/NY-conv.htm>

Contracts of carriage do not have to be in writing in the majority of the initial jurisdictions, but there are problems arising in Abu Dhabi, the Philippines, China and probably Indonesia, where such writing requirements exist. Under the US Harter Act it is highly arguable that a bill of lading has to be in writing, but this problem would be solved by the proposed new US COGSA, which in its current form permits the bill of lading to be printed or electronic (Sec. 2.(a) 5.A. (ii)). In South Korea the scope of application of two statutes of 1999 is unclear, which give legal recognition to some extent to documents in electronic form.

The legal feasibility study does not offer a solution for cases on the Bolero system which affect with the named countries. It seems quite certain that the contract of carriage will be invalidated in court because it is not in writing. So the only solution appears to be to rely on the paper form documentation and refrain from the use of Bolero until these countries have updated their legislation. One reason for such update might be pressure from the possible future development of Bolero.

4. The contract of sale and writing requirements

The underlying contract for the international carriage of goods is usually a contract of sale¹⁰⁶, many of which incorporate the Incoterms to determine the party's rights and obligations. The Incoterms in their 1990 and 2000 revisions made provision for the use of electronic transport documentation, but not for contracts of sale concluded electronically. As the Incoterms are only model contract clauses, the clause catering for electronic documents can of course be amended in respect of the contract of sale.

Most of the initial jurisdictions do not require contracts of sale to be in writing, the exemptions are China, Ireland, Thailand, Abu Dhabi, the Philippines and some states of the USA.

However, the Vienna Sales Convention (CISG), which the USA is a party to, states in Art. 11:

“A contract of sale need not be concluded or evidenced by writing and is not subject to any other requirements as to form. It may be proved by any means, including witnesses.”

In the opinion of the authors of the legal feasibility study this obvious inconsistency will most probably be solved by the Convention overruling the jurisdictions of the respective states of the US. However, this is not necessarily the case in general, as each party might uphold its writing

¹⁰⁶ Apart from 'in-house' shipments between branches of international companies.

requirements according to the option of Art. 96, but the US did not take this option and so the respective writing requirements should indeed be overruled by Art. 11 CISG¹⁰⁷.

5. Commercial Invoices, Certificates and writing requirements

The compilation of documents necessary for an international sale of goods usually includes a commercial invoice and, depending on the specific requirements, certificates of quantity, quality, origin, movement and/or those required for dangerous goods and foods.

Most relevant sources of writing requirements for these documents would surely be customs, governmental or administrative regulations. Any survey of these surely rich sources was not undertaken in the legal feasibility study. Apart from that there seem to be no general objections against the dematerialization of these documents¹⁰⁸, what is of course not the kind of certainty a Bolero user can rely upon.

6. Insurance policies and Bolero

From the perspective of the legal feasibility study an incorporation of insurance policies into the Bolero system was not to be attempted¹⁰⁹. However the insurance certificate as well as the insurance policy are currently one the list of documents available on the Bolero system in electronic form¹¹⁰.

This is surely not unimportant for the users of Bolero as in a fully electronic transport documentation the presence of paper insurance documents would have been an alien element.

Writing requirements for insurance certificates do generally not exist in the initial jurisdictions, but insurance policies commonly have to be in writing. However, the development shows that forms of electronically issued insurance certificates are possible and have become practice¹¹¹.

7. The Rulebook Clause concerning Writing Requirements

The clause found to satisfy the problems raised in the context of writing and signature requirements reads as follows:

¹⁰⁷ For a more detailed review of the Incoterms and CISG see supra X., p. 62

¹⁰⁸ Legal Feasibility Study, p. 52

¹⁰⁹ Legal Feasibility Study, p. 52

¹¹⁰ See <http://www.bolero.net/boleroxml/docdef/insurance.php3>

¹¹¹ Chandler, The Electronic Marine Insurance Certificate, Int'l Trade L.J. No. 2 (winter 1999), p. 47

“2.2.2. Validity and Enforceability

(1) Writing Requirements. Any applicable requirement of law, contract, custom or practise that any transaction, document or communication shall be made or evidenced in writing, signed or sealed shall be satisfied by a Signed Message.

(2) Signature Requirements. The contents of a Message Signed by a User, or a Portion drawn from a Signed Message, are binding upon that User to the same extent, and shall have the same effect at law, as if the Message or portion thereof had existed in a manually signed form.

(3) Undertaking not to Challenge Validity. No User shall contest the validity of any transaction, statement or communication made by means of a Signed Message, or a portion drawn from a Signed Message, on the grounds that it was made in electronic form instead of by paper and / or signed or sealed.”

C. Electronic Evidence

In the initial jurisdictions the rules for the admissibility of electronic evidence are developed to a varied degree. As the question of admissibility of electronic evidence is of some importance for the users of Bolero each of the initial jurisdictions is dealt with in detail¹¹².

Generally speaking the admissibility of electronic evidence is not problematic, where a jurisdiction does not require a contract to be in writing for evidential purposes, or laws exist regulating this matter. Where such regulations exist, adequate technical and contractual provisions need to be made to guarantee the accuracy and authenticity of the electronic data.

Problems might only occur in the United Arab Emirates, the Philippines and in Thailand. Elsewhere in the initial jurisdictions the laws are that far developed or flexible that problems are unlikely to occur (for example in England, Belgium, the Netherlands, the US Federal Courts, Korea, China, Malaysia, Hong Kong, Singapore and Japan) or the position is uncertain yet, but not totally negative (in Taiwan, France, Germany and Ireland).

The respective provision in the rulebook about electronic evidence formulated as a result of the study reads as follows:

“2.2.3. Messages as Evidence

(1) Admissibility. Each user agrees that a Signed Message or a portion drawn from a Signed Message will be admissible before any court or tribunal as evidence of the Message or portion thereof.

(2). Primary Evidence. In the event that a written record of any Message is required, a copy produced by a User, which Bolero International has authenticated, shall be accepted by that User and any other User as primary evidence of the Message.

¹¹² see Legal Feasibility Study, p. 54 et seq

(3). Each user agrees that if there is a discrepancy between the record of any User and the copy authenticated by Bolero International, such authenticated copy shall prevail.”

Bolero also advises its users to avoid problems, which might arise in spite of these clauses, to rely additionally on “appropriate jurisdiction clauses”¹¹³.

D. The transfer of Goods and Associated Contracts on the Bolero system

1. The BBL replicating the function as a document of title

One of the main ambitions of Bolero is to replicate all functions of a paper bill of lading, of which the most sophisticated is the function as a document of title¹¹⁴. The main concern related to the transfer of goods and associated contracts carried out under this function of the bill of lading is, that the transfer must be effective, especially in the case of insolvency of the transferor. The transferee must not carry the risk of the transferor’s insolvency and must be protected against the transferor’s creditors. Further the problem of priorities exists where the transferor transfers the respective goods more than once, either by way of sale or by way of pledge.

The requirements resulting from the issue of the insolvency, which are problematic in the different jurisdictions lead to the conclusion that some form of possession has to be transferred to protect the transferee to satisfy the most strict existing requirements.

The Bolero system therefore transfers what is known under English Law as “constructive possession” to the new owner of the goods named by the (then previous) owner by a confirmation of the carrier (as independent bailee), that he holds the goods to the order of the new owner. This constructive possession “should not be different from the possession which is obtained by the holding of a negotiable document of title”¹¹⁵, that means a paper bill of lading.

The respective clause in the Rulebook reads:

“3.4.1. Procedure for Transfer of Possession.

(1) By Designation. The transfer of constructive possession of the goods, after the creation of a transferable Bolero Bill of Lading, shall be effected by the designation of:

- (a) a new Holder-to –order
- (b) a new Pledgee Holder
- (c) a new Bearer Holder, or
- (d) a Consignee Holder.

¹¹³ Legal Feasibility Study, p. 59

¹¹⁴ upon which see supra at II.A., p. 3

¹¹⁵ Legal Feasibility Study, p. 63

(2) Effect of Designations. The Carrier shall, upon Designation of such Holder-to-order, Pledgee Holder, Bearer Holder or Consignee Holder, acknowledge that from that time on it holds the goods described in the Bolero Bill of Lading to the order of the new Holder-to-order, Pledgee Holder, Bearer Holder or Consignee Holder, as the case may be.”

The rulebook also contains a clause (3.4.2.) by which Bolero International is irrevocably appointed by each carrier as its agent to issue the respective acknowledgement. So the carrier does not have to deal with all the changes of ownership in the goods taking place while the goods are on their way to the port of destination.

The different categories of Holders referred to in clause 3.4.1. are defined in clause 1.1. of the Rulebook.

The Holder-to-order is defined as “a User who is or becomes simultaneously Designated both Holder and to Order Party of a Bolero Bill of Lading”.

The Pledgee Holder is defined as “a User who is or becomes Designated as both Pledgee and holder simultaneously”.

A Bearer Holder is “a User who is or becomes Designated a Holder of a Blank Endorsed Bolero Bill of Lading”.

A Consignee Holder is defined as “a User simultaneously Designated as Consignee and Holder of a Bolero Bill of Lading”.

Concerning the problem of priorities connected to unauthorised dispositions, the constructive possession transferred on the Bolero system is expected to bring no changes to the current situation. This means that the risk remains for the owner of the goods in transit that the carrier unauthorised disposes over them.

Another issue raised in the context of the acknowledgement is whether it has to be in writing or not. The requirement of writing in this respect might only exist in those jurisdictions which require the contract of carriage to be in writing, but concerning these jurisdictions the legal feasibility study does not come to a final conclusion, “it would seem surprising...and relatively unusual”¹¹⁶ if such writing requirement would exist. The jurisdictions left with this uncertainty are Korea, the Philippines and China. The national reports from Abu Dhabi and Indonesia are incomplete in this respect.

¹¹⁶ Legal Feasibility Study, p. 63, 64

The Study also deals with the case where the owners of the goods in transit are not users of Bolero but employ for example, a freight forwarder as an agent to contract on their behalf. In this case the Bolero User would hold the goods as bailee and the carrier as its sub-bailee, which would not lead to more complications than the construction with one level bailee.

2. The transfer of rights under a contract of carriage

As the contract of carriage is concluded between the shipper and the carrier, it is a problem how a third party to which the goods in transit have been sold, the consignee for example, becomes a party to that contract¹¹⁷.

Attempts have been made to solve the problems resulting from this by means of legislature In England for example by the Bills of lading Act, 1855, and its successor the English Carriage of Goods by Sea Act, 1992. But the legislative solution is not applicable to the Bolero system as electronic contracts of carriage are not covered by the Act, although the Act makes provision to be extended in this respect it has not been undertaken yet¹¹⁸.

Therefore a contractual solution inside the contractual Bolero framework had to be sought. The two ways to create such a 'succession' into the contractual rights of a party are the concepts of assignment and that of novation.

The transition of one party's rights by assigning those rights to a third party is possible in nearly all jurisdictions, but in some it is coupled with problems in the context of the proposed Bolero application. Some jurisdictions require an assignment of a contract to be in writing, which might be circumnavigated by a choice of jurisdiction. Some jurisdictions require notice, often in prescribed form, to the debtor or other similar formality. As an example Art. 1690 of the French Code Civil requires the notice to be delivered to the debtor by a court bailiff. A foolproof circumnavigation of this requirement does not exist, as a choice of law might not avoid, especially in Napoleonic jurisdictions and in Japan, that the law of the debtor (the carrier), possibly including the outlined formalistic requirement, would be applied by the courts¹¹⁹.

Because of this problem the concept of novation was chosen to be incorporated into the Rulebook. Novation can be described as extinguishing one contract between two parties to conclude an identical contract between one of these parties and a third party¹²⁰. By the novation of the contract

¹¹⁷ Hare, § 14-4, p. 554 et seq with a detailed discussion of the concepts of assignment and novation.

¹¹⁸ Legal Feasibility Study, p.71

¹¹⁹ On the discussion of the concept of assignment see the Legal Feasibility Study, p. 70 et seq

¹²⁰ Legal Feasibility Study, p. 71

all contractual rights and obligations of the one party leaving the contractual relation are shifted to the third party entering into it. As this means the conclusion of a new contract for the party which is party to both contracts, the initial and the novated, it has to give its consent to it.

