



THE PROBLEM OF TRANSFER ELECTRONIC BILL OF LADING

BY

MR. CHANOTHAT RUNGRUANGPATANA

AN INDEPENDENT RESEARCH PAPER SUBMITTED IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF MASTER OF LAWS
(BUSINESS LAW)

GRADUATE SCHOOL OF LAW
ASSUMPTION UNIVERSITY

NOVEMBER 2007

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Independent Research Paper Title : The Problem of Transfer Electronic bill of lading
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ABSTRACT

Carriage of goods by sea takes important role in international trade because goods are to be transported from a seller to one place to a buyer in another place. In this mode of transportation the carrier will usually issue to the shipper a bill of lading evidencing to receipt of goods in to the carrier's custody.

Electronic bill of lading system (EBLs) can solve many problems that paper bill of lading are facing. Firstly, Electronic bill of lading can be delivered by computer network. It is very quick and can facilitate international businesses. Secondly, it can save time and cost about dispatch and manage a document. Thirdly, it can generate group of people/trader who have similar ways of trading who believe that electronic bill of lading is safety and efficiency. There are some system have been developed at international level ,for example, The Seaborne Trade Documentation System (SeaDocs) has centre point in Bank, The Committee Maritime International (CMI), Bill of Lading Electronic Registry Organization (Bolero).

Electronic bill of lading may not be used in Thailand. Though bill of lading is a transport document that performs three functions, one function that electronic document cannot support is a document of title representing the goods being traded. In Thailand, when you want to transfer bill of lading, you must endorse and transfer to transferee. However, in case of electronic bill of lading, it cannot be endorsed because it is not paper.

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Chapter 1

Introduction

1.1 Background and General Statement of the problems

The “shipped” or “ocean” bill of lading is a transport document that performs three functions:

First, it is a receipt issued by the carrier acknowledging that the goods indicated in it have been delivered to him and loaded on board a vessel;

Secondly, it evidences the terms of the contract of carriage between the holder and the carrier; and

Thirdly, it is a document of title representing the goods being traded.

Under the contract of carriage of goods, the carrier of the goods, (the issuer of the bill of lading), has the duty to deliver the goods represented by it only to the holder of the bill.

This is problematic since the carrier who mis-delivers the cargo to someone who turns out not to be the lawful holder of the bill of lading is liable in conversion.

Because the speed of ships has increased while the processing of paper documentation has not, the bill of lading is failing satisfactorily to perform the functions for which it was originally developed.

Therefore, the electronic bill of lading has been developed such as SeaDocs, Open model: CMI, and Closed model: Bolero.

It seems almost inevitable that in the not too distant future traditional paper letters of credit will be replaced by electronic equivalents. However, many legal problems need to be overcome before true equivalence can be achieved.

1.2 Hypothesis of the Research

Electronic bill of lading may not be used in Thailand. Though bill of lading is a transport document that performs three functions, one function that electronic document cannot support is a document of title representing the goods being traded. In Thailand, when you want to transfer bill of lading, you must endorse and transfer to transferee. However, in case of electronic bill of lading, it cannot be endorsed because it is not paper.

1.3 Objectives of the Research

This research is to analyze the concept of bill of lading such as its definition and its function. Later, the research also examines the drawbacks of the traditional of paper bill of lading. Then the development of electronic bill of lading is investigated as well. In addition, problems of transfer electronic bill of lading are studied in detail. Finally, the solution and suggestion relating to transfer electronic bill of lading will be made in Thailand.

1.4 Research Methodology

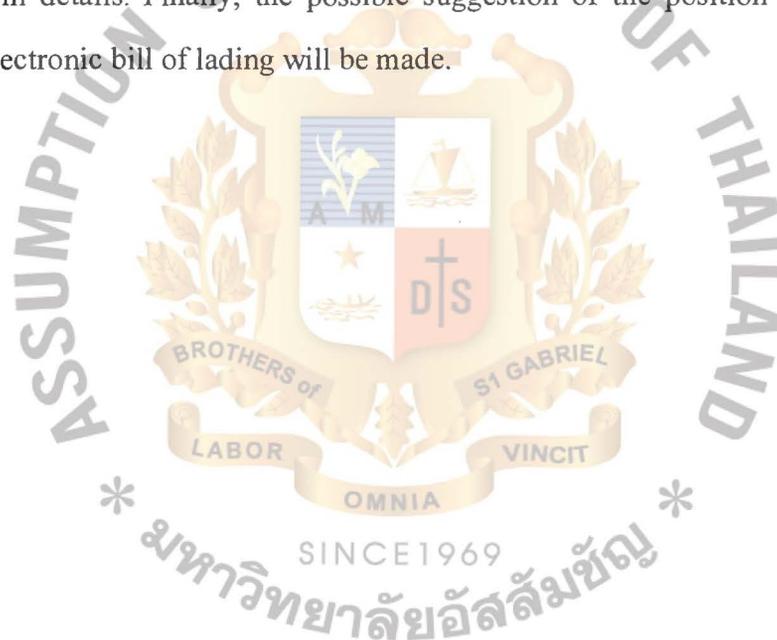
Documentary Research that mainly studies and analyzes from books and journals. Those materials have already been collected from Institute of Advance Legal Studies, University of London, Library of The London School of Economics and Political Science (LSE), Library of King's College, University of London, Library of University College London (UCL), Library of Assumption University, Library of Chulalongkorn University.

1.5 Scope of the Research

The Scope focuses on general principle common law (UK law). Some aspects of Australian law relating to bill of lading also are mentioned. Finally, Thai law concerning to bill of lading is examined as well.

1.6 Expectation of the Research

The pitfall of traditional bill of lading is examined. This brings more understanding among International Trade Lawyer. Then the development of electronic bill of lading is analyzed in details. Finally, the possible suggestion of the position of Thai law relating to electronic bill of lading will be made.



Chapter 2

The Process of Bill of Lading

2.1 Meaning of International Trade

The meaning of International Trade is buying, selling and exchange international goods with one country to another country. It consists of import and export. International Trade may be the business between individual and individual, the state and the state or between the government and individual.

Dr. Sompong Fungarlom¹ states that International Trade has happened because of International Division of Labour. Each country has the factors in the production different. Those factors, for example, are natural resources, asset and the labour. It may produce comparative advantage to trade among countries.

Carriage of goods by sea plays important roles in international trade because goods are to be transported from a seller in one place to a buyer in another place. In this mode of transportation the carrier will usually issue to the shipper a bill or bill of lading evidencing the receipt of goods into the carrier's custody.

2.2 History and background of carriage of goods by sea and the original bill of lading

In the beginning, the route by land was regarded an important way for humankind using in carriage of goods. Later, using wheeled vehicle had happened. This caused labour-saving. When human invented the ship, the human used ship to carriage of goods by sea increases again. In the past, ship was made of the wood. It was used to load of cross or follow the river. Egypt developed the ship for better than the past

¹ Sompong Fungarlom, International Trade Business (Bangkok: Department of Academic, 2006), p. 12.

since 4000 before B.E. The carriage goods by sea have been important because carriage goods by sea are cheaper than carriage goods by land.

The carriage of goods by sea has brought thriving to humankind. In 19 century it had steam machine to move a ship. The carriage goods by sea had been considerably developed and brought benefits for international businesses because, firstly it can control the duration of time that a ship reaches and secondly, the navigation must does not depend on the wind as happened it in the past.

Historically, there was no the maritime law in Greek and Roman time. Therefore law of carriage goods by sea originally comes from local custom and the way practices of merchants. However, the originality of the bill of lading can be found at the first time at Italian law in 11 century, namely “MARITIME ORDINANCE OF TRANI OF 1063”². It says that master of ship must register and have a ship’s book. The evidence of carriage of goods by sea has developed respectively. In the beginning, there was only witness coming to ship’s book finally, then there was a contract between merchant and master of ship. The list from ship’s book must be copied to a document with the signature of master of ship. There was only one document that had been produced. So, this caused a problem to proof who had the right over the goods when the document lost. In the 16 century bill of lading was considerably used.³

2.3 Characteristics of Bill of lading

As Emmanuel T. Laryea explains⁴, the “shipped” or “ocean” bill of lading is a transport document that performs three functions:

² Maritime Ordinances of Trani (1063 A.D.), article I.

³ Panida Wattanavekin, “Effect of the Transfer of bill of lading in Thai legal system” (Master of dissertation Thesis, Chulalongkorn University; 1985), p. 8.

⁴ Emmanuel T. Laryea, Paperless Trade: Opportunities, Challenges and Solutions (Netherland: Kluwer Law International, 2002), pp. 63-64.

