

# Functional Equivalency of Rotterdam Rules

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**Abstract – This article critically analyses the ‘electronic transport records’ (electronic bills of lading) introduced by the Rotterdam Rules against the traditional paper bill of lading to identify the functional equivalency in the carriage of goods by sea.**

## THE FINDINGS

The electronic transport record and the negotiable electronic transport records which are introduced by the Rotterdam rules are functional equivalent to respective paper bills of lading and having the same functions of a paper bill of lading. To get the optimum use of electronic transport records and negotiable electronic transport records, the implementation of similar regulations by individual countries is required, if not the objectives of the Rotterdam rules will be lost.

## I. INTRODUCTION

The bill of lading is an important document in international trade. It fulfils few functions in the transport of goods by sea internationally, such as;

- It acts as a receipt for the goods received by the carrier,
- It is an evidence of contract of carriage between the shipper and the carrier, and
- It is a document of title

In common law, the parties to a contract of affreightment covered by a bill of lading had complete freedom to negotiate their own terms, but, abuse of the carrier’s stronger bargaining position during the nineteenth century, however resulted in the curtailment of this freedom and the formulation of the Hague Rules in 1924. Those were the 1<sup>st</sup> set of rules which governed the bills of lading. Then, in 1968 Hague Rules were amended due to commercial requirements and it is called as Hague/Visby Rules. In 1992, Hamburg Rules came in to force and this is considered as an updated and more ‘cargo owner-friendly’ version of Hague and Hague/Visby Rules. Hague and Hague/Visby Rules apply mandatorily only to contracts covered by a "bill of lading or any similar document of title", i.e. basically, to paper bills of lading.

In the present commercial environment, the use of traditional paper bill of lading seems to be very problematic due to the following reasons;

- High administrative costs,
- If the vessel arrives before the bill of lading, the indemnifying of the carrier to release the cargo early, is very inconvenient and also this may create delays (in liner shipping, 15% of all cases

no bills of lading are presented, in bulk trade it is about 50% and in oil related trades it is close to 100%),

- Misdelivery of cargo

The Hamburg rules recognises the validity of an electronic signature on the bill of lading, but, still does not address an e-document which can be used to avoid above mentioned difficulties.

The international organizations have taken extensive efforts to eliminate the above problems by the introduction of CMI rules in 1990. The CMI Rules do not have the force of law, and parties must contractually agree to use them in conducting their businesses. The CMI framework is open internationally for any merchant to use. The CMI Rules turned out to be unpopular in the trading world, because, it did not resolve the issues inherent in creating a negotiable electronic bill of lading. The CMI Rules have not attracted wider acceptance from merchants for the following reasons:

- no provision for contractual rights and liabilities to be transferred along with the documentation;
- it is not clear what happens if a holder who has accepted the right of control and transfer defaults;
- no provision for the passing of property in the goods;
- no comprehensive system or body to administer it; and finally,
- it was not secure because the secret code was not encrypted.

On the other hand, to eliminate the above-mentioned problems involved with the traditional bills of lading, UNECE (United Nations Economic Commission for Europe) recommendation 12 emphasizes to consider the following points when using a bill of lading, among other things:

- Discourage the use of negotiable bills of lading unless it is required. Encourage the use of seaway bills,
- Encourage the use of single original transport documents,
- Facilitate the introduction of EDI (Electronic Data Interchange)

In fact, these recommendations are provided to ship owners, cargo owners, ship operators etc. Therefore, various institutions and organizations have attempted to address and reduce those problems, but, still they exist. The most recent attempt is the drafting of the Rotterdam Rules, which address ‘electronic transport records’ which can be considered as electronic versions of traditional paper bills of lading.

## II. OBJECTIVES OF THE ARTICLE

The receipt function and the evidence of contract function of a paper bill of lading can be easily replicated by an electronic bill of lading. Therefore, the main problem with the electronic bill of lading is the replication of the third function, i.e., document of title function. During this article, we will try to identify whether the electronic bill of lading which is mentioned in the Rotterdam rules is sufficient enough to perform the functions of a paper bill of lading and also whether the electronic bill of lading is capable enough to overcome the above-mentioned problems of the paper bill of lading.

The Rotterdam rules are designed to regulate rights and obligations under a substantially broader spectrum of transport documents than that which is regulated under Hague, Hague/Visby and Hamburg rules, but, only the electronic transport records are discussed in this paper. When discussing about an electronic bills of lading, there are two issues to be addressed. Firstly, the legal aspects and the feasibility of its use in the commercial trade (how effectively it can take the position of the traditional paper bill of lading). Secondly, the computer and software generated problems. Gaskell<sup>10</sup> among other things, identify the following computer and software generated problems in his article on “Bills of lading in an electronic age” as;

- Problems associated with printing bills of lading, especially where the number of attempts to print an original exceeds the number of originals shown on the face of the bill as having been issued,
- The resistance of the major traders and banks to invest on other software solutions (which are related to electronic bills of lading) since they have already invested on their own tailor made or proprietary software solutions to deal with customer relationship and supply chain management,
- Cyber risks

The above-mentioned computer and software generated problems are not addressed in this article since it goes beyond the scope of Rotterdam Rules. Only the problems which are within the scope of Rotterdam Rules such as the legal aspects of electronic bills of lading and the possibility of replacing the traditional paper bills of lading are addressed in this discussion.

## III. ANALYSIS

### A. Technological Neutrality

It is important to understand that the Rotterdam rules does not use the conventional terminology (bills of lading, seaway bills etc.), but, it uses its own terminology, such as transport document, negotiable transport document etc. Theoretically, this has advantages since different legal systems have different provisions

governing the characteristics and use of document of title in the carriage of goods.