As the novation means that a number of contracts are concluded the problems arise as to what writing requirements and further formalities exist for and what law applies to these new contracts.

The novation of the contracts is based on the Rulebook which is governed by English law (clause 2.5. (2)). This means that English law will apply to the novation itself but it will not interfere with the law chosen by the parties to govern the new contracts concluded.

The writing and other formal requirements for the novated contracts will be those which exist for contracts of that type in general. As the novated contracts will (most likely) be of the same type as the contracts previously entered into on the Bolero system it can be referred to the discussion of writing requirements¹²¹.

The clause in the Rulebook replicating the English bill of lading legislation reads as follows:

“3.5. Novation of the Contract of Carriage

3.5.1. Occurrence and Effect

The Designation of a new Holder-to-order or a new Consignee Holder after the creation of the Bolero Bill of Lading, other than one who is also the Head Charterer [defined in sec. 1 as a User who has entered into a charterparty other than by demise or bareboat with a Carrier], shall mean that the Carrier, the Shipper, the immediately preceding Holder-to-order, if any, and the new holder-to-order or Consignee Holder agree to all of the following terms in this section 3.5.1:

(1) New Parties to Contract of Carriage. Upon the acceptance by the new Holder-to-order or Consignee Holder of its Designation as such, or, at the expiry of the 24 hour period allowed for the refusal of the transfer under rule 3.5.2 (New holder’s Right to refuse Designation), whichever is the earlier, a contract of carriage shall arise between the Carrier and the new Holder-to-order or Consignee Holder either:

(a) on the terms of the contract of carriage as contained or evidenced by the BBL Text; or
(b) when the Shipper is a Head Charterer, on the terms set out or incorporated in the BBL text, as if this had contained the original contract of carriage.

(2) Accession of Rights and Liabilities. The new Holder-to-order or Consignee Holder shall be entitled to all the rights and accepts all the liabilities of the contract of carriage as contained in or evidenced by, or deemed to be so contained in so evidenced by, the Bolero Bill of Lading.

(3) Prior Designee’s Rights and Liabilities Extinguished. The immediately preceding Holder-to-order’s rights and liabilities under its contract of carriage with the Carrier shall immediately cease and be extinguished, unless:

¹²¹ see supra VI.B., p. 21 et seq

(a) such immediately preceding Holder-to-order is also the Shipper, in which case its rights but not its liabilities under its contract of carriage with the Carrier shall cease and be extinguished,

(b) such immediately preceding Holder-to-order is the Head Charterer, in which case neither its rights nor its liabilities under its contract of carriage with the carrier shall cease or be extinguished.

3.5.2. New Holder's Right to refuse Designation

(1) Refusal. The new Holder-to-order or Consignee Holder may, within 24 hours of having received notification thereof, reject his designation as new Holder-to-order or Consignee Holder in accordance with Operational Rule 30^[122], in which case all rights and obligations under the contract of carriage between the previous Holder-to-order and the Carrier remain vested in the previous Holder-to-order, or if none, the Shipper, as if no attempt to novate the contract had been made.

(2) Acceptance. If within the 24 hour period and before rejection of his designation, the Designated Holder-to-order or Consignee Holder represents that it accepts the novation or attempts to exercise any rights to the goods, by taking delivery or commencing proceedings against the Carrier for loss of or damage to the goods or otherwise, it shall be deemed to have accepted its Designation at the time it was made for the purposes of Rule 3.5 (Novation of the Contract of Carriage). Any subsequent refusal given pursuant to paragraph (1) of this Rule 3.5.2 shall be void.

3.5.3. Pledgee Holders

(1) No Novation. There shall be no novation of the contract of carriage between the Carrier and a Pledgee Holder as such.

(2) Pledgee Holder who is also To Order Party. A Pledgee Holder that is also the current To Order Party enforcing its pledge over a Bolero Bill of Lading shall automatically become the Holder-to-order, with the consequence that the contract of carriage is novated in accordance with the provisions of Rule 3.5. (Novation of the Contract of Carriage).

(3) Enforcement by Pledgee Holder who is Not To Order Party

When a Pledge Holder, who is not the current To Order Party, enforces its pledge over a Bolero Bill of Lading, the current To Order Party, if any, shall be automatically deleted from the Title Registry Record, and the Pledgee Holder shall automatically become the Bearer Holder.

3.5.4. Bearer Holders

(1) No Novation. There shall be no novation of the contract of carriage between the Carrier and a Bearer Holder as such.

(2) Exercise of Rights. A Bearer Holder who wishes either to claim delivery of the goods or commence proceedings against the Carrier for failure to deliver the goods shall first Designate itself as Holder-to-order, whereupon it shall become a party to the contract of carriage in accordance with the provisions of Rule 3.5 (Novation of the Contract of Carriage).

¹²² must be Operational Rule 33 of the current numbering of the second edition of the Appendix to Bolero Rulebook, at p. 97. Operational Rule 33 contains mere technicalities concerning the messages to be sent in order to refuse acceptance.

3.5.5. Bolero Bill of Lading Terms and Conditions to Apply

For the avoidance of doubt, any User who is or was the Holder, Pledgee Holder, Bearer Holder, Holder-to-order or Consignee Holder of a Bolero Bill of Lading, irrespective of whether such Designation has been rejected, agrees that any claim against the Carrier for loss of or damage to the goods shall be subject to the terms of the contract of carriage as contained in or evidenced by the BBL Text.”

E. Payments and Letters of Credit

The documentary credit is an important instrument of payment in today’s modern international contract of sale. It is almost invariably governed by the UCP 500 of the ICC. The UCP 500, the current version, date back to 1993 and are therefore not completely up to the challenges of today’s electronic communication. They provide for letters of credit and confirmations being issued paperless, which is done to a large extent on the SWIFT-system, but the documents to be handed in to obtain such a documentary credit have to be in paper. The Art. 23 – 30 of the UCP 500 do not contain provisions for these documents being electronic, and Art. 20 (b) seems insufficient. However, the UCP are model contract clauses and can therefore be amended and incorporated by the parties as they wish.

Writing requirements in respect of electronic letters of credit do not exist in England as here a normal letter of credit is not a guarantee obligation which must be in writing also in other states¹²³.

The Rulebook clause for Documentary Credits has the following wording:

“3.11. Documentary Credits

(1) Validity of Electronic Presentation of Documents. This Rulebook will apply and the presentation of any Documents by electronic transmission through the Bolero system will be accepted as if they were equivalent paper documents, where a User issues, advises or confirms a Documentary Credit on the instructions of an Applicant User under which a Beneficiary User is required to present stipulated documents in order to operate the Documentary Credit, provided that:

- (a) the documentary credit expressly indicates that presentation under the Bolero System is acceptable; and
- (b) the data contained in such transmissions is presented in Documents whose description matches that of the documents required to be presented by the terms of the credit; and
- (c) where the Documentary Credit requires that a particular document is issued, authenticated or signed by a particular person, the data transmission is Signed by that person or by a User who is authorised to act and take responsibility on his behalf.

(2) Electronic Documents to be “Originals”. Any requirement under the terms of a Documentary Credit, to which this Rulebook apply, that an “original” document be presented shall be satisfied by the presentation of a Document from a message bearing the Signature of the person said to have issued or created the document or that of a User who is authorised to act and to take responsibility on his behalf.

¹²³ Legal Feasibility Study, p. 74

(3) Copies. Where the terms of a Documentary Credit, to which this Rulebook apply, require that a number of copies of a document be presented by a Beneficiary User to another User (“the recipient User”):

(a) such a requirement shall be satisfied by a single transmission of the equivalent Document to such recipient User; and

(b) The recipient User shall be entitled or empowered to make the number of onward transmissions, or, as the case may be, to create the number of copies, of that document as would have been necessary to complete the transaction in a paper environment, provided always that no Bill of Lading shall have more than one Holder (whether Holder-to-order, Bearer Holder, Pledgee Holder, Consignee Holder or Holder) at any one time.

(4) Banks as Holders of Bolero Bills of Lading. Where a User acting as an issuing or confirming bank is designated as a Pledgee Holder or Bearer Holder of a Bolero Bill of Lading for the purposes of the performance of a Documentary Credit, the User shall only acquire such property in and responsibility for the goods as the parties to the Documentary Credit transaction intend.”

F. Security for creditors on the Bolero system

1. General

When creditors are involved in financing an international sale they usually require security for their credits. This security is gained by a variety of concepts, the most common is related to the financing of an international sale by means of a letter of credit. In this case the bank gains physical possession of the transport documents without the production of which the goods cannot lawfully be released if they are documents of title. Payment is made to the seller against the production of the documents. This or all other banks involved in the transaction (if any) hand the documents over only against payment or a form of credit agreement.

Other examples of concepts of security for creditors are trust receipts and bills of exchange¹²⁴.

It is of importance in this context that the transfer of the BBL does not have to correspond with a simultaneous transfer of property, the latter depends on the intention of the parties expressed in the contract of sale which is paid respect to by the clause contained in the rulebook:

“3.10. Ownership and Contracts of Sale

(1) Transfer of Ownership. If as a result of either the intention of the parties to the transaction or the effect of any applicable law, the transfer of constructive possession of the goods and / or the novation of the contract of carriage as provided for in this Rulebook have the effect of transferring the ownership or any other proprietary interest in the goods (in addition to constructive possession thereof), then nothing in this Rulebook shall prevent such transfer of ownership or other proprietary interest from taking place.

¹²⁴ on which and further concepts see more detailed Legal Feasibility Study, p. 77

(2) Rulebook Does not Effect Transfer. Nothing in this Rulebook shall be construed as effecting the transfer by the owner of property in the goods which are subject to a contract of carriage contained in or evidenced by a Bolero Bill of Lading or other Transport Document.

(3) Validity if Electronic Tender of Documents. Each User agrees that, where a contract of sale between Users requires that shipping documents are to be tendered to the buyer of those goods or to another party nominated by the buyer, a tender of documents by means of the Bolero System shall not be rejected on the grounds that the documents are in the form of electronic messages or images provided that they contain all of the information required by the contract of sale.

(4) Sale Concluded by Electronic Interchange. Where a contract of sale between Users is concluded (in whole or in part) by means of a Message or by a series of Messages, each User agrees that such Message or Messages shall constitute or evidence the contract concluded between them.”

The security of the creditor may be construed to be connected to different aspects of the international sale which are:

- The goods: The creditor usually requires receiving a pledge over the goods purchased.
- The Contract of Carriage: The creditor may require to obtain the right of a direct claim against the carrier for the loss of or damage to the goods.
- The Contract of Sale: The creditor may require to confer the right of claiming the price of the goods against the buyer, the rights to the goods under any retention of title clause, and against the seller the claim for defect in the goods or injury or damage caused to third parties by the goods.
- Insurances: The creditor may gain security as a beneficiary of a claim for loss of or damage to the goods and any cover for third party liability.
- Export credit agency cover: The seller may be covered by an Export credit agency (ECA) for the buyer not paying and the creditor may require to confer this claim.
- Negotiable instruments: The creditor may have security over any negotiable instrument issued for the price of the goods, e.g. a bill of exchange, but these negotiable instruments are invariably required to be in writing and therefore have to be handled outside Bolero.

Except for the security over the goods and over the contract of carriage, the security instruments are left outside Bolero and the legal feasibility study. This has to be seen in the context that in the legal feasibility study the expectation is expressed that there will be general security agreements entered into outside the Bolero system as in many jurisdictions, such as many US states and Canadian provinces, writing requirements exist for security agreements¹²⁵. So a completely electronic

¹²⁵ Legal Feasibility Study, p. 79

environment in respect of security for the creditor would not have been possible to establish anyway.

Special regulations for finance regimes for consumers are left outside the study due to the fact that consumers will not be directly involved with the Bolero system¹²⁶.