First, it is a receipt issued by the carrier acknowledging that the goods indicated in it have been delivered to him and loaded on board a vessel;

Secondly, it evidences the terms of the contract of carriage between the shipper and the carrier; and

Thirdly, it is a document of title representing the goods being traded.

2.3.1 Bill of Lading as Acknowledgement of Receipt

Historically, the primary use of the bill of lading was to show evidence of the fact of receipt by the carrier of the goods to be carried to a particular destination. The modern bill of lading started as an excerpt from an entry in a book of lading maintained by carriers.

McLaughlin⁵ points out that in the past goods were shipped from one port to another, merchants who were without transport facilities had to procure the services of a carrier to transport their goods. In the course of trade, disputes arose between shippers and ships' masters as to exactly what goods were delivered on board. This raised a need to establish some unquestionable evidence of goods delivered on board, and various cities passed statutes to that effect as early as 1063. These statutes required every master of a ship to take an independent clerk (a public officer who was obliged to take an oath of fidelity) to enter in a parchment book or register a record of all goods received from shippers and laden on the vessel. The clerk was supposed to be a man of honour appointed to safeguard the interests of the shipper and the captain, and was not the agent of either party. The duties of the clerk were so important that the master could not load anything on the vessel unless the clerk was present and no goods were removed from the

⁵ C. McLaughlin Jr., "The Evolution of the Ocean Bill of Lading," Yale Law Journal (1936): 35.

vessel without the clerk's knowledge. The clerk's entries in the register were done in the presence of the shipper, the master and one other witness and constituted evidence of the receipt of the goods.

The practice developed where the clerk gave a copy of its entry in the register to the shipper. The excerpt from the register issued to the shipper marked the beginning of the bill of lading as distinguished from the book of lading. The excerpt was defined at the time as the acknowledgement which the master of the ship makes of the number and quality of the goods loaded on board.⁶

The carrier's primary obligation is to deliver the goods as stated in the document to their destination as the carrier received them. The receipt function of the bill of lading enables the shipper or the receiver of the cargo to enforce that obligation. Thus, the bill of lading functions to reinforce the obligations of the carrier under the contract of carriage. The carrier undertakes to deliver the goods in the same condition as it received them. At the time of concluding the contract, the carrier would not have seen or examined the goods. The apparent order and condition of the goods are stated in the bill of lading, as it is issued after the goods are delivered to the carrier. In addition to the condition of the goods, the bill of lading states, *inter alia*, the date of receipt and or shipment, the leading marks necessary for identification of the goods, the quantity of the goods or number of packages or pieces, or weight of the goods.⁷

In common law, a bill of lading is only *prima facie* evidence of the facts stated in it. Thus a carrier could adduce evidence to prove that the quantity of goods actually received and shipped was smaller than that

⁶ *Ibid.*

⁷ Hague-Visby Rules, article 3(3) and Hamburg Rules, article 15.

stated in the bill of lading and thereby avoid liability. Similarly, the carrier will not be liable in respect of damage to goods stated to have been shipped in good condition, if the carrier can prove that the goods had in fact been already damaged at the time of shipment.

However, a carrier may be stopped, as against a third party endorsee, from denying the truth of statements in the bill of lading. A carrier that states in a bill of lading that goods have been shipped in apparent good order and condition may be stopped from denying that fact as against a third party endorsee that takes the bill for value without notice. The statement may also be found of action in tort for misrepresentation by a third party endorsee.

In order for common law estoppels to apply, it must be shown that the statement embodied a representation of fact, the maker intend the representation to be relied upon, the party asserting the estoppels is in fact relied upon the representation to its detriment, and the statement was made by the ship owner or by some person with actual or apparent authority of the carrier. Representations in a bill of lading may be found on action in tort at the suit of a person who relies upon the representations to its detriment, if the master or ship's agent signed the bill knowing the representations to be untrue, was regarded as reckless or negligent.

The Hague-Visby Rules and the Hamburg rules render the bill of lading in the hands of a third party endorsee conclusive evidence as against the carrier. Proof is not admissible to contradict statements in the bill of lading when it has been transferred to a third party acting in good faith. The position in these rules overrules the common law position in *Grant v. Norway*. This is the position in jurisdictions that

have adopted one or the other of the Hague-Visby Rules or the Hamburg Rules, such as Australia and the United Kingdom.

2.3.2 Bill of Lading as Evidence of the Contract of Carriage

Laryea⁸ claims that opinions seem to differ as to whether the bill of lading is the contract of carriage or merely evidences the terms upon which the goods were delivered to and received by the ship; the contract having been made before the bill of lading is issued. The difference in opinion is the result of conflicting authorities on the matter.

The prevailing view is that the bill of lading evidences the terms of the contract of carriage; it is generally not the contract between the shipper and the carrier, as it is normally issued long after the contract of carriage is established. Thus where the terms of the bill of lading conflict with the actual contract, as for instance contained in the booking note, the actual contract prevails. Extrinsic evidence is admissible to contradict the terms contained in bills of lading and, by extension, sea waybills and delivery order.

Between the carrier and third party endorsees, however, the bill of lading may constitute the contract of carriage and not mere evidence of it⁹. As between the ship-owner and the third party endorsee (buyer-importer, banker or other transferee)¹⁰, the terms of the bill of lading will prevail over any previous contractual arrangement between the carrier and the shipper relating to the carriage contract.

⁸ Emmanuel T. Laryea, *op.cit.*, p. 65.

⁹ *Leduc v. Ward* (1888) 20 QBD 475, at 479.

¹⁰ Emmanuel T. Laryea, *op.cit.*, p. 66.

Where shipment was made under a charter party and the charterparty was between the shipper and the ship-owner, any bill of lading issued by or on behalf of the ship-owner operates, as between the shipper-charterer and the ship-owner, as a mere receipt. The bill of lading does not constitute as evidence the contract of carriage; the contract of carriage will be the charterparty. Accordingly, if the bill of lading conflicts with the terms of the charterparty, the latter will prevail.

However, if the bill is endorsed to a third party, as between that third party and the carrier, the bill of lading is the contract of carriage and its terms will prevail over the charterparty except to the extent that the terms of the charterparty are effectively incorporated by reference into the bill of lading.

An importer may charter a ship to transport its goods and request the seller to ship the goods on the vessel the importer has chartered. If, in that case, the seller takes the bill of lading in its own name, the terms of the bill of lading will constitute the contract between the carrier and the seller¹¹, but not between the carrier and the charterer (importer). Where the seller subsequently endorses the bill of lading to the buyer, in pursuance of the sale contract, the bill of lading does not become the contract of carriage between the buyer-charterer and the carrier. The charterparty remains the contract of carriage between the buyer and the ship owner. As such, in the case of a conflict between the terms of the bill of lading and the charterparty, the charterparty prevails. This is an exception to the general principle that the bill of lading constitutes a conflict between a third party endorsee and the carrier. If, however, the buyer-charterer endorses the bill of lading to another party then as between that other party and the carrier the bill of lading becomes the contract of carriage.

¹¹ *Leduc v. Ward*(1888) 20 QBD 475, at 479.

A contract under the bill of lading imposes contractual liabilities and obligations, and confers contractual rights and remedies on the parties. The rights and obligations depend on the terms of the contract on the one hand, and the applicable law on the other. As mentioned already, the applicable law is usually a combination of international conventions and national legislation. The applicable law of sea-carriage contracts under bills of lading is the law of the place of shipment. Section 11(1) of COGSA (Cth), for example, provides that all parties to a bill of lading are taken to have intended to contract according to the laws in force at the place of shipment. Parties are prohibited from agreeing to oust, or contracting out of, this provision.¹²

2.3.3 Bill of Lading as a Document of Title to Goods

According to Laryea¹³ probably the most important characteristic of the bill of lading is its function as a document of title. At common law documents of title to goods are defined as documents relating to goods the transfer of which operates as a transfer of the constructive possession of the goods, and may operate as a transfer of the property in the goods. English courts recognized early the custom of merchants that an order bill of lading by which goods has been shipped enabled the holder, if it owns the goods, to transfer the property in the goods to a transferee by transferring the bill.

The linkage of the bill of lading with title to the goods in respect of which it was issued has played an invaluable role in facilitating international trade. As trade became more complex and widespread, and merchants stopped accompanying their wares during maritime carriage, shippers needed means that enabled them to have their cargo

¹² Carriage of goods by sea Act, section 11 (2).

¹³ Emmanuel T. Laryea, op.cit., p. 67.

delivered not merely to their agents but to purchasers in foreign countries. Initially they arranged to have the goods delivered to named consignees and later to anyone in a chain of transactions, so long as they could demonstrate that they were lawfully entitled to the goods. The custom grew to give the cargo-receiver a copy of the bill of lading as a proof of its entitlement to the goods.