2. Writing and other formal requirements

As it is therefore inevitable that there will be written security agreements outside Bolero the question arose, “whether any subsequent identification of specific cargoes or contracts, if required by applicable law, needs to be in writing or requires any other special formality on the ground that it is part of the security agreement which itself has to be in writing”¹²⁷.

In the first step the different concepts of gaining security for creditors were outlined. Although there is a great international diversity of concepts they have more or less two general concepts in common.

The one concept is that of publicity according to which it has to be shown to other creditors as well as the public that the specific asset of the debtor is pledged in order to protect third parties. The publicity is mainly achieved either by some form of possession or by public registration of the security in an official register.

The other concept is that of specificity, which requires the asset to be transferred or to create a security over, needs to be specified with particularity. The degree of specificity required varies among the jurisdictions, but writing requirements might also arise in this context. First there might be writing requirements or other formalities for the identification of specific cargoes as a result of writing requirements for the security agreement, or second writing requirements might exist in order to gain security over the benefit of a specific contract as an aspect of specificity.

a) Security over the goods

In a paper environment the creditor gained security by physical possession of the bill of lading, as the bill of lading is a document of title. There will be no more hard copy of the bill of lading on the Bolero system, instead there will be a confirmation of the carrier that it holds the goods to order of

¹²⁶ see already supra VI.B.1., p. 21

¹²⁷ Legal Feasibility Study, p. 80

the creditor as a Pledgee Holder, what means that the bank is given constructive possession of the goods¹²⁸.

To comply with the requirements of the concept of publicity the acknowledgement of the carrier is considered to be sufficient in most of the jurisdictions as this gives the creditor control and dominion over the goods to a large extent. As the requirement of publicity therefore is satisfied there has to be no public registration¹²⁹.

Whether there are further requirements, especially a writing requirement for the acknowledgement, for a valid security over the goods, cannot be said with absolute certainty, as some jurisdictions might require actual instead of mere constructive possession. At least in most jurisdictions clause 3.4.1. of the rulebook will suffice¹³⁰.

b) Security over the Contract of Carriage

Of less importance than the security over the goods is the security over the contract of carriage, because the responsibilities of the carrier are often quite limited and of these liabilities only the security of the pledgee consists. What the pledgee gains is a direct claim against the carrier for loss of or damage to the goods in transit.

The Bolero system does not make specific provision to replicate this form of security. However, on the Bolero system the pledgee receives constructive possession of the goods by the acknowledgement of the carrier, which does not make the pledgee a party to the contract of carriage. But when the pledgee decides to designate himself as to-order-party of the BBL he novates the contract of carriage with himself and is then a party to it with all rights and liabilities. So indirectly there is the possibility for the pledgee on the Bolero system to gain security from the contract of carriage as well.

The legal feasibility study comes to the conclusion that this solution of the Bolero system would have to be regarded in effect as a security assignment, which in turn in some jurisdictions would have to comply with specific formal, mostly writing, requirements. The problems would arise mainly in the USA, and similarly in Canada, because of writing and other formal requirements contained in UCC Art 9 for security agreements. Similar writing requirements exist in Japan and

¹²⁸ see supra VI.D.1., p. 29

¹²⁹ Specific problems may arise with collisions of interest and the avoidance of the loss of the (possessory) pledge by redelivery, for which see the Legal Feasibility Study, p. 93

¹³⁰ quoted in the context of the transfer of rights in the goods at VI.D.1., p. 29/30

South Korea, the whole group of Napoleonic Jurisdictions appears “problematical in all respects” and the Islamic jurisdictions are classified as “problematic anyway”¹³¹.

The conclusion is that the Bolero solution for the security over the contract of carriage might lead to problems in a significant number of jurisdictions, which might not be possible to circumvent. But this is considered not to be of too great importance as this instrument of security is not regarded as crucial among banks and they still can “obtain a perfected security by the observance of the required formalities”¹³², that means outside Bolero.

c) Security over the Contract of Sale

The purpose of this form of security is to confer rights against the seller on the pledgee, for example for a defect in the goods or injury or damage caused to third parties by the goods. In cases where the security is granted by the seller this is usually done in order to obtain security over the purchase price.

The Bolero Rulebook does not make provision for this form of security. It would have had to face formal requirements and therefore problems similar to those for creating security over the contract of carriage anyway.

Those parties who consider security over the contract of sale, for example by bills of exchange, to be important for them accordingly have to gain this form of security outside Bolero.

d) Security over Insurances

Security for creditors can also be obtained by conferring rights to them under the cargo insurance and under the third party liability insurance. Different methods to create this form of security exist, either to assign the benefit of the policy to the pledgee, to include the pledgee expressly in the policy (co-insurance) or to follow the rule that in asset insurance, the insurance follows the goods themselves.

From the perspective of the legal feasibility study, insurances would be left outside the Bolero system. Now that the Insurance Policy and the Insurance Certificate are available in electronic form on Bolero¹³³, the situation might be different, although it would be surprising how a transfer of

¹³¹ Legal Feasibility Study, p. 99, 100

¹³² Legal Feasibility Study, p. 100, 102

¹³³ <http://www.bolero.net/boleroxml/docdef/insurance.php3>, see also already supra VI.B.6., p. 27

them would work as it was revealed in the study that almost invariably in the jurisdictions writing requirements exist for insurance policies and assignments of them¹³⁴.

G. Stamp Duties

Stamp duties arise mainly in the context of tax duties and have a paper document to be stamped as a prerequisite. This does not lead to problems in a dematerialised world of Bolero as there are hardly any stamp duties existing for the documents handled in the Bolero system. And if there are such stamp duties existing “the obligation to pay will exist outside the Bolero system and will not affect the legality of the system”¹³⁵. That means that the user is left alone in the situation where he is confronted with a stamp duty. It remains to be seen if a printout would help in such situation.

H. Data Protection

The degree to which the protection of data is required by law in the initial jurisdictions is divided into two extremes, either there is express legislation, such as in the EU, the USA and Taiwan, or there is none, as in China, Abu Dhabi, Malaysia, the Philippines, Thailand and Japan.

In the EU the member states were required to implement the directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 concerning data protection into domestic legislation until October 1998. That does not necessarily mean that the member states have already complied with this requirement and have implemented such legislation, but at least the direction of future legislation is determined.

The main aspect of the Directive is that it only applies to personal data about identifiable individuals and not to data about companies. However such company related data also comes within the scope of the Directive if there is only an incidental inclusion of personal data amongst it. Exceptions might be applicable, but this is left open in the legal feasibility study, as Bolero will principally contain company related data only.

Taiwan has followed this European model.

In the US data protection laws do not apply to the private sector, which is only self-regulated.

Bolero therefore will not have to observe too many aspects of data protection except that of personal data in the EU.

¹³⁴ Legal Feasibility Study, p. 101

¹³⁵ Legal Feasibility Study, p. 103

Besides the statutory requirements of data protection there are contractual provisions as well to bind the individual Bolero User to in this respect appropriate behaviour.

I. Cryptography

The use of encryption on the Bolero system, besides the usage of digital signatures, is understood to protect the confidentiality of the users' business data.

The only problem arising in this context is that some countries consider encryption to be of military significance or a matter of national security and therefore have established some sort of control over the import or use of encryption.

Among the initial jurisdictions only France has enacted such legislation, the impact of which on Bolero is left open.

All of the initial jurisdictions have export controls on encryption products according to the minimum standards of the Wassenaar Arrangement on Dual Use Goods¹³⁶. The export of encryption products with up to 56-bit keys from the states which are parties to this agreement will be unregulated.

J. Choice of Forum

The Rulebook contains a non-exclusive choice of English jurisdiction [rule 2.5.(4)]. The alternative, an exclusive choice of forum, would have lead to a higher degree of predictability and would have avoided forum shopping, but would also have met difficulties, because in numerous jurisdictions decisions of foreign courts would not have been recognised.

The non-exclusive choice of English forum does not interfere with the present status and leaves the choice of forum to the parties of the dispute.

In Europe the choice of law clause will be respected when complying with the requirements of the Brussels and Lugano Jurisdiction Conventions. Problems might occur in the US, Taiwan, South Korea and the Philippines, the solution of which is left open.

¹³⁶ for details of the Wassenaar Arrangement see <http://www.wassenaar.org>

VII. The contractual relations of the Bolero system in detail

Apart from the Rulebook and its Appendix there are some more contracts of which the Bolero system consists^{137 138}.

Between Bolero International Ltd. and the Bolero Association there is a contract regulating the relationship between them which is confidential and therefore cannot be examined in this work. The only information available about this contract says that the contract ensures

“that each company fulfils certain obligations to the other. Amongst other things, the contract provides that the Bolero Association has the exclusive rights to perform its functions in relation to the bolero.net service.”¹³⁹

Between the Bolero Association Ltd. and each individual user a Bolero Association Service contract¹⁴⁰ is concluded. It will be examined later in this chapter.

Further, each user enters into a so called ‘Operational Service Contract’ with Bolero International Ltd. This contract will be reviewed later in this chapter.

First some clauses of the Rulebook will be reviewed which have not been mentioned yet in the light of the legal feasibility study.

A. The Rulebook – specific clauses

1. Creation and Content of a Bolero Bill of Lading

The Rulebook contains rules for the creation and the content of a Bolero Bill of Lading. According to clause 3.1.(1)

“[e]ach carrier agrees that any Message sent by him as a Bolero Bill of Lading other than a Message intended to operate as a Chartered Bill of Lading shall, within the BBL text:
(a) include an acknowledgement by the Carrier of the receipt of goods shipped on board a vessel or received for shipment by that carrier; and
(b) contain or evidence the terms of the contract of carriage.
The Message shall be transmitted to the Title Registry.”

¹³⁷ For a graphical overview of Bolero’s contractual structure see <http://www.bolero.net/decision/legal/contract.php3>

¹³⁸ The Articles of Association of the Bolero Association are not discussed in this work as they represent internal contracts of less relevance for the individual Bolero User and the explanation of the Bolero System as a whole; however, they are available at http://www.boleroassociation.org/downloads/bal_art.pdf; the same is the case in respect of the Bolero Association’s Memorandum of Association, which is available at http://www.boleroassociation.org/downloads/bal_memo.pdf

¹³⁹ http://www.bolero.net/decision/legal/bol_int.php3

¹⁴⁰ The short form is BAL (for Bolero Association Limited) Service contract

The contract of carriage need not be contained or evidenced by a Bolero Bill of Lading where it is issued by the carrier to a time-or voyage charterer (in terms of the Rulebook a 'Headcharterer') who is designated as Shipper and Holder. However the BBL text shall state whether the goods were shipped or received for shipment [clause 3.1.(2)].

The further sections of clause 3.1. read:

“(3) Statements Relating to Goods received. Without prejudice to the generality of section 2.2.2, any statement a Carrier makes as to the leading marks, number, quantity, weight, or apparent order and condition of the goods in the BBL text will be binding on the Carrier to the same extent and in the same circumstances as if the statement had been contained in a paper bill of lading.

(4) Original parties. When a Carrier creates a Bolero Bill of Lading the Carrier must:

(a) Designate a Shipper

(b) Designate a Holder of the Bill of Lading, and

(c) Either:

(1) Designate a To Order Party (who shall not be the same as the Designated Holder)

(2) Designate a Consignee (who shall not be the same as the Designated Holder)

(3) Blank Endorse the Bolero Bill of Lading, thereby Designating the Holder as a Bearer Holder,

in accordance with the Shipper's instructions. In the absence of any instructions as to (b) or (c), the Carrier shall Designate the Shipper as the Bearer Holder.”

If the carrier does not set out his standard terms and conditions in full in the BBL Text, it shall [clause 3.2.(1)]

“(a) Express in the BBL Text that external terms and conditions be incorporated into the BBL Text; and

(b) Indicate where such terms and conditions can be found and read, electronically or otherwise.”

Each user agrees that such incorporation shall be effective to make the respective terms and conditions binding part of the contract of carriage [clause 3.2.(2)].

Regarding charterparty terms the users agree per clause 3.2.(3), that words contained in a BBL Text incorporating the provisions of any charterparty shall have the same effect as if they were part of a paper bill of lading issued by the carrier.