In the early stages, the shipper would expect to be present personally or through an agent at the port of discharge ready to receive its cargo. The next step was to indicate it was the intention of the shipper to benefit some other person as receiver, that was achieved by endorsement. The shipper endorsed the bill of lading to a specified person, who could in turn further endorse it to another person, or generally to no named endorsee, in which case the holder of the bill was entitled to the take delivery of the goods. All that was needed was that the bill appears transferable. This was achieved by making the bill of lading declare in its terms that the goods were deliverable to the shipper-consignee "or to his order".

By the close of the 19th century the bill of lading had evolved to perform a two-fold function in this respect. (1) The shipper or any endorsee had control of or could deal with the goods (such as sell the goods) when the goods were at sea. (2) The shipper or any consignee or endorsee could claim the goods at the journey's end by presenting the bill of lading. The effect of the custom, and its recognition by the common law, was to give to the holder (shipper or endorsee) constructive possession of the goods. The bill of lading became a 'key to the warehouse door'. Accordingly, its pledge could also operate as a pledge of the goods. The carrier is not bound to deliver the goods except on production of the bill of lading, and it is liable to the holder of the bill if it wrongfully delivers the goods to anyone else.

Proper possession of the bill of lading generally gives the holder a right to immediate possession of the goods it represents. Possession of the bill of lading may, but not necessarily (as this depends the terms of the bill of lading and intention of the parties), be equivalent to ownership. If the bill of lading is negotiable (and it usually is) and it is properly negotiated, the holder (transferee) obtains the immediate right to possession of the goods it represents, because it is the key to the warehouse.

It is important to note that at common law, the bill of lading is not negotiable in the sense a bill of exchange is. The bill of lading is transferable, but not negotiable, under Australian and English law. When transferred (negotiated), the bill of lading operates to transfer right of possession of the goods it represents, but not necessarily the ownership in the goods, which depends on the terms of the contracts of sale and/ or carriage and the intention of the parties. Where title is intended to pass, the transferee acquires the proprietary interest previously vested in the transferor – that is the shipper or a lawful holder to whom the bill of lading may have been transferred. The transferee does not take the bill of lading free from defects in convey what it does not have) principle in English law comes into play, as the rights acquired by the transferee of the bill of lading are measured by the rights of the transferor.

As a document of title, the bill of lading is unique among transport documents and, as such, plays an invaluable role in international commerce, particularly when the transaction is financed under documentary credits the bill of lading enables merchants to trade the goods, by trading the document, while the goods are on the high seas. Since any lawful holder of the bill of lading has general rights to possession and, in appropriate cases, ownership of the goods, it offers security to interested parties. Banks issuing letters of credit for the

transaction can hold on to the bill of lading until the buyer reimburses them. Other financiers can take the bill of lading as a pledge or security over the goods. Sellers who obtain bills of lading can retain them, and thereby have control over the goods, until they are paid. By retaining the bill of lading, they have an immediate right to stop the goods in transit or re-route or sell the goods to someone else, which gives them far better protection than the mere right to sue the buyer in a foreign country for non-payment. In addition to the seller's rights against the goods while they retain the bill of lading, the seller can also sue the buyer for damages in the event of default.

But the uniqueness of the bill of lading and its resultant special functions brings two problems for the international business community. The first brings two problems is that because the bill of lading is a document of title and must be presented to the carrier for delivery, buyers and carriers find themselves in difficulties when the bill is delayed in reaching the buyer.

The second problem is that of all the usual shipping documents, the bill of lading is the most difficult to replicate electronically. This is not hard to understand. The receipt and evidentiary functions of the bill of lading, and all the other documents, can be replicated electronically without many problems. These functions are technologically easy to replicate. Minimal amendments to domestic legislation may be needed to facilitate electronic performance of these functions in some jurisdictions. But the same cannot be said of the title and negotiability functions of the bill of lading and this has presented acute problems. Despite efforts by the international business community in the past three decades to unravel these difficulties, the problems persist.

Another problem with the bill of lading is the number of originals issued. While the bill of lading is a document of title and must be

presented by a person demanding the goods, it is often issued in three originals, the presentation of any one of which is sufficient to obtain delivery of the goods, The rationale behind issuing multiple originals was to make them available to all parties – one for the consignor, one for the carrier “following the goods” and one for the consignee, but this original reason seems no longer valid because in modern practice all three originals are given to the consignor.

The availability of multiple originals, any one of which entitles the holder to possession of the goods, means that they have the key ‘to the warehouse where the goods are held’ could be at many places and in many hands at the same time. It is common for merchants who wish to sell their wares afloat on the high seas to send on original to each of their agents in different ports in search of the best price for their goods. This raises two problems that disturb the functions of the bill of lading as a document of title. When the bills of lading are in the hands of different people in different places, problems may arise as to who has the right of control over the goods, and the right to possession of the goods.

* * *
The way in which the problems of multiple originals have been dealt with is to distinguish between the right to take delivery of the goods and the right to control the goods while in transit. The holder of at least one original bill of lading is entitled to delivery, but only the holder of at least one original bill of lading is entitled to delivery, but only the holder of all originals (the full set) can control the goods in transit. The carrier is bound to deliver the goods to the holder of at least one original bill of lading, and such holder is entitled to claim delivery of the goods in exchange for surrendering the bill of lading. If there are conflicting claims, say from two people, each of which has an original bill of lading, neither of them is entitled to have the goods. The goods must be stored until the true owner is decided. To have control over the

goods in transit, for example, to dispose of the goods at a place which is not the original destination or to re-route the goods, a holder needs all originals.

The rationale for requiring all three originals from a person who wishes to control the goods in transit is simple. If the holder of one original were allowed to issue instructions and control the goods, the carrier may find itself having to deal with conflicting instructions from different holders of availability of multiple originals creates uncertainty because each original is enough to demand the goods at its destination, and this opens up the system to maritime fraud. Consequently, interested organizations recommend restricting the number of originals.

The multiplicity of originals threatens the security obtainable by banks financing the transaction under a documentary credit and who take the bill as security. Banks, and other financiers, often acquire the right to possession of and ownership to the goods by taking and holding the bill of lading until it is released to the buyer. If multiple originals are issued and other persons since those other persons can take delivery of the goods at its destination. In practice, however, banks taking security over the bill of lading demand the full set. Moreover, banks often take other forms of security, such as an indemnity or a charge over the buyer's assets, in addition to the security in the goods represented by the bill of lading. But this does not diminish the importance of their security in the goods, which gives an immediate right to possession and, possibly, sale of the goods in the event of default by the buyer. Their realization of the additional security may involve lengthy legal processes.

In summary, the bill of lading is an important transport document in sea-carriage contracts. The bill of lading performs three classic

functions namely, as a receipt for the goods, as evidence of the terms of the contract of carriage, and as a document of title to the goods. Of the three functions, the title attribute of the bill of lading is its most unique and, perhaps, the most important quality. The title attribute of the bill of lading means that its possession constitutes constructive possession of, and control, over the goods it represents, and it can be used to pass ownership of the goods. These uses of the bill of lading are the reason the bill of lading is said to be negotiable.

2.4 The Thai Law concern Carriage of goods by sea and Bill of Lading

As of Thailand, at present there is no specific law on this matter. The Civil and Commercial Code section 609 paragraph 2 stipulates “the carriage of good by sea is governed by the laws and regulations relating thereto.” In practice, the Thai court has applied general provisions of the code especially section 4 and book III title VIII, chapter I on carriage to the disputes. This practice creates uncertainties and confusion. This application is not only unsuitable to the nature of contract but also contrary to the idea behind section 609 paragraph 2. On some occasions the result is against the parties’ will. The applied law does not cover all aspects of carriage of goods by sea and in some cases differs from international accepted rules or customs.

In Thailand, there is no specific law dealing with Bill of lading. The court has to apply general provisions of the Civil and Commercial Code especially section 4 and book III title VIII, chapter I on carriage to the disputes. This practice creates uncertainties and confusion. However, Thai court must apply the local custom. For example:

- The Civil and Commercial Code section 613 “If required by the sender, the carrier must supply him with a consignment note.