Special clauses for the carriage of goods covered by a BBL to and from the US are contained in the Annex to the Rulebook, which is made reference to in clause 3.2.(5). These clauses relate to the declaration of a value of the goods and the incorporation of the US COGSA from 1936¹⁴¹.

¹⁴¹ For further information on these and other implications of US Law on the Bolero system see <http://www.bolero.net/downloads/uslaw.pdf>

The BBL may be transferable or non-transferable [clause 3.3.(1)], and in order to make it transferable the Carrier shall designate a to order party or blank endorse the bill [clause 3.3.(2)]. To make the BBL non-transferable the carrier shall designate a consignee [clause 3.3.(6)].

The way the transfer of the BBL is carried out is regulated in clause 3.3.(3):

“(3) Effect of Designating To Order Party. If the Carrier Designates a To Order Party, the carrier is thereby deemed to have agreed that:

- (a) such To Order Party who becomes the Holder-to-Order of the Bolero Bill of Lading can Designate a new To Order Party, a Pledgee Holder, a Bearer Holder or a Consignee; and
- (b) any subsequent Holder-to-order, Pledgee Holder or Bearer Holder can do likewise.”

Clause 3.3.(4) makes similar provision for the case where the carrier instructs the Title Registry to blank endorse the BBL, which makes the Holder to a Bearer Holder of the bill, who can designate a subsequent party of those named in the previous clause or a Bearer Holder, which has the same right to name a subsequent party as further set out in the previous clause.

For the case where the BBL designates a Bearer Holder who is not the shipper, the carrier “acknowledges that it holds the goods described in the Bolero Bill of Lading to the order of that Bearer Holder” [clause 3.3.(5)].

According to clause 3.3.(7) the carrier has to make sure that the designations made by it in the Title Registry “accurately reflect:

- (a) the express or implied instructions of the Shipper and;
- (b) the terms and effect of the contract of carriage as contained in or evidenced by the BBL text; or
- (c) in the case of a Chartered Bill of Lading in which the Head Charterer is Designated Shipper, the terms set out in the BBL Text as if the same were the terms of the contract of carriage.”

2. Delivery of the Goods under a Bolero Bill of Lading

Delivery of the goods covered by a BBL in terms of the Bolero system is connected to ‘surrendering’ the BBL. ‘Surrender’ is defined (clause 1.1) as

“the presentation of a Bolero Bill of Lading to the Carrier or another User appointed by the Carrier, in accordance with the Operational Rules, in order to obtain delivery of the goods at the end of the carriage.”

How delivery of the Goods is made is regulated in clause 3.6.¹⁴²:

¹⁴² For details to Surrendering a BBL see The Rulebook Appendix 4.4.6., p. 84 et seq

“3.6. Delivery of the Goods

(1) Persons entitled to Delivery. Under a contract of carriage in respect of which a Bolero Bill of Lading has been created, delivery of the goods shall only be made by the carrier to, or to the order of, a Holder-to-order or Consignee Holder which duly Surrenders the Bolero Bill of Lading.

Note

Pledgee Holders and Bearer Holders are also entitled to delivery of the goods, but have to make themselves into Holders-to-order first. This is a matter entirely within their power and discretion, and is therefore no fetter on their immediate or right to possession of the goods.

(2) Surrender of the Bolero Bill of Lading. The Bolero Bill of Lading shall be Surrendered either to the User identified as the Surrender Party or, if none, to the Carrier in accordance with the Operational Rules.

(3) Termination of Bolero Bill of Lading. Once the Title Registry Record has recorded that the Bolero Bill of Lading has been Surrendered, the Bolero Bill of Lading shall cease to be effective as a Bolero Bill of Lading and no further dealings with it through the Title Registry shall be possible.”

3. Switch to Paper

It is clear that a totally electronic system might reach its limits for various reasons, so that the electronic documents would have to be transferred into paper documents. The Rulebook makes provision for the switch to paper documents in clause 3.7. It reads:

“3.7. Switch to paper

(1) Persons Entitled to Switch to Paper. At any time before the goods to which the Bolero Bill of Lading relates have been delivered by the Carrier, a current Holder, Holder-to-order, Pledgee Holder or Bearer Holder shall be entitled to demand that the Carrier issue a paper bill of lading in accordance with the Operational Rules.”¹⁴³

Clause 3.7.(2) states, that

”[t]he carrier shall, immediately upon receipt of such demand, issue a paper bill of lading which sets out:

- (a) all the data contained in and all the terms and conditions contained in or evidenced by the original BBL Text;
- (b) a statement to the effect that it originated as a Bolero Bill of Lading
- (c) the date upon which it was issued in paper form; and
- (d) a record issued by Bolero International of the chain of Users which have been parties to contracts of carriage with the Carrier, from the date of the creation of the Bolero Bill of Lading until the date on which its switch to paper demand was sent by Bolero International.”

In the event of discrepancies between the paper and the electronic Bolero Bill of Lading the electronic record shall prevail [clause3.7.(3)].

¹⁴³ Operational Rule 32, for further information on the switch to paper see the Rulebook Appendix 4.4.7., p. 86 et seq

The carrier shall then deliver the paper bill of lading in accordance with the instructions of the person currently entitled to hold it [clause 3.7.(4)].

No further instructions shall be given by a User to the Bolero Title Registry regarding that BBL who knows about the switch to paper and the BBL ceases to be effective from the moment the paper document is issued by the carrier [clause 3.7.(5)].

4. Powers of Parties to a BBL and Transport Documents

Clause 3.8. of the Rulebook describes in detail which messages can be sent and by which parties to a BBL, i.e. the powers of the parties are described.

Clause 3.3.(8) expresses that the powers described do not override any underlying contractual obligation:

“Nothing in this Rulebook shall be construed as permitting any User to Designate any person in breach of the User’s obligations or duties arising under or in relation to any underlying contract governing the transaction. “

The rights of the shipper are not limited by the powers listed. Clause 3.8.(9) reads:

“Nothing in this rule shall limit the right of a Shipper, who is the Holder of a Bolero Bill of Lading, to insist upon an amendment of the Bolero Bill of Lading.”

Clause 3.9. makes provision for cases where the Carrier issues Transport Documents other than a BBL. “Transport Documents” are defined in clause 1.1. as “[a]ny Document originated by a Carrier which is either a Sea Waybill or a Ship’s Delivery Order.”. Both of these documents are defined in clause 1.1. as well. In terms of Bolero the Sea Waybill is a

“Document, other than a BBL Text or a Ship’s Delivery Order, which is such a receipt for goods as contains or evidences a contract for the carriage of goods by sea and identifies a User to whom delivery of the goods is to be made by the carrier in accordance with that contract.”

The Ship’s Delivery Order is defined as a

“Document, other than a BBL Text or a Sea Waybill, which contains an undertaking to the User identified in the Document to deliver identified goods to that User, given under or for the purposes of a contract of carriage of those goods or of goods which include those goods.”

Clause 3.9.(1) gives to these Transport Documents the same legal effect as if paper documents had been issued in respect of the national law or international convention applicable. The rights and liabilities of a User under such a Document, whether the User is named or not [clauses 3.9. (2),(3)] and the duration of the liability [clause 3.9. (4)] are set out as well. In the case where a paper copy

of such Transport Document is issued it shall “clearly state that it is a copy only”. In cases of inconsistency the electronic record shall prevail [clause 3.9.(5)].

The applicability of Rule 3.9. is terminated when the right to the delivery of the goods is transferred to a party not being a User [clause 3.9.(6)].

B. The Operational Service Contract

Additional to, and on the legal basis of the Rulebook and its Appendix, further contracts between Bolero and the Users are concluded regulating the parties’ rights and obligations. Although, of course, the Rulebook is a contract and has to be signed as well to bind the parties, it contains more general rights and obligations as well.

The ‘Operational Service Contract’ for a Basic User¹⁴⁴ is a contract “in a standard form with limited variability” [clause 1.2. (1)] and consists of eight parts. In a case of inconsistency between the Operational Service Contract and the Rulebook the latter “shall govern to the extent of the inconsistency” [clause 1.3.(2)].

1. The Parts one to three – Cover Sheet, General Terms and Certification

The first part of the Operational Service Contract, the Cover Sheet, is an introduction describing the Bolero system briefly. It contains the clauses already mentioned and lists the parts of the contract as appended to the Cover Sheet as parts of the agreement to which the Rulebook and its Appendix also belong.

The second part contains, apart from the catalogue of definitions similar to that of the Rulebook, the general terms and conditions of the contract, such as the retention of intellectual proprietary rights (2.2), details to the rights and obligations to provide and maintain the technical components of the Bolero system (2.3/2.4) and to pay fees in turn for that (2.7.).

It also contains a clause by which Bolero International is appointed as agent for the user in respect of acts as agreed in the Rulebook. It reads:

“2.5. Limited Authorisation of Bolero International

(1) Limited appointment of Bolero International as Agent. In the following circumstances, the Enrolling User hereby appoints Bolero International to act as its agent in performing the following acts:

¹⁴⁴ Currently not available any more on the Bolero website at http://www.bolero.net/decision/legal/oper_cont.php3, but is appended as Appendix 1 to this work.

(a) Attornment. If the Enrolling User acts as a Carrier (also termed an “Originator”) Designated for a transferable Bolero Bill of Lading, then the Enrolling User hereby authorises Bolero International to perform attornments in relation to that Bolero Bill of Lading on behalf of the Enrolling User and as provided in sections 3.4 and 3.5 of the Bolero Rulebook.

(b) Withdrawal. The Enrolling User hereby authorises Bolero International to direct the Carrier (Originator) of a Bolero Bill of Lading to switch it to Paper on the Enrolling User’s behalf and as provided in section 3.7 of the Bolero Rulebook if either of the following events occurs: (i) the Enrolling User is Designated the current Holder of that Bolero Bill of Lading and the Enrolling User ceases to be Enrolled as a User of the Bolero System, or (ii) the Carrier (Originator) of a Bolero Bill of Lading of which the Enrolling is Designated the Holder ceases to be Enrolled as a User of the Bolero System.

(2) Authorisation by Administrative Directive. ...

(3) Limits of Authorisation. The Enrolling User does not authorise Bolero International to act on its behalf except as expressly set forth in this Operational Service Contract or the least extent necessary to perform its obligations pursuant to this agreement.”

Further provision is made for Confidentiality and Disclosure (2.12), Termination of the Contract and the rights and obligations arising from this to the parties (2.13) and for Liability (2.15.). It is interesting that in the context of the clause regulating the liability issue, that Bolero accepts no liability, besides that for other reasons such as Force majeure, for indirect and consequential losses [2.15.(5)]. The liability for death or personal injury caused by Bolero’s employees, agents, subcontractors or representatives, as well as for fraud is unlimited [2.15.(6)].

The contract is governed by English law [2.16.(9)].

Part three of the Operational Service Contract regulates Certificates in detail. Certificates are used to verify Digital Signatures and part three regulates the issuing and usage of such Certificates on the Bolero system¹⁴⁵.

2. Part four – Limitation of Liability

Part four of the Operational Service Contract deals with the liability of Bolero and its limitation. Clauses for exclusion or limitation of liability exist for all thinkable cases that may happen to a message sent on the Bolero system. Each clause [4.2. – 4.6. - except 4.5.(6)] contains the following final sentence:

“The Limit of Loss [defined in 4.1. (2)] for xyz [‘the Misdirection of a Message’ for example as contained in clause 4.2.(1)] shall be USD 100,000 per User per loss caused by an act or omission or series of acts and/or omissions arising from substantially the same cause.”

¹⁴⁵ see for details chapter 5.4., p. 119 and 6.3., p. 129 et seq and the references made therein of the Appendix to the Rulebook.

Clause 4.5.(6) deals with what is describes as “Catastrophic Failure”, in the case that all Certificates become unsuitable or unreliable for their usage. For the Users’ direct loss Bolero limits its liability to USD 1,000,000 “for all claiming Users payable in ratable shares”.

Clause 4.7. contains the provisions for the general limits of Bolero’s anyway (as described) limited liability. It reads:

“4.7. General Limits

(1) Extent of Liability. Bolero International accepts responsibility to pay Damages up to the Limit of Loss to the extent, but only to the extent, that the User has actually suffered loss from one or more of the causes of loss specified in sections 4.1 through 4.6 of this Part. Unless specifically identified in sections 4.1 through 4.6 of this Part, Bolero International accepts no liability whatsoever and howsoever arising. Any and all claims shall be subject to the terms set out in this section 4.7. However, the limits calculated pursuant to this part shall not take into account or affect any Service Credits accrued to the User in accordance with section 2.8.

(2) Overall Limit of Loss per Act or Omission or Series of Acts or Omissions. The Limit of Loss specifies in sections 4.1 through 4.6 applies to each User entitled to claim. If multiple Users are entitled to claim Damages arising from an act or omission or series of acts or omissions, the maximum liability of Bolero International shall be limited to:

USD 1,000,000.00

irrespective of the number of Users entitled to claim. In the event that the total amount claimed exceeds USD 1,000,000 for an act or omission or series of acts and/or omissions arising from substantially the same cause, each User shall have its claim reduced by the same proportion as the claims in excess of USD 1,000,000 bears to the total amount claimed.

(3) Aggregate Limit of Loss per Calendar Year. Bolero International’s aggregate liability to all Users for all claims shall be:

USD 10,000,000.00

in any one Calendar Year. Under no circumstances shall Bolero International’s liability exceed USD 10,000,000.00 irrespective of the number of claims or of the number of Users entitled to claim in any Calendar Year. In the event that the total amount claimed in any Calendar Year exceeds USD 10,000,000 each claim shall be reduced by the same proportion as the claims in excess of USD 10,000,000 bears to the total aggregate amount claimed in the Calendar Year in question.”

Clause 4.8. deals with technicalities of how claims are to be made against Bolero and when and how the overall limitations are to be calculated. Clause 4.8. (5) says that the parties will omit to proceed with small claims below USD 500.

As most computer users will already have experienced for themselves the degree to which computer systems are sophisticated and the number of their failures seem to be somewhat proportional to each other. The computer system in use on the Bolero system is, as outlined, of a quite high standard. And of course trials have been made, but only very few practical applications have taken place. It

cannot be said yet with absolute certainty to what extent the system is safe in respect of possible failures of any kind. SWIFT, providing the technical components of the Bolero computer system, has experience of almost three decades in the application of a similar computer system. But this does not mean that once and for all there will be no failures occurring.

As there is to a certain unknown degree a possibility existing that a failure will occur, the provisions made for this have to be seen in the context of the damage that might occur. As mentioned in the context of SeaDocs one failure among 10.000 transactions would have been a good quality control, but could still have lead to a damage of USD 20.000.000 or more¹⁴⁶. The measures of possible damages caused by a failure of the Bolero system are at least the same, if not much higher. And for each user the claim is limited to a maximum of USD 100.000 per cause, irrespective of the damage that occurred.

These limitations appear to be very much in favour of Bolero and not orientated on a balance of interests. This might lead to reluctance of potential users to leave the paper based transport documentation behind which might be slower and more vulnerable in respect of fraud, but at least the risks are more or less evaluated. By using Bolero the one risk evaluated might just be exchanged by a risk which is not evaluated yet.

The limitation of liability as contained in part 4 of the Operational Service Contract also has to be seen in context of the ambition of Bolero to become a relevant alternative to paper transport documentation. If a failure leading to Bolero's liability occurs under the circumstances now prevailing of a very limited use of the Bolero system, each User entitled to claim might still receive a fairly reasonable payment for the damages suffered (within the borders contractually stipulated). But if at a later stage there are hundreds, thousands, tens of thousands or even more transactions on the Bolero system per calendar year, and therefore the number of failures possibly occurring increases accordingly, the limitation of liability in respect of the number of potential damage suffering users seems even more unreasonable and inappropriate.

What was said to be one of the reasons for the failure of SeaDocs Bolero just might be about to repeat.

¹⁴⁶ See supra IV.A., p. 11

3. Parts five to eight – Service Level, Pricing, User support and Records retention

Part five of the Operational Service Contract states that the Bolero system will be available online to the User for at least 99% of the total minutes in every calendar month [clause 5.1.1.(1)] and makes provision for planned and unplanned downtime as well as for a Service Credit (5.2.). This is granted to the User when the Bolero system is not available to the User for at least three calendar months in a row.

Part six contains pricing and service details for the Basic User. The annual fee for the Basic User is USD 5.000 unless another user entitled to do so sponsors the Basic User (clause 6.3.). The User Account is described in its technical specifications (clause 6.2.). (The annual fee can amount up to USD 250.000 for other users depending on their trading volume and their need for assistance¹⁴⁷.)

Part seven gives details to what extent and in which way the User can obtain support for problems related to the Bolero system. There are two levels of Help Desk support, one of which is available 24 hours a day, 365 days a year, the other only to office hours of Greenwich Mean Time [clause 7.1.(1)(2)].

Part eight regulates the retention of records in the Bolero system, and a table points out the varying retention times, depending if on- or offline, and reaching to up to 1200 days¹⁴⁸.

C. The Bolero Association Service Contract

The functions of the Bolero Association Service contract¹⁴⁹ can be summarised as follows:

- a) convening and administering the different groups of users to find out about suggestions for improvements of the Bolero system to Bolero International
- b) administering the Disciplinary Procedures and the Rule Book Amendment Procedure.

The contract in clause 2 lists the services offered by the Bolero Association according to and described more specifically in the contract. Clause 3 empowers the Bolero Association to enter into the multi-lateral contract represented by the Rulebook on the User's behalf with all other existing and future users, and to amend the Rulebook from time to time according to the respective procedure. Details of the registration process are contained in clauses 4 and 5 as the Bolero

¹⁴⁷ see the report of Robin and Beatrice Arnfield, Opportunities and Challenges for Banks in Business-to-business E-commerce, p. 2, available at http://www.bolero.net/overview/what_say/articlep2.php3

¹⁴⁸ For details see the table on p. 46 et seq of the Operational Service Contract

¹⁴⁹ Available at http://www.boleroassociation.org/downloads/bal_sc.pdf

Association acts as registrar, and an annual fee of USD 300 is connected to the membership in the Bolero Association.

Any liability to the User is limited to an aggregate of a maximum of £ 1.000 that does not apply to liability for death or personal injury [clause 11 (1)].

Clause 11 (2) excludes any liability on the part of the Bolero Association

“to any User under or in connection with this agreement and /or the Bolero System to the extent that such liability arises as a result of:

- (a) the negligence of the employees, agents or subcontractors of the User
- (b) the late delivery of, failure to deliver, or error, omission, or inaccuracy in, data, information, or instructions to be provided by any user always provided that this sub-clause (b) shall not relieve BAL from its obligations in relation to BAL’s function as registrar;
- (c) the use of the network, system or services of any User or any third party or
- (d) any act or omission of the User in accordance with the provision of the Bolero System or the provisions of the Rules or the User Manual,
- (e) any services provided by or any acts or omissions on the part of BIL,
- (f) any breach by a User of the Rule Book or the User Manual;
- (g) any defects, errors or omissions in the Rule Book or User Manual;
- (h) any defects in the operation of the Rule Book or matters arising out of or in connection with the Rule Book Amendment Process;
- (i) the agency relationship described in clause 3 not being fully effective unless such lack of effect has been caused by BAL’s negligence or fraudulent action.”

The Bolero Association Service Contract is governed by English Law and contains an exclusive submission to English jurisdiction (clause 18).

Mirroring the mentioned functions the contract has two appendixes, the first being the Bolero Disciplinary Procedure and the second being the rules for the Bolero Rulebook Amendment Process.

Without going into detail, the Disciplinary Procedure contains provisions reaching from the set up of the Disciplinary Committee (clauses 2-4) and how it undertakes the investigation (clauses 6-8) to the sanctions the Committee may impose (clause 12), reaching from a warning to the termination of the User’s membership in the Bolero Association and its User status in Bolero International. Provision is made for an Appeal Tribunal as well (clauses 9-11).

The Rulebook Amendment Process regulates how proposals for an amendment of the Rulebook are to be made (clause 3) and how the Rulebook Committee shall proceed with the proposal (clauses 4 and 5). Clause 6 enables the committee to make urgent amendments in a shortened process. According to clause 7 Bolero International is involved in the amendment process as well and “no

amendments to the Rulebook shall be implemented without the Agreement of Bolero International”¹⁵⁰.

D. How Bolero works – an Example of a Transaction

On the basis of the contracts entered into with Bolero International and the Bolero Association the User handles the documentary transactions on the Bolero system.

An example of a life-circle of a Bolero Bill of lading (BBL) could be like this¹⁵¹:

- A seller agrees to sell a certain quantity of sprockets for a stipulated price to a buyer CIF financed by a documentary credit.
- The seller delivers the sprockets to the carrier, who loads them and produces a Bolero Bill of lading. In it the seller is declared as the shipper and the Holder of the BBL, whereas the importer is named as the to-order-party.
- The seller designates Bank A as the Pledgee Holder of the BBL and provides it with the documents required to obtain the documentary credit digitally via the Bolero system. In the meantime the buyer’s bank B issues a letter of credit.
- After checking the documents handed in, Bank A credits the seller’s account and designates Bank B as the Pledgee Holder on the Bolero registry.
- Bank B performs checks of the documents as it requires, and after the documents have passed the checks, it charges the buyer’s account against relinquishing its pledge and designating the importer as the holder of the BBL. The importer is named from the beginning of the transaction as the to-order-party of the BBL, and now as the holder he has the power to transfer the BBL. Bolero International notifies the importer that the carrier holds the goods to its order.
- The importer re-sells the sprockets, while they are underway. The importer designates the buyer as the Holder and the to-order-party of the BBL. Bolero International notifies the new Holder and to-order-party that the carrier holds the goods to its order.
- When the goods arrive at the port of destination the buyer surrenders the BBL, which is confirmed by Bolero International to the buyer, Bolero International also gives notice of surrender to the carrier. The BBL is not transferable on the Bolero system any more.
- The buyer or his representative presents himself at the port with the proof of identification which is required by the carrier and/or port. The goods are handed over to him by the carrier.

¹⁵⁰ clause 7.1.

¹⁵¹ Legal Aspects of a Bolero Bill of Lading, available at www.bolero.net/decision/legal

VIII. Bolero and the CMI Rules for Electronic Bills of Lading / UNCITRAL Model Law

A. The CMI Rules for Electronic Bills of Lading

The CMI Rules for Electronic Bills of Lading¹⁵², as they are model rules for contracts, have to be incorporated by agreement into the contract of carriage between carrier and shipper (see CMI Rule 1) and have this issue in common with the contractual provisions of the Bolero system. The system the CMI Rules proposes is that of direct communication between carrier and shipper without making use of a central depository. The carrier is intended to act as the registry carrying out the instructions of the shipper to give effect to an electronic transfer of the bill of lading (see CMI rules 4 and 7).

The Bolero system, as it makes use of a central registry, is not based on the CMI Rules¹⁵³. Their proposed system of the carrier acting as registry might be regarded as outmoded or nowadays unpractical, but it has to be appreciated that the CMI Rules were published in 1990 and at that time were surely ahead of the development¹⁵⁴.

B. The UNCITRAL Model Law on Electronic Commerce

The UNCITRAL Model Law on Electronic Commerce of 1996¹⁵⁵ is, as the name already suggests, not a source of law in force but a set of regulations to consider for states intending to create such law on electronic commerce¹⁵⁶. Accordingly the regulations of the Model Law can only be taken as a model set of rules for electronic commerce without actually having the force of law. But this does not mean a lack of relevance for the comparison to the regulations of the Bolero system. However, the difference in the approach has to be taken into consideration.