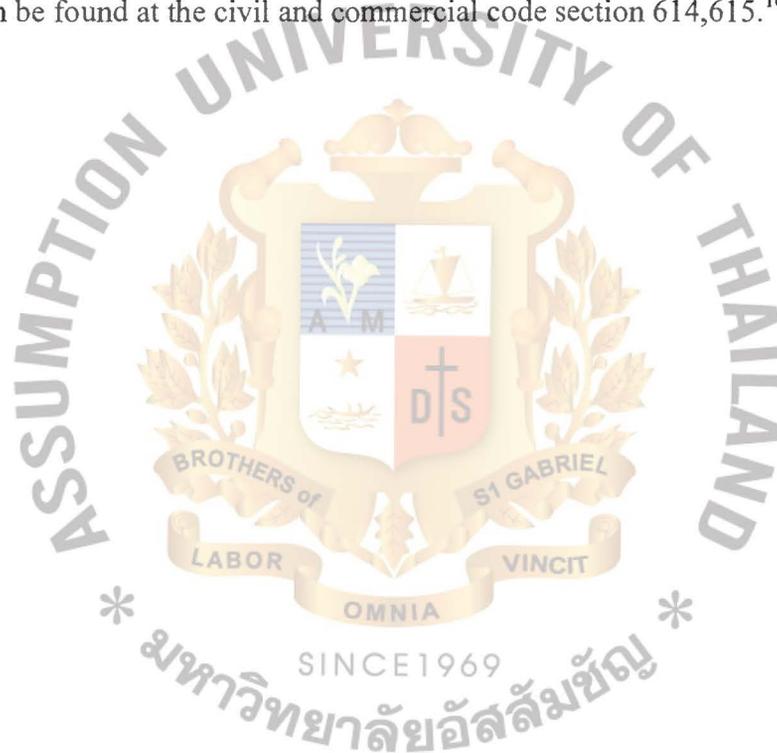
The consignment note must show the following particulars:

1. Those mentioned in Section 612, subsections 1, 2 and 3.
2. The name or trade-name of the sender.

3. The amount of freight.
4. The place where and the time when the consignment note is made out.

The consignment note must be signed by the carrier”¹⁴ this section must introduce in Bill of Lading follow the section 609 paragraph 2.¹⁵

In Thailand, there is law relating to transferring bill of lading. Bill of lading can be transferred but it must be endorsed and transferred to transferee. This can be found at the civil and commercial code section 614,615.¹⁶



¹⁴ The Thai Civil and Commercial Code, section 613.

¹⁵ The Thai Civil and Commercial Code, section 609 Paragraph 2 “The carriage of goods by sea is governed by the Law and Regulations relating thereto”.

¹⁶ The Thai Civil and Commercial Code, section 614-615.

Chapter 3

Principle of Electronic system

3.1 Electronic Data Interchange (EDI) System

Wichai Makwattanasu¹⁸ defines Electronic data interchange (EDI) is a set of standards for structuring information that is to be electronically exchanged between and within businesses, organizations, government entities and other groups. The standards describe structures that emulate documents, for example purchase orders to automate purchasing. The term EDI is also used to refer to the implementation and operation of systems and processes for creating, transmitting, and receiving EDI documents. The Electronic Bill of Lading is one part of EDI.

3.2 Electronic Data Interchange (EDI) in Department of Customs

Wichai Makwattanasu¹⁹ notes that Department of customs bring the electronic data interchange (EDI) come to use because of decrease method and increase efficiency in practicing work for service in international trade. It make the service is comfortable, quickly, be consistent in universal system and develop to reach the Paperless Trading in the future.

In past the department of customs use On Line system in customs Bangkok airport for export since 1st May 2541 to now a day. But the electronic data interchange (EDI) systems that bring to use in midyear 2542.²⁰ This system was developed and can make customs formality is comfortable more than the past for export. Which, airline representative and carrier can exchange electronic document. In order that, the entrepreneur will must prepare a program for send INVOICE that develop by you or

¹⁸ Wichai Makwattanasu, The customs 2000 (Bangkok: Bunnasin, 2002), pp. 29-30.

¹⁹ Ibid., p. 31.

²⁰ Ibid., p. 32.

employ the SOFTWARE HOUSE for do and develop the invoice. And the customs officer can call the invoice for check also.

3.3 Reason that Electronic Document is become necessary.

According to Professor Michael Bridge²¹ (lecture at UCL, University of London year 2004), reasons that Electronic Document becoming necessary can be seen as follows:

1. Late arrival of documents

The carrier of the goods, (the issuer of the bill of lading), has the duty to deliver the goods represented by it only to the holder of the bill.

But if the bill is delayed in reaching the hands of the final buyer of the goods, the carrier may have to deliver the goods in spite of its absence. This is problematic since the carrier who miss-delivers the cargo to someone who turns out not to be the lawful holder of the bill of lading is liable in conversion.

Normal solution: letter of indemnity, under which the carrier would be indemnified for any losses incurred for delivering the cargo in the absence of the bill. But:

- The enforceability of the indemnity may not be guaranteed
- Even where it is enforceable, the ship may be arrested and lengthy court proceedings may have to be undergone before the indemnity can be enforced.

Because the speed of ships has increased while the processing of paper documentation has not, the bill of lading is failing satisfactorily to perform the functions for which it was originally developed.

²¹ Michael Bridge, Electronic Bill of Lading (London: University of London, 2004).

2. The possibility of forgery and/or backdating,

Forgery and backdating of bills of lading is a widespread phenomenon. These could be to a large extent resolved by the use of a secure electronic system

3. The possibility of error in the processing of information through the need for re-keying of data.

The trade information in the bill of lading especially that relative to the description of goods will be repeated in various other documents. Data is re-keyed for the purposes of producing various documents and for traders' own records. Re-keying of data can give rise to errors which would/could slow down the documentary sale, especially if a letter of credit payment method is being used.

3.4 How are the bill of lading's functions replicated electronically in United Kingdom

As mentioned above, the ocean bill of lading performs the following functions:

1. It is a receipt issued by the carrier acknowledging that the goods indicated in it have been delivered to him and loaded on board a vessel;
2. It evidences the terms of the contract of carriage between the shipper and the carrier;
3. It is documents of title to goods are defined as documents relating to goods the transfer of which operates as a transferred, pledged or mortgaged²². At common law documents of title to goods are defined as documents relating to goods the transfer of which operates as a transfer of the constructive possession of the goods, and may operate as a transfer of the property in the goods.

The first two functions of the bill of lading belong also to seaway bills, which have already been successfully dematerialised and used for a number of years in electronic

²² Emmanuel T. Laryea, *op. cit.*, p. 64.

form. It is the negotiability function of the bill of lading that gives rise to most difficulty for electronic replication purposes.

If it is realistically to constitute a proper substitute for (or functional equivalent of) the paper ocean bill of lading, the electronic bill of lading must also be capable of performing the third and most important of these functions.

Because it is impossible to physically “hold”, “endorse” or “deliver” an electronic document, other means must be devised to determine at any point who is the rightful holder of the electronic bill of lading, that is:

- who has the right to control and transfer it while the goods are afloat, and
- who has the right to demand delivery of the goods when the ship reaches destination.

This can only be done through the use of a registry.

3.5 The evolution of Electronic Bill of Lading system (EBLs)

A Professor Michael Bridge²³ has observed the electronic bill of lading has been developed such as the Seaborne Trade Documentation System (SeaDocs), Open model: the Committee Maritime International (CMI) and Closed model: Bill of lading Electronic Registry Organization (Bolero).

3.5.1 The Seaborne Trade Documentation System (SeaDocs)

The history of electronic bill of lading (EBLs) start with the Seaborne Trade Documentation System (Seadocs), which was initiated in 1983 by Intertanko (the International Association of Independent Tanker Owners) and Chase Manhattan Bank, and was intended for the carriage of bulk oil. In the Seadocs system, a paper document was still issued but it was transferred down the sales string electronically through the use of Chase Manhattan Bank as a central registry, Seadocs Registry Limited, more accurately described as a depository. The system operated as follow.

²³ Michael Bridge, op.cit.

1. the carrier issued an original paper bill of lading which was deposited with Seadocs as custodian;
2. a code, used to authenticate any transaction relating to the bill of lading, was issued to shipper;
3. The shipper notified Seadocs electronically when it wanted to transfer the bill of lading and provided the endorsee with a portion of the code. The endorsee/buyer would also notify Seadocs of the transfer.
4. Seadocs would test both messages to ensure authenticity before acting on them. The buyer's message would be verified against the portion of the code provided by the shipper.
5. In the transfer of the bill of lading, Seadocs acted as the agent both of the seller and of the buyer. The transfer thus occurred from Seadocs to Seadocs and audit-trailed messages would go to each party. The name of the buyer would then be recorded in the registry as the new owner.
6. Upon arrival of the goods at the port of destination, Seadocs would transmit an identifying code to the carrier and the last endorsee of the bill of lading. The code entitled the endorsee to the delivery of the goods. The paper bill of lading in the registry could be used where necessary.