¹⁵² available at <http://www.uctshiplaw.com/cmi/cmirus.htm> and <http://www.comitemaritime.org/rules/rulesebla.html>

¹⁵³ Proctor, p. 152, says that “Bolero combines the procedures established in the CMI Rules with a central registry operated by an independent party.” Of the same opinion is Livermore et al, *Electronic Bills of Lading and Functional Equivalence*, available at http://elj.warwick.ac.uk/jilt/ecom/98_2liv/, at 3.2.: “The processes used in the project [Bolero] are based on the CMI Rules for Electronic Bills of Lading.” Both of these quotes might refer to an earlier stage of Bolero’s development, but the Bolero system in its current form does not have too many parallels with the CMI rules, apart maybe from the similar issues to regulate contractually (e.g. the private key), what rather seems to be due to practical necessities than an issue of specific similarity.

¹⁵⁴ for an analysis of the CMI Rules see Muthow, ch 8.1., available at <http://www.uctshiplaw.com/muthofrm.htm> and Kelly, *Tulane Maritime Law Journal* 16 [1992], p. 360 et seq.

¹⁵⁵ available on the homepage of UNCITRAL at <http://www.uncitral.org/english/texts/electcom/ml-ecom.htm>

¹⁵⁶ see the motives of the UNCITRAL Model Law at 2.

The UNCITRAL Model Law relies on the “functional equivalent approach”, which means that after analysing the purposes and functions of the paper based environment, a solution was sought to fulfil these requirements and functions in an electronic environment¹⁵⁷. This “functional equivalent approach” the UNCITRAL Model Law has in common with Bolero as it is obvious from the comprehensive legal feasibility study evaluating the requirements Bolero would have to meet¹⁵⁸.

Although the UNCITRAL Model Law deals mainly (in its first part) with electronic commerce in general, it has a second part, the first chapter of which deals with the carriage of goods (articles 16 and 17)¹⁵⁹.

The regulations of the first part address many, if not all problems Bolero had to face and regulate in its contracts itself. Provision is made for legal recognition of data messages (Art. 5), writing requirements (Art. 6), electronic signatures (Art. 7), requirements of documents being an original (Art. 8), admissibility of electronic messages as evidence (Art. 9) and retention of data messages (Art. 10). Articles 11 to 15 deal with the communication of data messages.

It is interesting to note that the only specific area of electronic commerce the UNCITRAL Model law deals with is that of carriage of goods, as in this context “electronic communications were most likely to be used and in which a legal framework facilitating the use of such communications was most urgently needed”¹⁶⁰. Articles 16 and 17 are not only applicable to carriage of goods by sea but also “by other means such as road, railroad and air transport”¹⁶¹.

Article 16 defines the scope of application for the chapter ‘carriage of goods’ by defining a contract of carriage of goods by a non-exclusive list of actions,

- “in connection with, or in pursuance of, [...]:
- (a) (i) furnishing the marks, number, quantity or weight of goods;
- (ii) stating or declaring the nature or value of goods;
- (iii) issuing a receipt for goods;
- (iv) confirming that goods have been loaded;
- (b) (i) notifying a person of terms and conditions of the contract;
- (ii) giving instructions to the carrier
- (c)(i) claiming delivery of goods
- (ii) authorizing release of goods;
- (iii) giving notice of loss of, or damage to, goods;
- (d) giving any other notice or statement in connection with the performance of the contract;

¹⁵⁷ See the Guide to Enactment of the UNCITRAL Model Law on Electronic Commerce at 16 et seq

¹⁵⁸ On the Legal Feasibility Study see chapter VI., p. 18 et seq.

¹⁵⁹ For a general analysis and comment on the UNCITRAL Model Law see Hare, § 12-6, p. 468 et seq

¹⁶⁰ See the Guide to Enactment of the UNCITRAL Model Law on Electronic Commerce at 110

¹⁶¹ See the Guide to Enactment of the UNCITRAL Model Law on Electronic Commerce at 110

- (e) undertaking to deliver goods to a named person or a person authorized to claim delivery;
- (f) granting, acquiring, renouncing, surrendering, transferring or negotiating rights in goods;
- (g) acquiring or transferring rights and obligations under the contract.”

In this list all three functions of the paper bill of lading can be found and even if the list is found to be insufficient to cover any contract of carriage, it can be relied on the fact that it is not exclusive.

Article 17 deals with the transport documents and reads as follows:

“(1) Subject to paragraph (3), where the law requires that any action referred to in article 16 be carried out in writing or by using a paper document, that requirement is met if the action is carried out by using one or more data messages.

(2) Paragraph (1) applies whether the requirement therein is in the form of an obligation or whether the law simply provides consequences for failing either to carry out the action in writing or to use a paper document.

(3) If a right is to be granted to, or an obligation is to be acquired by, one person and no other person, and if the law requires that, in order to effect this, the right or obligation must be conveyed to that person by the transfer, or use of, a paper document, that requirement is met if the right or obligation is conveyed by using one or more data messages, provided that a reliable method is used to render such data message or messages unique.

(4) For the purposes of paragraph (3), the standard of reliability required shall be assessed in the light of the purpose for which the right or obligation was conveyed and in the light of all the circumstances, including the relevant agreement.

(5) Where one or more data messages are used to affect any action in subparagraphs (f) or (g) of article 16, no paper document used to affect any such action is valid unless the use of data messages has been terminated and replaced by the use of paper documents. A paper document issued in these circumstances shall contain a statement of such termination. The replacement of data messages by paper documents shall not affect the rights and obligations of the parties involved.

(6) If a rule of law is compulsory applicable to a contract of carriage of goods which is in, or is evidenced by, a paper document, that rule shall not be inapplicable to such contract of carriage of goods which is evidenced by one or more data messages by reason of the fact that the contract is evidenced by such data message or messages instead of a paper document.”

The Bolero system seems to comply with the requirements of paragraphs 3 and 4 in that a reliable method has to be used to render the messages unique, because a lot of precautions have been made to make the Bolero system secure in all respects and the messages unique. However, a proof of practise is not delivered yet and it has to be awaited, if Bolero can deliver it. Interesting to note is the absence of requirements for the liability of the system provider in the UNCITRAL Model Law.

The provisions made for the switch to paper on the Bolero system are in compliance with those of the UNCITRAL Model Law, as the fact that the paper document was previously a data message will be noted on the paper bill of lading created on the Bolero system.

The comparison with the wording of the clauses of the Bolero contracts and the CMI rules is especially interesting in the relation to paper documents. For example, the CMI Rules (article 6) and the Bolero Rulebook (clause 3.2.(4)) define what regime shall be applicable to the contract of carriage covered by an electronic transport document by a recourse to the paper document (as ‘if a paper document had been issued’)¹⁶². The UNCITRAL Model Law has found a different way and is independent of paper documents also in this respect (see the wording of Article 17 clause 6 supra). This is important as it brings the independence of electronic documentation from paper documentation one step further, or in other words: the step forward being made by the use of an electronic document is made back by relying upon paper documents to evaluate, what law is applicable to the electronic document. In the long term the difference in the approach might become even more important as the current development might lead to paper documentation being abolished, and then the definitions of the CMI Rules and the Bolero contracts will have lost the basis they rely upon¹⁶³.

However, as long as the UNCITRAL Model Law has not been transformed into national legislation in global measures (or the subject is governed by a similar international convention with a great number of states having signed it), Bolero’s need for reliable legal and technical uniformity is not satisfied so that there is no alternative to Bolero’s present system of regulating all relevant matters in its own contracts. The help of the UNCITRAL Model Law, until it is globally adopted, might be the improvement of legal recognition of the Bolero system in courts and by the administration in countries not having adopted any such legislation yet, as they might interpret local legislation ‘in the light of the Model Law’.

IX. Bolero and South Africa

South Africa was not among the Initial Jurisdictions investigated in the legal feasibility study. So it is unclear yet, whether the South African legal system is ready for advanced computer appliances such as Bolero¹⁶⁴.

¹⁶² The same wording is contained in the CMI Rules 4 (b) ii and (d), 7 (a) iv and (d)

¹⁶³ see the critics of van der Ziel in the CMI Yearbook 1997, Antwerp II, p. 274

¹⁶⁴ For a general overview on the subject of South African Law and Electronic Commerce see the report of the law firm Edward Nathan & Friedland carried out in course of the e-commerce debate in South Africa for the preparation of the Green Paper on e-commerce. It is available at <http://www.ecomm-debate.co.za/docs/report.html>

To come a little closer to the answer to this question some brief remarks shall be made regarding the topics covered by Bolero's legal feasibility study and the legal questionnaire appended to it¹⁶⁵.

All of the Bolero contracts contain a Choice of English law-clause and a choice of forum¹⁶⁶. Concerning these contracts, in the (unlikely) event that a 'maritime claim' is concerned¹⁶⁷ as defined in sec. 1 of the Admiralty Jurisdiction Regulation Act¹⁶⁸, and under the precondition that the court will have jurisdiction, the choice of law of the parties will be upheld and the case will be decided under that law chosen according to sec. 6 (5) AJRA.

At common law a South African Court will normally respect a choice of foreign forum and refuse to entertain proceedings in such a dispute¹⁶⁹.

Section 7 (1) AJRA deals with the question of jurisdiction of South African Admiralty courts where there is a choice of forum clause¹⁷⁰. Even an exclusive choice of law clause might be overcome by the opinion and decision of the court that proceedings in South Africa would be more appropriate (sec. 7 (1)(a) AJRA) or should be stayed for any other sufficient reason (sec. 7 (1)(b) AJRA). The choice of English forum in the Bolero contracts might therefore not be watertight, but according to the provisions of sec. 7 (1) AJRA it would require substantive argument to get into the door of the South African Admiralty Courts.

Generally writing is not required for validity of a contract in South African Roman Dutch law¹⁷¹ and a requirement of a physical signature does not exist either¹⁷². The consent of the parties to be bound by their agreement is sufficient for a valid contract where no statutory or writing

¹⁶⁵ The review of South African Law is restricted to sea transport only and no other modes of transport will be dealt with.

¹⁶⁶ e.g. Rulebook cl. 2.5.(2) (3) (4), Bolero Operational Service contract part 2 cl. 2.16 (9) (10), Bolero Association Service Contract cl. 18

¹⁶⁷ The choice of English Law in the Bolero contracts concerns only those contracts and not the contracts of carriage entered into on the system. These contracts of carriage are intended to have an own choice of law clause not interfered with by the Bolero contracts for reserving the parties' contractual freedom. However, claims arising from these contracts of carriage will be dealt with according to the same measures as set out now.

¹⁶⁸ Act 105 of 1983, online available at <http://www.uctshiplaw.com/ajra.htm> and abbreviated 'AJRA' in the following.

¹⁶⁹ Hare, § 2-4, p. 95 citing in fn 211 Pollak, South African Law of Jurisdiction at 196

¹⁷⁰ see detailed on this issue Hare, § 2-4, p. 95 et seq

¹⁷¹ Innes CJ in *Goldblatt v. Fremantle* 1920 AD 123 128; for details see Christie, Law of Contract in South Africa, p. 115 et seq

¹⁷² Eiselen, SA Merc LJ 1995, 1 at 10/11

requirements agreed between the parties exist¹⁷³. Special formalities required by statute for the contracts involved on the Bolero system in respect of sea transport seem not to exist.

However, the Due Diligence Report prepared in the course of investigation for the preparation of the South African Green Paper on e-commerce comes to the conclusion, that with reference to section 1 of the South African Carriage of Goods by Sea Act¹⁷⁴ “it not clear whether an electronic contract of carriage of goods by sea will be recognised for the purposes of the Act. It is also unclear whether a bill of lading can be electronically created.”¹⁷⁵ These doubts might exist in a situation purely based on statutory provisions, but with a view on the regulations of the Bolero contracts, especially the Rulebook, the situation should be regarded as being not that ‘unclear’, but as in favour of the Bolero system.