*
Seadocs lasted only one year though no serious operational or legal difficulties were experienced. The reasons for its failure were practical;

- 1) Commodity traders were unwilling to record their transactions in a central registry as this would subject them to inspections by tax authorities and other competitors;
- 2) The ultimate buyer of the cargo (in this case, crude oil) resisted acquiring bill of lading from a registry which was designed to service intermediaries and speculators;

- 3) Banks were uncomfortable with the fact that one of their competitors (Chase Manhattan Bank) should have exclusive control of the registry business.
- 4) The liability of participants was not established, so insurance of the registry operations was relatively expensive.

3.5.2 The Committee Maritime International (CMI): Open model

As note by Laryea²⁴, In 1990 CMI adopted its model Rules for Electronic Bills of Lading ('the Rules'). The system does not require users to be members of a central registry. Instead a "private registry" is created in the person of the carrier.

1. Article 4 provides for an electronic document containing information similar to that on a paper bill of lading to be sent by the carrier to an electronic address specified by the shipper together with a secret code known as the 'Privacy Key' to be used in subsequent transaction. This is known only to the shipper and the carrier.
2. Article 7 (b) provides how the Right of Control and Transfer can be transferred to a subsequent Holder by the shipper or any subsequent holder:
 - 1) notification by current Holder to Carrier.
 - 2) confirmation by the carrier of such notification message,
 - 3) transmission of the information minus Private Key to the proposed new Holder,
 - 4) acceptance by the new Holder communicated to the carrier,
 - 5) cancellation by the carrier of the current Private Kay and the issue of a new Private Key to the new Holder.
3. Article 7 (c) allows the proposed new Holder to advise the carrier that he refuses to accept the transfer, and requires the carrier to assume this

²⁴ Emmanuel T. Laryea, *op.cit.*, p. 80.

unless the new Holder accepts within a reasonable time. In this event the carrier notifies the current Holder and the current Private Key retains its validity.

4. Article 7 (a) provides that only the Holder can claim delivery of the goods from the carrier, nominate a consignee / substitute a consignee already nominated, or transfer the Right of Control and Transfer to anybody else. Also, it is only the current Holder who may instruct the carrier on any other subject concerning the goods, in accordance with the terms and conditions of the Contract of Carriage, as if he were the holder of a paper bill of lading.
5. Article 9 deals with delivery of the goods. The carrier must deliver the goods to the Holder or a consignee nominated by him upon production of paper identification; such delivery automatically by him upon production of proper identification; such delivery automatically cancels the Private Key. The carrier is under no liability for miss delivery if it can prove that it exercised reasonable care to ascertain that the party who claimed to be the consignee was in fact that party.

In Laryea's²⁵ view, the CMI Rules for Electronic Bills of Lading (CMI Rules)²⁶ were promulgated in 1990 by the Committee Maritime International (CMI) in an attempt to address the problems encountered by the SeaDocs system. The CMI Rules are not a system in themselves but a regulatory framework open for adoption by parties (primarily carriers and shippers) who agree to use EBLs instead of paper bills of lading. The CMI Rules are not a system in the sense that they do not establish an entity or a body to administer the issuance, transmission, certification, and transfer of EBLs issued thereunder. In effect, they are merely a published proposal which parties who are

²⁵ Emmanuel T. Laryea, *op.cit.*, p. 81.

²⁶ Rules for Electronic Bills of lading, Committee Maritime International, in <http://www.comitemaritime.org/cmidoesrulesebla.html>, access date November 1, 2007.

technologically able, and willing to use electronic documentation, could adopt to regulate their transactions.

As noted by Laryea²⁷, The CMI Rules shifted from Seadocs' centralized depository system to decentralized carrier-based system, but left the option for parties to agree on the use of depositories. They operate by incorporation into the contract of carriage. The CMI rules are not intended to govern bills of lading on a comprehensive basis; they are not intended to displace the substantive law applicable to bills of lading. Rather, the CMI Rules are subject to the substantive law. Rule 6 states that "[t]he Contract of Carriage shall be subject to any international convention or national law which would have been compulsorily applicable if a paper bill of lading had been issued". This means that an EBL issued in accordance with the CMI Rules will be governed, in the case of the United Kingdom, COGSA 1992 and COGSA 1971 and, in the case of Australia, by SCDA (Australia) and COGSA (Cth).

When parties agree to use an EBL under the CMI Rules, the Carrier will issue to the shipper an electronic notice, called the "receipt message", upon receipt of the goods by the carrier. The receipt message is transmitted to the shipper's electronic address, and must contain certain information prescribed in Rule 4(b). The receipt message must contain the name of the shipper, a description of the goods, the date and place of receipt of the goods, a reference to the carrier's terms and conditions of carriage, and a Private Key. This information is essentially the same as that contained in traditional paper bills of lading.

²⁷ Emmanuel T. Laryea, *op.cit.*, p. 81.

The shipper must confirm the receipt message to the carrier to become the holder. A recipient of a transmission is generally not authorized to act on the transmission until it has sent a confirmation. Rule 4(d) seeks to equate the receipt message to the paper bill of lading, providing that the information contained ... paragraph (b), including the date and place of shipment if updated in accordance with paragraph (c), shall have the same force and effect as if the receipt message were contained in a paper bill of lading.²⁸

The operation of the CMI Rules is centred on the Private Key, defined in Rule 2 as “any technically appropriate form, such as a combination of numbers and/or letters, which the parties may agree for securing the authenticity and integrity of a Transaction”. The holder of the Private Key is entitled to receive the goods, nominate a consignee, substitute a nominated consignee with another, instruct the carrier on matters concerning the goods, and transfer its right of control or title to the goods. The holder of the private Key therefore is in the same position as the holder of a paper bill of lading.

To transfer its right of control or title to the goods, the holder of the Private Key notifies the carrier of its intent. The carrier confirms the message and transmits the information, except the Private Key, to the intended transferee. If the transferee accepts the right of control, the carrier cancels the previous Private Key and issues a new Private Key to the transferee, which makes the transferee the new holder. The carrier acts as the registry. Transfer of the EBL in the manner described has the same effect as transfer of paper bills of lading. Delivery of the goods is to the holder of the Private Key.

²⁸ Ibid., p. 82.

Where an EBL presents problems (legal or other) to a party, Rule 10 of the CMI Rules provide for conversion to a paper bill of lading. Problems may arise from paper-based nature of bills of lading laws in some jurisdictions or paper-based clearance systems in the ports of developing countries. In addition, a holder of an EBL may wish to transfer the document to a party who is unable to support electronic documents or unwilling to accept an EBL. Convertibility from electronic to paper bills of lading solves such problems.

Further, the CMI Rules provide for foreseeable legal obstacles such as writing requirements under national laws. Under Rule 11, parties agree that any national law or practice that requires the contract of carriage to be evidenced in writing is satisfied by confirmed electronic data. Rule 11 goes on to provide that parties undertake not to raise the defence that the contract was not in writing. It is doubtful, however, whether the CMI Rules override statutory requirements for writing.

The CMI Rules were initially thought to be the means of attaining paperless bills of lading in the computer era, but they did not take off as expected. Not long after their promulgation, it became clear that the CMI Rules did not have the needed support of the intended users. Twelve years on, there is no record of the CMI Rules having been adopted by any major trading parties, and the CMI is not in the process of drafting new rules.

Laryea²⁹ claims that the CMI Rules failed to attract support from users for basic reasons:

1. First, the system overly burdens carriers. Carriers are to act as private registries, and be the hub of issuance and transfer of rights and ownership in EBLs. The carrier must confirm a transfer

²⁹ Ibid., p. 82.

message from the current holder, confirm with the intended transferee if it wishes to accept the transfer, then attend to the transferee by issuing a new Private Key to the transferee and calling the previous Private Key held by the transferor. This is burdensome for carriers. Surprisingly, carriers were not represented on the CMI and they were not parties to the July 1990 conference at which the CMI Rules were adopted. Probably the rules would not have been promulgated, at least not in their current form, if carriers had participated in their formulation. Carriers would not have agreed to shoulder the burden placed on them by the CMI Rules.