The new South African Sea Transport Documents Act¹⁷⁶ is not yet in force, but even when it comes into force its influence on the situation will be limited. On the one hand the Sea Transport Documents Act is intended to be open for electronic documents (see sec. 3 (1) (b) according to which a Sea Transport Document may be transferred “through the use of a telecommunication system or an electronic or other information system”), on the other hand the definition of the Sea Transport Document (sec. 1 (a) – (e)) does not include any electronic forms of documents. An option exists for the Minister of Transport to extend the definition of the Sea Transport Document by regulation to electronic forms of such documents according to sec. 9 (1) (a), but this option has not been made use of yet and as long as this has not happened, there is no benefit for modern forms of communication from the Sea Transport Documents Act.

The admissibility of computer evidence in South African courts is regulated partly¹⁷⁷ by the Computer Evidence Act 1983¹⁷⁸, which provides for computer printouts being admissible as evidence in civil proceedings (sec 3.1) only after they have been authenticated by an affidavit of a deponent (sec.2). The South African Law Commission investigated the Computer Evidence Act of

¹⁷³ Reid Bros (SA) Ltd v Fischer Bearings Co Ltd 1943 AD 232 at 241; for details see the Report on Electronic Commerce - legal issues, chapter 3 at http://www.ecomm-debate.co.za/docs/report3.html#N_10

¹⁷⁴ Act 1 of 1986, online available at <http://www.uctshiplaw.com/cogsa.htm>

¹⁷⁵ Due Diligence Report at 73, p. 126, available at <http://www.ecomm-debate.co.za/docs/pdf/report-diligence.pdf>

¹⁷⁶ Act 65 of 2000, assented by the President on December 5th 2000 and published in Government gazette No. 21884 (Vol. 426 of December 13th 2000). It comes into force on a date to be fixed by proclamation of the President in the Gazette and is also online available at <http://www.parliament.gov.za/acts/2000/act65-2000.pdf>, to which a link is provided at <http://www.uctshiplaw.com/titosu.htm>

¹⁷⁷ Further statutes and case law exist for which see the report at <http://www.ecomm-debate.co.za/docs/report4.html>

¹⁷⁸ Act 57 of 1983

1983 and found it to be “inadequate”, as it seems to apply only to data created by some form of human intervention and not automatically¹⁷⁹.

Lesser requirements for evidence exist under the Admiralty Rules for the Court in Admiralty compared to the High Court in Common Law¹⁸⁰. Under Rule 22 (10) (f) faxed copies of pleadings, affidavits or documents, when originals are not available, may be used, but this Rule does not say anything about electronic evidence. Further, the original documents may still be required as well. Therefore the Admiralty Rules do not change the general situation either.

The South African Interpretation Act¹⁸¹ sets out in section 3 the interpretation of writing in a quite wide sense which would possibly allow the inclusion of electronic data, but only an amendment would bring certainty instead of relying on this rather extensive approach¹⁸².

The South African legal system is not yet prepared for payments made by electronic money¹⁸³, but as far as electronic letters of credit on the Bolero system are concerned, the contractual provisions of Bolero should be sufficient, as no statutory writing requirements seem to exist.

Stamp duties in connection with Bolero transactions will at least arise in the context of customs from the Customs and Excise Act¹⁸⁴ rule 39.12, as “the first copy of any bill of entry (including voucher of correction)... shall, before delivery be stamped ‘notification copy by the clearer’...”, although further South African customs, tax and other administrative stamp duty requirements were not investigated as they were not investigated in the course of the legal feasibility study either¹⁸⁵.

¹⁷⁹ see <http://www.ecomm-debate.co.za/greenpaper/theme1.PDF>, see also detailed on Evidence the report on electronic commerce legal issues itself at <http://www.ecomm-debate.co.za/docs/report4.html>

¹⁸⁰ Hare, § 2-7.1, p. 103

¹⁸¹ Act 33 of 1957

¹⁸² for details see Hare, § 14-8, p. 569, for a more restrictive approach not permitting such extensive interpretation see the Due Diligence report at p. 114 et seq, available at <http://www.ecomm-debate.co.za/docs/pdf/report-diligence.pdf>

¹⁸³ see the report on electronic commerce legal issues at <http://www.ecomm-debate.co.za/docs/report6.html> and the Position Paper (11/99) of the South African Reserve Bank at <http://www.resbank.co.za/nps/pp0499.html>. Nevertheless South African residents may make small transactions of up to R 20.000 on the internet via credit/debit card, see the statement of the South African Reserve Bank of February 23rd 1999 at <http://www.ecomm-debate.co.za/docs/report12.html>

¹⁸⁴ Act 91 of 1964

¹⁸⁵ A source of stamp duties in this context will surely be the Stamp Duties Act 77 of 1968.

One of the basic principles of the South African Law of things is that of publicity¹⁸⁶. As a result of this, possession is required for the constitution of a valid pledge and the continued existence thereof¹⁸⁷. Delivery by attornment and accordingly constructive possession is acknowledged under South African law as respecting these principles¹⁸⁸. The requirements of attornment are that

- “(a) there is a mental “concurrence of all three interested parties”¹⁸⁹ ¹⁹⁰
- (b) the party who the transferor and the transferee assumed to have control of the article in question actually did exercise control over it when he consented to hold it in future on behalf of the transferee.”¹⁹¹

Bolero’s construction of pledge security by means of mere messages sent will accordingly most probably be valid under the precondition that the electronic environment of the attornment will be acknowledged by the courts.

There seem to be no requirements concerning Cryptography or requirements of data protection in South African law effecting the Bolero system¹⁹².

To summarise the investigation as to whether the South African legal system and its courts would accept the implications of the Bolero system it can be said that a quite considerable amount of uncertainty exists, as in most jurisdictions investigated in the legal feasibility study as well. In the end only practise will show whether South African courts will accept the Bolero contracts and they in turn will survive a challenge in court. The chances for this do not appear to be too bad, as to some extent the South African legal system is preparing for the age of e-commerce, but it has to be admitted, that the South African legal system is not ahead of the development¹⁹³.

¹⁸⁶ see van der Merwe, para. 10

¹⁸⁷ van der Merwe, para. 54

¹⁸⁸ Generally on attornment see Silberberg and Schoeman’s at 263 et seq

¹⁸⁹ These are the transferee, the transferor and the party holding the goods for either of them.

¹⁹⁰ as authority quoted inter alia Court v. Mosenthal & Co (1896) 13 SC 127 153-154 155-156; Hearn & Co (Pty) Ltd v. Bleiman 1950 3 SA 617 (C) 625 C-G; Air-Kel (Edms) Bpk h/a Merkel Motors v Bodenstein 1980 3 SA 917 (A) 923 B

¹⁹¹ Silberberg and Schoeman’s at 263 / 264

¹⁹² South Africa is not party to the Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies, see <http://www.wassenaar.org/docs/index1.html> This agreement is the source of most of cryptography restrictions in the initial jurisdictions, see supra at VII.I., p. 41

¹⁹³ For a general overview of the barriers of e-commerce provided by the South African statutes see the Due Diligence report at <http://www.ecomm-debate.co.za/docs/pdf/report-diligence.pdf>

X. Bolero in the surrounding international legal framework

Mention has already been made of various international conventions or sets of standard / model contract clauses in the context of the legal feasibility study. The results shall be summarised and further commented on in this chapter.

The Convention on Contracts for the International Sale of Goods (1980) does not make express provision for electronic communication for contracts of sale of the kind Bolero makes use of, but only for telegram and telex (Art. 13). To fit EDI or computer communication into the framework of CISG and regard it as a form of 'writing' these mentioned modes of communication could be interpreted in a wider sense¹⁹⁴. Although a general freedom of form exists under CISG (Art. 11), some jurisdictions have taken the option according to Art. 96 CISG to uphold writing requirements for contracts of sale¹⁹⁵ and simultaneously upholding obstacles in the way of fully electronic communication, which could only be overturned by the mentioned interpretation of writing in a wider sense.

The Incoterms already provided for the use of electronic transport documentation in their 1990 revision.

“The main reason for the 1990 revision of Incoterms was the desire to adapt terms to the increasing use of electronic data interchange (EDI)”¹⁹⁶, particularly in the context of bills of lading.

The clause under the seller's obligations A 8 since then reads:

“Where the seller and the buyer have agreed to communicate electronically, the document referred to in the preceding paragraph [the transport document, some examples of which are listed, e.g. a negotiable bill of lading or non-negotiable sea waybill] may be replaced by an equivalent electronic data interchange (EDI) message.”

The Incoterms in their 2000 revision continue this computer-using-friendly approach. However, the Incoterms (1990 and 2000) do not make provision for contracts of sale concluded electronically. The way to overcome this obstacle is to amend the Incoterms in the contract of sale, as they are model contract clauses only, in that they cater for electronic contracts of sale as well.

¹⁹⁴ as proposed by Eiselen, *Electronic commerce and the UN Convention on Contracts for the International Sale of Goods (CISG) 1980*, *EDI Law Review* (1999), 21, 35 et seq, also available at <http://www.cisg.law.pace.edu/cisg/biblio/eiselen1.html>

¹⁹⁵ for an updated list of these countries (currently Argentina, Belarus, Chile, Estonia, Hungary, Latvia, Lithuania, Russian Federation and Ukraine) see <http://www.cisg.law.pace.edu/cisg/countries/cntries.html>

¹⁹⁶ Incoterms 1990, Introduction, p. 6 at 3.

Still¹⁹⁷ under development by a working group of the ICC and LegalXML¹⁹⁸ are the Eterms¹⁹⁹ as contractual model rules similar to the Incoterms, but specially developed for application in e-commerce. As no draft is yet available the relation to the Bolero system cannot be evaluated.

The documentary credits are almost invariably governed by the UCP 500 of 1993. The Art. 23 – 30 of the UCP 500 do not contain provisions for documents being handed in electronic form in order to obtain a documentary credit²⁰⁰.

According to Art. 12 of the UCP 500 the issuing bank can instruct the advising bank by “any teletransmission”, which should also include electronic communication of the kind Bolero uses. But there is no provision made for such teletransmission between the bank and the applicant or beneficiary. However, as the UCP are model contract clauses it is the same situation as with the Incoterms and they can be amended and incorporated by the parties as they wish.

The Hague Visby rules apply to Bolero Bills of Lading where they would have applied to paper bills of lading according to the Rulebook clause 3.2.(4).

XI. Bolero’s competitors

There are at least two other enterprises currently under development and more or less in use which aim to use the world wide web for processing a complete international sale transaction including the transport documents involved, but also involving letters of credit and online payment²⁰¹. None of these systems offer (nor obviously plans to do so) the full electronic equivalent to the paper bill of lading.

The first of the enterprises mentioned is found at <http://www.cceweb.com> and the Toronto-based company is trading under the trademark “@Global Trade™”. As the commercial launch is planned for fall 2001 it is still too early to say whether @Global Trade™ is going to come as far as Bolero has got already, although Bolero has not yet proved to be of practical relevance either.

¹⁹⁷ The E-Terms Repository was planned to be available on the ICC-website <http://www.iccwbo.org> in early 2000, see http://www.iccwbo.org/home/news_archives/1999/electronic_contacts.asp

¹⁹⁸ For general information see <http://www.legalxml.org>

¹⁹⁹ See on the web <http://www.legalxml.org/ETerms/> with very limited access to information for the public.

²⁰⁰ See already supra VI.E., p. 34

²⁰¹ For comparative information about the projects see Damas, E-shippers kick the paper habit, American Shipper February 2001, available at <http://www.cceweb.com/amshipfeb2001.htm> Bolero is said to be currently developing an online payment system as well.

One of the main features of @Global Trade is the ‘eLC’, the “electronic letter of credit card”²⁰², which is the marriage between a credit card and the documentary credit and seems to be a result of the co-operation with the Visa International company. The legal basis of eLC transactions are the UCP 500, the Incoterms 2000, the CMI Uniform Rules for Sea Waybills and the @Global Trade user agreement²⁰³.

The other main component of @Global Trade is its “documents clearance center”²⁰⁴. In this center, working like a trade finance department of a bank, in broad terms all documents involved in an international documentary credit are collected and checked and upon compliance, online payment is made on the letter of credit issued²⁰⁵.

Surprisingly no preparatory work in the complexity of the legal feasibility study of Bolero seems to have been undertaken.