2. The second reason the CMI Rules failed is that they do not define the liability of carriers for their part in transfers. Carriers are not willing to expose themselves to potential liability that is not clearly regulated or defined.
3. The third reason for the failure of the CMI Rules is that they did not attract the support of banks. The banking community was concerned about the apparent lack of security in the Private Key system. Bankers believe there is not enough security mechanisms built into the system. They could not envisage telecommunications between strangers without high risks of fraud. To banks, the security of uniform log-in procedures, message numbering, error checking, encryption and message self-auditing as under SWIFT are a necessity. A possible solution is to ensure that each Private Key is included as an integral part of the encryption algorithm to make erroneous transmissions evident to the recipient.
4. The fourth reason the CMI Rules failed to attract wide support was the failure to establish a comprehensive system or a body to administer a system. The idea was considered during the

deliberations that led to the formulation of the CMI Rules, but it was thought that it would be difficult to introduce a comprehensive system on a worldwide scale and for all commodities; The CMI Rules were thus formulated in general terms for adoption by parties who can operate EBLs and wish to adopt them. The incomprehensive nature of the CMI Rules made it difficult to operate. Trade parties want a comprehensive system proven in its operation.

5. The fifth reason is a legal problem: the uncertainty whether the Private Key procedure is legally effective to negotiate the document. The general rule seems to be that the creation of negotiable documents of title is the prerogative of statutory law. For holders of bills of lading to realize the full benefits conferred by statutes affecting bills of lading, it is important that the receipt message and the Private Key are recognized as constituting a bill of lading under those laws. It is doubtful whether the receipt message and the Private Key qualify as a bill of lading under the laws in many jurisdictions. The tenor of the law in most jurisdictions demands the bill of lading to be in writing, presumable on paper, and signed. Although the CMI Rules attempt to overcome the problems of writing and signature, the effectiveness of the rules is not clear to many.

The Committee Maritime International (CMI) has Problems is:

- 1) No provision made for contractual rights and liabilities to be transferred along with the documentation.
- 2) It is not clear what happens if a Holder who has accepted the right of control and transfer does not pay for the goods.
- 3) The Rules make no provision for the passing of property in the goods.
- 4) The system is relatively insecure against fraud.

- 5) The system burdens carriers as it forces them to act as private registries, and the Rules do not define the liability of carriers for their part in transfers.
- 6) The Rules fail to establish a comprehensive system or a body to administer a system.
- 7) It is uncertain whether the Private Key procedure is legally effective to negotiate the document.
- 8) The Rules lack provisions dealing with the issues of what constitutes an actual receipt of an offer and subsequent acceptance and they provide no guideline as to what happens in the event of system failure.

3.5.3 Bill of landing Electronic Registry Organization (Bolero): Closed model

As Professor Christ Reed³⁰ has observed, Bill of landing Electronic Registry Organization (Bolero) can be described as follows:

1. Bolero is a closed system to which all trading parties have to register. It relies on Internet communication, and authenticates message using digital signatures (public and private keys), the issuance of which it administers itself.³¹

‘Since all Bolero messages are verified by bolero.net before being forwarded to the intended recipient, the recipient verifies the bolero.net digital signature when downloading a message. The table

³⁰ Christ Reed, Cross-Border Electronic Banking: Challenges and Opportunities, 2nd edition (London: LLP, 2002).

³¹ Bolero.net’s Security tutorial version 2.4 (1999-2000), in http://www.boleroassociation.org/sec_tut.pdf, access date October 16, 2007.

below illustrates the process. The numerals indicate the order of the actions.³² For example:

	User	Bolero	Receiver
Signs with	1 User's private key	3 Bolero's private key	4 Bolero's public key
Verifies with		2 User's public key	

The Bolero equivalent to the paper bill of lading is the Bolero Bill of Lading (BBL), which Rule 1.1(11) defines as 'a BBL Text with its related title registry Record.' Under Rule 1.1(6) a BBL Text is 'a document which: (a) is sent into the Core Messaging Platform and recorded in the Title Registry as the documentary component of the Bolero Bill of Lading; and (b) acknowledges the receipt of goods by a Carrier for carriage by sea.' A Title Registry Record is defined by Rule 1.1(55) as 'the structured information kept in the Title Registry linked to the BBL Text and derived from Title Registry Instructions involving the related Bolero bill of Lading.'³³

- * * * * *
2. Messages are sent through a Cover Messaging Platform (BCMP), which is described in Chapter 2 of the Operating Procedures, and which uses advanced cryptography for security purposes.

'Messages can be encrypted if their contents need maximum secrecy during delivery (subject to the laws in your jurisdiction). If anyone somehow manages to intercept an encrypted message, it will be unreadable. Encryption in bolero.net utilizes the key pairs, but in a

³² Ibid., p. 3.

³³ Appendix To Bolero RuleBook Rule 1.1, in http://www.boleroassociation.org/downloads/op_procs.pdf, access date October 1, 2007.

different way than they are used for digital signatures. The sender uses the receiver's public key to encrypt. Since the receiver's private key is needed to decrypt the message, no one but the receiver can ever see the contents. The following table demonstrates the process.³⁴

For example:

	User	Bolero	Receiver
Signs with	1 User's private key	3 Bolero's private key	
Verifies with		2 User's public key	4 Bolero's public key

3. The carrier transmits a message to the BCMP requesting the issue of a BBL to the shipper. To do so he must use a unique digital signature the authenticity of which is checked by the BCMP. Once the signatures of both sender and recipient are authenticated, the BCMP will issue a BBL to the shipper and a confirming message to the carrier. The shipper's legal title to the cargo is registered in the Title Registry (BTR). When the shipper wants to transfer the BBL to a third party he must do so by sending a message through the BCMP, which verifies authenticity through the shipper's signature and through BTR records, adds its own digital signature and forwards it to the third party in question.

4. The BTR therefore allows the owner of goods on board a ship to transfer them to other members, and updates the title accordingly. The BTR is defined in the Rule 1.1(53) 'an application operated by Bolero International and providing: (a) the means to execute the functions relating to Holdership and transfer of Bolero Bill of Lading: (b) a

³⁴ Security tutorial, version 2.4 (1999-2000), in http://www.boleroassociation.org/see_tut.pdf, access date October 16, 2007.

record of the status of current Bolero Bills of Lading; and (c) an audit trail of dealings with such Bolero Bills of Lading.’³⁵The BTR not only acts on instructions by authorized companies, but it also acknowledges the actions taken and automatically notifies affected parties. This enables operational controls to prevent sending the BBL to the wrong party, as well as internal auditing of all activities. The carrier can therefore be reliably informed, at the port of discharge, of the identity of the ultimate receiver to whom he is to discharge the goods.

5. Rule 3.7 of the Rulebook allows a switch to a paper bill of lading. Rule 3.7(3) provides that in the event of any discrepancy between the paper bill and the electronic record of the BBL, the electronic record prevails. Under Rule 3.7(5) the BBL shall cease to be effective as from the moment of the issue of the paper bill by carrier.
6. The contractual nexus between the carrier and the person entitled to the cargo at discharge is provided by the Bolero Rulebook which binds all members contractually to each other, and by notation of the carriage contract as appropriate on each transfer.

The Bolero system has solved the problems presented by CMI through the following:

- 1) Use of cryptography
- 2) Use of central registry system
- 3) Use of content-obscured messaging system
- 4) The Rulebook, thanks to which the transfer of a BBL has equivalent effects in Private law as the endorsement of a paper bill of lading has under statutory and common law.

³⁵ Appendix To Bolero RuleBook Rule 1.1, in http://www.boleroassociation.org/downloads/op_procs.pdf, access date October 1, 2007.

But it still has not been a success in replacing the paper system because:

- (1) Any carrier or merchant can use and transfer paper bills of lading, without the need for all parties involved to be members of or subscribers to any scheme.
- (2) The current system is well-known to traders who have become accustomed to its workings.

Practical reasons why the shipping world may not yet be ready for the widespread use of electronic bills of lading:

- A. Potential users question whether EBLs offer a secure alternative.
- B. Cost-savings not enough to justify the investment for non-liner operators.
- C. All parties to carriage contract must share the same technological capability.
- D. Risks associated with the electronic transfer of title.
- E. Risk of malfunction.

According to Professor Christ Reed³⁶, obstacles to the use of electronic alternatives can be seen from the table below:

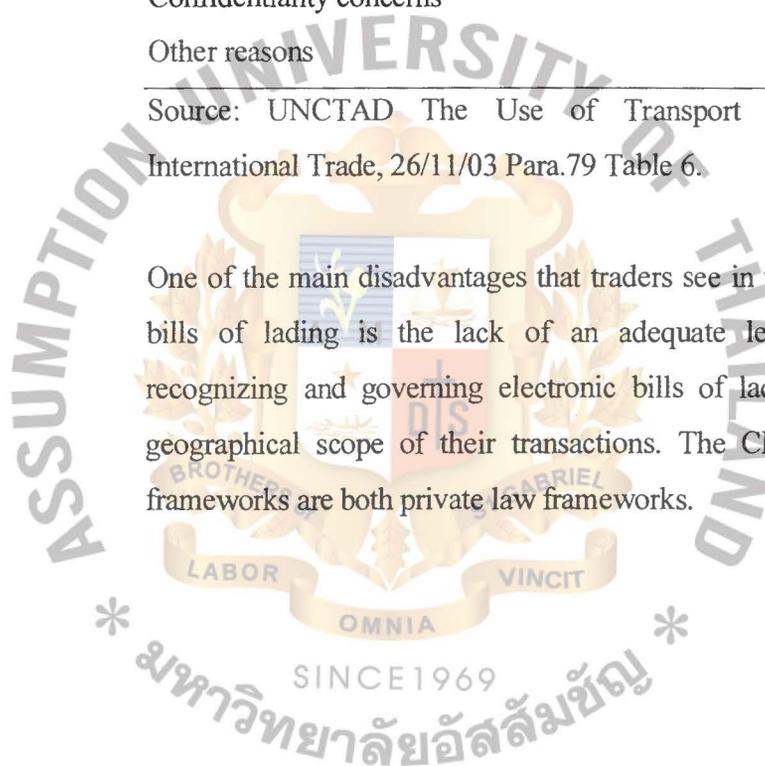
³⁶ Christ Reed, op.cit.

Obstacles to the use of electronic alternatives Responses

(more than one answer possible)	(% of respondents)
Infrastructure/market/trading partners not yet ready	51
Legal framework is not clear enough or is not adequate	44
Electronic equivalents are not sufficiently secure	25
Technology and/or switch to electronic environment is too costly	12
Confidentiality concerns	10
Other reasons	2

Source: UNCTAD The Use of Transport Documents in International Trade, 26/11/03 Para.79 Table 6.

One of the main disadvantages that traders see in using electronic bills of lading is the lack of an adequate legal framework recognizing and governing electronic bills of lading across the geographical scope of their transactions. The CMI and Bolero frameworks are both private law frameworks.



Chapter 4

Analysis of Legal Problems Concerning the Electronic Bill of Lading

4.1 Analysis the legal relating to the Electronic Transaction and Document

Piyawat Suratcharoensuk³⁷ points out that before years 2005 that Electronic Transaction Act has enforcement in contracts, the court applied The Civil and Commercial Code for this issue. However, the evolution of electronic leads to the change in contract particularly relating to bill of lading.

The electronic document store in the Digital Form it can not touch and the signature in the contract is not used the pen to write in the paper but it uses the Digital signature. The change as mentioned above has affected the legal system because it cannot proof that what is the original when the electronic document has been copied.

The Electronic Transaction Act that has come into force on 3rd May 2005 until now³⁸. The main principle is the section 7. This section mentions that the court accepts the electronic data made in the contract.

4.2 Analysis The legal problem about Electronic Bill of Lading

In my opinion, although the problem of Electronic Transaction can be solved by the Electronic Transaction Act B.E. 2544, in reality, the problem of Electronic bill of lading (EBL) still can not solved .There is still a question relating to the legal position of electronic bill of lading in Thailand and the question is still answerable. This problem has happened in Thailand and other countries. The status of electronic bill of lading is the same as the bill of exchange that is base on paper transactions. In Civil and Commerce Code decree mentions that the transferring of bill of exchange is

³⁷ Piyawat Suratchoroensuk, "E-Letter of Credit and E-bill of lading," Executive Journal Vol. 24 (January–March 2004): 75.

³⁸ Ibid.

completed when it has been indorsed and delivered. The Carriage of goods by sea Act section 27³⁹ is the law directly dealing with bill of lading for international trade.

Problems about using the Electronic Bill of Lading can be mentioned as follows:

1. Firstly, the electronic bill of lading cannot be endorsed. It is different from paper of bill of lading.

Although the Electronic Transaction Act B.E. 2544 chapter 2⁴⁰ has allowed to use electronic signature that can be proofed as well, but the proof of electronic signature is not use in bill of lading. Also, bill of lading can be transferred only by endorsement. In addition, electronic signature can be used for only specific transactions, for example, buying-selling goods on internet.

Moreover, Electronic Transaction Act B.E. 2544 Section 3 states, "This Act shall apply to all civil and commercial

- 1) Transactions performed by using a data message, except the transactions prescribed by Royal Decree to be excluded from this Act wholly or partly.
- 2) The provisions of paragraph one do not prejudice any law or rule enacted for consumer protection.
- 3) This act shall apply to the transactions in connection with the carrying out of the affairs of the State as prescribed in Chapter 4⁴¹

However, in my opinion, Electronic bill of lading system (EBLs) can solve many problems that paper bill of lading are facing. Firstly, Electronic bill of lading can be delivered by computer network. It is very quick and can facilitate international businesses. Secondly, it can save time and cost about dispatch and manage a document. Thirdly, it can generate group of

³⁹ Thai Carriage of goods by sea, section 27.

⁴⁰ Electronic Transaction Act B.E.2544, chapter 2.

⁴¹ Ibid., section 3.

people/trader who have similar ways of trading who believe that electronic bill of lading is safety and efficiency. There are some systems that have been developed at an international level, for example, The Seaborne Trade Documentation System (SeaDocs) has its centre point in Bank, The Committee Maritime International (CMI), Bill of Lading Electronic Registry Organization (Bolero).

Although, it can be accepted using electronic bill of lading has many advantages, but the system of electronic bill of lading still has some limitations. For example, in CMI rule, transferring electronic bill of lading is not easy because data is kept at centre management. By this I mean that when you want to transfer electronic bill of lading, you must contract the centre of data.

Moreover, if you want to transfer electronic bill of lading to transferee. The transferee must register to be a member of the system as well. It is inconvenient for traders.

4.3 Analysis Future of Electronic Bill of Lading System (EBLs)

Laryae⁴² has mentioned that in view of the previous failed attempts, it is pertinent to be cautious not to jump to the conclusion that Bolero is the solution for EBLs. However, Bolero seems to have a great chance of success as the international EBL system for a few reasons. First, the designers of Bolero have had the opportunity to analyse and avoid the flaws that inhibited its predecessors. Through SWIFT, representing the major international banks, and TTC, owned by the transport industry, Bolero already has several users, with more members joining. Some large influential companies have committed to Bolero.

⁴² Emmanuel T. Laryea, *op. cit.*, p. 89.

Second, Bolero has already survived its critical stages. Bolero has gone through its first and second growth phases and has now matured into its commercial phase. The first two phases covered five years of extensive trials, analysis, adjustments, and development. Over this period, Bolero has adjusted to address common problems. In contrast, SeaDocs collapsed in its first phase within one year of its establishment, while the CMI Rules never took off.

Third, the playing field for EBL systems has changed dramatically in favour of electronic documentation. Electronic technology has developed tremendously in the 15 years since SeaDocs and ten years since the CMI Rules. The need for electronic systems in place of paper is far stronger today than ten or fifteen years ago. There is now far more awareness of, and dependence upon, information and communication technologies (ICT). The availability of new techniques for electronic messaging security has raised user confidence and reliance on electronic systems. In contrast, when SeaDocs and the CMI Rules were trialled, security concerns over electronic systems were high and businesses were reluctant to replace their paper based systems with electronic systems.

Finally, governments are beginning to legislate to remove legal barriers that hinder the adoption of electronic messaging systems, and give the ability to legally facilitate legal electronic messaging. Australia for example, has enacted laws not only to promote electronic sea-transport documents, but electronic transactions in general.⁴³ Singapore has enacted an electronic transactions law to facilitate the use of electronic systems in business.⁴⁴ There are electronic transaction enabling laws in the United States at State and federal levels. Germany, the United Kingdom and France, Malaysia and many countries in South America have all enacted electronic commerce enabling laws. The effect of these changes is to create the needed legal certainty for electronic messaging, thereby engendering user confidence and promote adoption of electronic documentation systems.

⁴³ Electronic Transaction Act 1999.

⁴⁴ The Singaporean Electronic transaction Act 1998.

However, Bolero is not without sceptics. Some players think Bolero will fail to effect global paperless trade and have adopted a wait-and-see attitude. Despite the commercial launch of Bolero more than two years ago, international trade continues to be largely paper-based. Moreover, @GlobalTrade poses a strong challenge to the continuing relevance of the bill of lading in paperless trade. If e-sea waybills (ESWs) adequately and effectively replace the bill of lading, as @GlobalTrade proposes, the bill of lading will become obsolete.