It has not been possible to reveal the structure of ownership of cceweb.com, but in this respect it can be said, that the spread ownership structure of Bolero, including above all SWIFT as reputed trusted third party supplying the Central Messaging Platform and the Title Registry, leads to an advantageous quite neutral positioning which in the past especially SeaDocs lacked and which was said to be one of the reasons for its failure²⁰⁶.

The other project is found at <http://www.tradecard.com> and its structure is similar to that of @Global Trade™ as both of them are focussed on B2B online payment and the documents involved are only an aspect of this. New York based Tradecard has in common with @Global Trade™ a partnership with a major credit-card company, which is Mastercard, and the concept as such mainly as well²⁰⁷. So far the application of the Tradecard system is limited to trade transactions within and

²⁰² for details see http://www.cceweb.com/elc_card.asp

²⁰³ See the answers on question 6 “What about legalities? Are transactions covered by UCP500?” and question 42 “Does @GlobalTrade assure buyers and sellers in different jurisdictions that a mutually acceptable legal framework will support their trade commitments?” at <http://www.cceweb.com/faq.asp>

²⁰⁴ The first of such in Europe has just been agreed to be piloted by Dresdner Bank between April and August 2001, see http://www.cceweb.com/press_dresdner.asp

²⁰⁵ for details see <http://www.cceweb.com/whatisgt.asp>

²⁰⁶ see supra IV.A., p. 11

²⁰⁷ Many standard contracts and forms of Tradcard are available on the web, a list of downloads is available at <http://www.tradecard.com/BuyerSeller/Apply/FormsAndContracts.html>

for the fees for a transaction on the Tradecard system see

<http://www.tradecard.com/BuyerSeller/FormsContracts/TradeCardFeeSchedule.pdf>

for a glossary of the Tradecard terms see <http://www.tradecard.com/resources/Glossary.html>

between Hong Kong, Japan, Korea, Taiwan Singapore, Canada and the United States. The extension to China, Western Europe and Latin America is expected for late 2001.

The main component of Tradecard is its patented transaction system which compares the data of the electronically submitted shipping documents and the purchase order. If the data contained match, payment is made online.

The role of Tradecard in the international sale transaction is thus the same as that of @Global Trade™, that of a trade finance department of a bank coupled with the online processing of the documents involved in this, that is, in terms of Tradecard, a form of ‘eOutsourcing’²⁰⁸. In this respect Tradecard makes use of automated document processing to a greater extent than @Global Trade™. It does not offer an electronic letter of credit but an alternative method of payment which is similar to a letter of credit but without making use of paper documents²⁰⁹.

The World Trade Center Association, which originally founded Tradecard, currently holds a minority stake in it. The majority of Tradecard is owned by GE Information Services, an electronic trading community of 40.000 companies, the insurance company Marsh & McLennan Co., which plans to provide the Tradecard users with its cargo insurance and risk management services and the venture capital firm E.M. Warburg, Pincus & Co²¹⁰. Also this structure of ownership can be regarded as more problematic than that of Bolero, as not all of the owners could be without interest on the transactions of the Tradecard users on the system.

XII. Future Development

The future is not predictable, especially in the world of e-commerce. But with a view on the current status and the history of Bolero’s development so far, it can be said that Bolero’s concept is brilliant and a practical need for it undoubtedly exists. The development of its services shows that what is asked for as well as offered, is not just electronic transport documentation, but also online contract negotiation and payment, which is already technically possible. Bolero is constantly developing, in the direction of electronic online payment as well, but the presence and the concepts of the competitors might prove that an electronic bill of lading is superfluous and the electronic sea

²⁰⁸ for details see http://www.cceweb.com/e_outsourcing.asp

²⁰⁹ see Damas, E-shippers kick the paper habit, American Shipper February 2001, available at <http://www.cceweb.com/amshipfeb2001.htm>

²¹⁰ see S. Marjanowic, Two web trade systems ready for launching, in: The American Banker, September 24th 1999, reprint available at <http://www.tradecard.com/News/Articles/092499.pdf>

waybill might be sufficient in the electronic environment. But above all is the question of how long Bolero will survive without any relevant application of its system.

What has been achieved so far is quite a lot. An obviously working contractual system has been established, lots of customers have signed as well, but what every commercial enterprise needs is commercial success, and that certainly has not been achieved yet. This shows drastically the comparison²¹¹ of the number of transactions on the SWIFT system in its first year of commercial application (3,4 million) with only one reported transaction on the Bolero system²¹² in its first 4 months approximately²¹³. It is only too obvious that no basic confidence of any party involved in a Bolero transaction (except maybe of Bolero.net itself) has been established. This is not surprising due to all the unexpected perils a user might have to face using Bolero instead of old-fashioned paper documentation. So what in my view has to be urgently undertaken is a further extensive legal investigation of all the aspects left out of the study so far, for example of governmental writing requirements, and suggestions of solutions. This could lead to a picture of risks and requirements for the Bolero Users which is more complete than it is now, and that could in turn lead to more confidence and factual usage of Bolero.

But if this is not undertaken or the practical usage of Bolero does not increase dramatically due to other factors, then the fate of Bolero might be similar to that of SeaDocs, although Bolero might have got a step further by having broad support. But in the end this does not matter if there is no commercial application and/or success.

XIII. Summary of Critics and Conclusion

The work has revealed that Bolero is indeed no longer an experiment, but a commercial enterprise seeking commercial success. Bolero is in theory, but not in practise, an alternative to paper-based transport documentation and will not be an alternative in practise in the near future. For this a lot more practical application would have to be established. It is uncertain, when Bolero and/or its competitors or someone else will replace the current form of paper based negotiable transport documentation, but it is certain that it will happen. Technology is much too advanced and advantageous for paper transport documentation to survive in the long term.

²¹¹ As both systems, SWIFT and Bolero, are EDI-based and are applied in a similar business environment, the comparison is admissible in my opinion.

²¹² Fairplay February 24th 2000, p. 22

²¹³ 4 months calculated from Bolero's commercial launch (27.9.1999) till end of January 2000, the Fairplay article was published end of February 2000. This single transaction might be the only for even a longer period of time, that means, till now, if Bolero's silence on practical application can be taken as admission that there was no further transaction.

The major issues giving rise to criticism of Bolero which this work so far has revealed, are summarised in the following along with some general remarks.

In the first group of points giving rise to criticism some aspects of the Bolero system can be pointed out which lead to a great amount of uncertainty for the Bolero user when using the Bolero system.

Aspects of this uncertainty are:

- Bolero seems to be not too sure if their chosen legal framework will not be overturned by courts [for example see advise to replicate Convention protections (legal feasibility study p. 43) in spite of incorporation clause in Rulebook cl. 3.2.(4)].
- The legal feasibility study (p. 50) comes to the conclusion that it would be difficult to predict the attitude of an individual court confronted with a contract of carriage not in written form. Unfortunately there is no further comment on this issue and so the users are left alone with this problem. Of course only practical usage and the challenge of Bolero in courts can bring certainty, but all of this still has to be awaited.
- The issue of securities for creditors in Bolero's electronic environment is to a large extent not sufficiently evaluated²¹⁴.
- In general Bolero advises its users to seek legal advice to assess for themselves, whether and in how far the rulebook complies with the laws of the country the User wishes to trade with, if not one of the initial jurisdictions²¹⁵. But even if it is one of the initial jurisdictions, a great amount of uncertainty remains. So the user has to incur even more costs to get started on the Bolero system.

From a conceptual point of view the Bolero system has to be criticised for the following points (among others):

- Clause 3.2.(4) of the Rulebook lacks the independence from paper documents as the CMI rules do. The pattern to elaborate which law / convention applies to the BBL is to find out what law would have applied had a paper document been issued. As shown the UNCITRAL Model Law (Article 17 (6)) contains a clause leading to the same result but linking directly to the relevant convention.
- The whole contractual structure of Bolero is very complicated. There are numerous contracts for the users to be entered into with hundreds of pages, along with rules and appendixes. It is clear, that complex systems such as Bolero also require lots of contractual provisions. Above all

²¹⁴ See supra VI.F., p. 35 et seq.

²¹⁵ See the answer to the question 'How do I know if the Rule Book is compliant with the laws of the country that I am trading with?' at <http://www.bolero.net/decision/faqs/legal.php3> and supra VI.A., p. 20 at fn. 90

because the whole legal environment already existing for paper transport documentation had to be replicated, but it surely would have gone a little easier as well.

- Along with the volume of pages of agreements the user enters into, the terminology of the contracts is quite complicated as well. Of course, when in daily application the persons involved with Bolero will get used to it, but the lists of definitions and the terminology as a whole might be another reason to discourage potential users from enrolling with Bolero.
- Bolero is open only to its users who have signed the contracts and, not to the public. Transactions on the system involving a party not being a Bolero user would require a switch to paper or a future amendment of the system. For Bolero's competitors this could be a lesser problem, as the application process is less complicated and most probably faster. However the application processes of all the three systems are not completely online.

Among further contractual details which have to be criticised, above all the limitation of Bolero's liability in part 4 of the Operational Service Contract is in no way adequate or appropriate and is that much in favour of Bolero, that any relation to fairness or reasonableness seems to be missing²¹⁶.

Mention must also be made of the poor co-operation of the Bolero staff in preparing this work, as there were no substantial replies at all either to requests for further material or on sometimes critical questions.

In the end only time will tell what the fate of Bolero and its undoubtedly valuable concept will be, but with a continuing lack of practical application and the listed points of criticisms the perspective does not look too good. Whether the possible end of Bolero sometime in future will also mean the end of the electronic bill of lading even has to be awaited. But the current and constant development in the area of B2B e-commerce shows that nothing is impossible.

²¹⁶ for details see supra VII.B.2., p. 48

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4. Hearn & Co (Pty) Ltd v. Bleiman 1950 3 SA 617 (C) 625
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11. The Sormovskiy 3068 – S.A. Sucre Export v. Northern River Shipping Ltd. [1994] 2 LLR 266

C. World Wide Web site – URL's

1. The International law firm Allen & Overy, which co-prepared Bolero's legal feasibility study, at <http://www.allenoverly.com>
2. The Bolero International Limited, trademark of which is bolero.net, at <http://www.bolero.net>
3. The Bolero Association Limited at <http://www.boleroassociation.org>
4. Internet B2B platform for financial services and international trade transactions at <http://www.cceweb.com>
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12. The Internet Engineering Task Force at <http://www.ietf.org>

13. Non-profit organisation to develop open, non-proprietary technical standards for legal documents at <http://www.legalxml.org>
14. Silicon Crafts Software at <http://www.ozdocs.com>
15. The Parliament of South Africa at <http://www.parliament.gov.za>
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22. The United Nations Commission on International Trade Law at <http://www.uncitral.org>
23. The United Nations Economic Commission for Europe at <http://www.unece.org>
24. The Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies at <http://www.wassenaar.org>
25. The World Wide Web Consortium at <http://www.w3.org>

D. Bolero documents available on the internet

For lists of downloadable Bolero documents see:

<http://www.bolero.net/decision/legal/legal.php3>

http://www.boleroassociation.org/dow_docs.htm

Legal feasibility study:	Http://www.bolero.net/downloads/legfeas.pdf
Rulebook:	Http://www.boleroassociation.org/downloads/rulebook1.pdf
Rulebook Appendix (Operating Procedures):	Http://www.boleroassociation.org/downloads/op_procs.pdf
Bolero Association Service Contract (including appendixes):	Http://www.boleroassociation.org/downloads/bal_sc.pdf
Bolero Association Articles of Association:	http://www.boleroassociation.org/downloads/bal_art.pdf
Bolero Association Memorandum of Association:	http://www.boleroassociation.org/downloads/bal_memo.pdf

XV. Appendix: The Bolero Operational Service Contract - Basic User

Note: The Bolero Operational Service Contract for a Basic User is appended only to the hardcopies of this dissertation submitted to the Faculty of Law of the University of Cape Town. If it is not available on Bolero's website again, it is submitted to contact Bolero in order to obtain a copy.