Furthermore, recent Internet security breaches such as the 'I LOVE YOU' virus in May 2000 re-ignited security concerns over the reliability of e-commerce. E-commerce requires security and reliability to thrive. The identity of buyers and sellers must be verifiable, as are digital signatures and authenticity of message content. Electronic payment methods must be secure and confidentiality and must be maintained. The 'I LOVE YOU' virus, for instance, moved with such speed around the world infecting over 10 million computers and systems, including the most secure computer systems including defence departments and parliaments. The virus spread through an e-mail message forcing many large banks to shutdown and disconnect from the outside world until the problems were solved. Billions of dollars were estimated to have been lost in damaged information and time taken to repair the damage. Such events do heighten existing scepticism within the business and consumer markets for paperless dealings.

Nonetheless, it cannot be doubted that paperless trade is the way of the future. Bolero, @GlobalTrade or other electronic trade systems (existing, being developed or to be developed) will in due course overcome the residual problems that currently plague paperless trade. The systems are evolving and changes will occur as their operations reveal weaknesses, problems and flaws, and as the technologies develop further. No paperless trade system will be foolproof, and that cannot be a realistic expectation. The Paper system is fraught with numerous flaws, yet it has served the business community well for centuries.

Chapter 5

Conclusion and Recommendations

5.1 Conclusion

The Thai law does not have any specific provision to deal with the bill of lading and also does not have any rules to cope with electronic bill of lading system. In my opinion, Electronic bill of lading system is a good system because it can facilitate international trade transaction, but there is no legal provision that are prepared to support this kind of technology. In the future, Thailand should develop legal structure to support this transaction. For example, Thailand may learn from the experience of developed countries such as Australia, or UK and brings system by way of legal transplant. From my view point, for example, though Thailand does not have any specific rules or laws relating to the Carriage of goods by sea, the Carriage of goods by sea in Thailand can be used in international trade by section 609 paragraph 2 of Civil and Commerce Code that states that, "the carriage of good by sea is governed by the laws and regulations relating thereto."⁴⁵

I would argue that Electronic bill of lading now in fact is not perfect system because it has both advantages and disadvantages. For example, in United Kingdom, position of electronic bill of lading still does not clearly defined. It can be seen as follows:

1. Section 1(4) of COGSA 1971 – for the Hague-Visby Rules to apply automatically to a contract for the carriage of goods by sea the contract must expressly or by implication provide for the issue of a bill of lading or any similar document of title. Section 1(6) provides that the Rules shall have the force of law in relation to (a) any bill of lading if the contract contained in or evidenced by it expressly provides that the Rules shall govern the contract and (b) any receipt which is a non-negotiable document marked as such if the contract contained in or evidence

⁴⁵ The Thai Civil And Commercial Code, section 609 paragraph 2.

by it is a contract for the carriage of goods by sea which expressly provides that the Rules are to govern the contract as if the receipt were a bill of lading.

2. Section 1(2) COGSA 1992 (Important: How would “indorsement” be defined? And How is it replicated electronically?) – See Section 1(5) and (6) – no regulations have been issued yet under those provisions. The Act would only apply to an EBL if appropriate regulations were issued. Endorsement is not defined. See also Contracts (Rights of Third Parties) Act 1999 Section 6(5)-(7).
3. Section 4 COGSA 1992 prescribes the evidential effect of representations in ‘signed’ bills of lading. It is not clear whether this would include an electronic signature, though Section 7 of the Electronic Communications Act deal with electronic signatures as a means of authenticating a document which can then be used as evidence in any legal proceedings.
4. Section 13 Civil Evidence Act 1995 “document” means anything in which information of any description is recorded. This presumably means that any data message possessing the three qualities of a bill of lading should be recognized as a bill of lading. The question is whether electronic data can possess the three qualities without statutory conferment of them. The negotiability function and right of an endorsee of a bill of lading to sue in its name are conferred by COGSA 1992 Section 2 and Section 4

Amendment of the law would definitely help to make the position clearer. Lacking of clarity in the law brings problem for business transaction. The Nowadays, the Australian version of the COGSA was amended to apply to electronic sea-carriage documents (Section 1A and 7). There are no specifications as to what constitutes and EBL, as the statutes leave the procedures and methods for their creation, transmission and transfer to the parties involved. Any data message containing the information usually contained in a paper bill of lading and that is capable of transfer by endorsement or delivery to third parties by its Australian equivalent (Section 4(4) of the Sea Carriage Documents Act) as

including “any form of authorization that constitutes endorsement under the terms of the contract of carriage”.

In addition, because international trade is international, efforts at developing a legal framework in this area should ideally transcend national boundaries. On the legal level, even though Bolero has a very sound contractual framework backed by a legal feasibility study, which seems to cover all eventualities, there are still hurdles to be overcome, as, amongst other things, it is not only private parties but also public authorities that are involved in international trade transactions.

Legal and bureaucratic stumbling blocks are part of the reason for the delay in the establishment of electronic documents and the private law model is not able to solve these problems. The existence of these obstacles also indicates that any legislative efforts made with regard to electronic bills of lading should address also other trade documents including import and export certification. Efforts are currently taking place in various countries to implement “Single Window” projects which would allow traders to submit international trade – import, export or transit – data required by government departments or agencies once only through a single electronic interface, thereby fulfilling all the regulatory requirements in respect of each transaction. This kind of project should incorporate legal recognition of electronic equivalents of trade documents such as Bolero bills of lading.

5.2 Recommendations

In my opinion, one of possible ways to solve the problem is that ICC (International Chamber of Commerce) of Thailand should be a centre of transfer Electronic Bill of Lading. By this I mean that a person who wants to transfer electronic bill of lading must register as a member in the ICC system. So, when the transferor transfers electronic bill of lading, the data will be recorded to ICC system. In addition, when a problem happens, you can check the data record at the ICC. I firmly believe that this

can solve the problem of transferring electronic bill of lading and Thailand might be the centre of commercial in Asia in the future.

Finally, it would argue that using new technologies in many commercial transactions in Thailand may bring many advantages for businesses particularly by using electronic transaction majority such as buying-selling goods on internet.

However, legal position for some electronic transaction such as Electronic bill of lading is still not clear and is needed to be improved. It still has limitation in legal system .In other word , there is no regulations to deal with electronic transaction for electronic bill of lading directly .Consequently, the status of electronic bill of lading in Thai legal system is ambiguity .I firmly believe that, in the future, laws and regulations dealing with electronic bill of lading should be enacted. This will bring certainty for traders from both local and international level. Legal transplant from developed countries might possibly good ways for developing countries such as Thailand. Other possible ways is to bring the Model Law that made by international organisation such as UNCITRAL when we draft new law in Thailand. This might bring harmonisation in international trade law.

BIBLIOGRAPHY

Books

- Chissick M., and Kelman, A. Electronic Commerce Law and Practice. London: Sweet and Maxwell, 1999.
- Fungarlom, S. International Trade Business. Bangkok: Department of Academic, 2006.
- Laryea E.T. Paperless Trade: Opportunities, Challenges and Solutions. Netherland: Kluwer Law International, 2002.
- Makwattanasu, W. The customs 2000. Bangkok: Bunnasin, 2000.
- Reed, C., Walden, I., and Edgar, L. Cross-Border Electronic Banking: Challenges and Opportunities 2nd edition. London: LLP, 2000.

Articles

- C. McLaughlin Jr., The Evolution of the Ocean Bill of Lading. Yale Law Journal Vol. 35 (1936): 548-551.
- NaNakorn, P., Electronic Commerce and Admissibility of Electronic Signature. Botbundith Vol. 56 Part 2 (June B.E. 2543).
- Suratcharoensuk, P., E-Letter of Credit and E-bill of lading. Executive Journal Vol. 24 (January–March 2004): 75.

Thesis

- Panida Wattanavekin, Effect of the Transfer of bill of lading in Thai legal system. Master dissertation Thesis, Chulalongkorn University, 1985.

Internet Network

Appendix To Bolero RuleBook Rule. In http://www.boleroassociation.org/downloads/op_procs.pdf. Access date October 1, 2007.

Bolero Documents. In http://www.boleroassociation.org/dow_docs.htm. Access date August 27, 2007.

Bolero.net's Security tutorial, version 2.4(1999-2000). In http://www.boleroassociation.org/sec_tut.pdf. Access date October 16, 2007.

CMI Rule for Electronic Bill of Lading. In <http://www.comitemaritime.org/cmidoocs/rulesebla.html>. Access date November 1, 2007.

Laws

Electronic Transaction Act B.E. 2544.

Thai Carriage of goods by sea B.E. 2534.

The Singaporean Electronic Transaction Act 1998.

The Thai Civil Procedure Code B.E. 2540.

Other

Michael Bridge. Electronic Bill of Lading. Lecture at UCL. London: University of London, 2004.