The Rotterdam Rules defines “electronic communication” as “information generated, sent, received or stored by electronic, optical, digital or similar means with the result that the information communicated is accessible so as to be usable for subsequent reference” and also it defines “electronic transport record” as “information in one or more messages issued by electronic communication under a contract of carriage by a carrier.....”. Both Articles above are medium and technologically neutral, i.e. any of the existing electronic mediums or new mediums in the future can be used as long as the stated requirements are satisfied.

When considering the above points, the negotiable electronic transport record also can be used similar to a paper bill of lading, irrespective of the type of the electronic medium used, provided that it is used with the consent of the carrier and the shipper both.

Same as Hague and Hague/Visby Rules, Articles 6 and 7 of Rotterdam Rules excludes charterparties except the consignee, controlling party or holder that is not an original party to the charterparty.

### B. Functional Equivalent – Receipt function of the Bill of Lading

There are two types of electronic transport records under the Rules. One is not negotiable (non-negotiable electronic transport record) which can be considered similar to a paper seaway bill, also may be used as an alternative to the straight bill of lading and the other one is negotiable (negotiable electronic transport record) which is an equivalent of paper negotiable bill of lading.

When looking at the definitions of ‘electronic transport record’, ‘negotiable electronic transport record’ and ‘non-negotiable transport record’, it is clear that whenever the Rules says, ‘electronic transport record’ it includes both negotiable and non-negotiable transport records.

The Hague and Hague/Visby rules have been criticised for the minimum information required to be on a bill of lading. The Rotterdam Rules specify that an electronic transport record should evidence the carrier’s receipt of goods under a contract of carriage and also it gives an extensive list of information that is to be provided on an electronic transport record as follows;

- A description of the goods
- Leading marks for the identification of the goods
- Number of packages or pieces, or the quantity of goods
- Weight of the goods

It should further include the following as well;

- The apparent order and condition of the goods
- Name and address of the carrier
- The date of loading or the date of the issue of the bill of lading
- Number of bills of lading issued if it is negotiable & also more than one original is issued

- Name & address of the consignee, if named by the shipper
- Name of the vessel, if specified in the contract of carriage
- Place of the receipt and, if known to the carrier, the place of delivery
- Port of loading and the port of discharge, if specified in the contract of carriage

To complete the receipt function of the electronic transport record, Article 38 paragraph 2 of the same regulations states that the electronic signature of the carrier or a person acting on its behalf shall be included on the electronic transport record. One can argue that the 'electronic signature' is not separately defined in the rules. As mentioned above, since the Rotterdam rules are medium and technologically neutral, this may include any version of an electronic signature provided it is accepted in the governing country.

Same as Hague and Hague/Visby Rules on traditional bills of lading, Rotterdam Rules also states that an electronic transport record is a prima facie evidence of the carrier's receipt of the goods as described in the contract particulars. Similar to Hague/Visby rules, Rotterdam Rules also specify that proof to the contrary shall not be admissible when the negotiable electronic transport record has been transferred to a third party acting in good faith (this provision is not included in Hague Rules). Therefore, it can be considered that when a negotiable electronic transport record is transferred to a third party acting on good faith, same as a traditional bill of lading, this also becomes conclusive evidence related to the information provided on electronic transport record.

Article 41, paragraph (c) of the Rotterdam Rules further states that proof to the contrary by the carrier shall not be admissible against a consignee that in good faith has acted in reliance on any of the following contract particulars included in a non-negotiable electronic transport record:

- The contract particulars referred to in article 36, paragraph 1, when such contract particulars are furnished by the carrier;
- The number, type and identifying numbers of the containers, but not the identifying numbers of the container seals; and
- The contract particulars referred to in article 36, paragraph 2.

That means a non-negotiable electronic transport record also a prima facie evidence of the carrier's receipt of the goods as stated in contract particulars, except in the above (i), (ii) and (iii). This is more logical because once the above information is provided by the carrier [above (iii) is usually provided by the carrier] it becomes conclusive evidence in the hands of a consignee acting in good faith.

According to the Rules the shipper is entitled to obtain from the carrier, a non-negotiable electronic transport record or a negotiable electronic transport

record at the shipper's option. As mentioned before, since the term 'electronic transport record' includes both negotiable and non-negotiable electronic transport records, the receipt function is included in both the types of electronic transport records.

When considering the above factors, it can be concluded that the Rotterdam Rules describe the electronic transport record as a proper functional equivalent of the paper bill of lading in the receipt function.

### *C. Functional Equivalent - Evidence of the Contract of Carriage of an Electronic Transport Record*

According to the rules, the carrier's period of responsibility of the goods starts when the goods are received by the carrier and ends when the goods are delivered. At the same time, this covers liability of the carrier for loss, damage or delay and also additional liabilities of the carrier relating to particular stages of carriage, such as deviation, carriage of deck cargo etc.

Chapter 13 describes about the time for suit which includes period of time for suit, action for indemnity, actions against the person identified as the carrier etc. Chapter 12 governs the limitation of liability by the carrier in the case of a damage or loss of the goods.

According to Article 1, paragraph 18 (b) electronic transport record is an evidence of a contract of carriage. As mentioned before, since the term 'electronic transport record' includes both negotiable and non-negotiable electronic transport records, both these types of 'electronic transport records' perform the function of evidence of contract of carriage.

The above points well establish that an electronic transport record under the Rotterdam Rules fulfils the second function of a paper bill of lading. Further, Goldby<sup>[14]</sup> says that the electronic transport record governed by the Rules would, at law, be perfectly capable of performing as an evidence of a contract of carriage.

### *D. Functional Equivalent - Document of Title of an Electronic Transport Record*

There are two things to be fulfilled if a bill of lading is to become a document of title. Firstly, it should be able to transfer the rights of possession of cargo. Secondly it should be able to transfer the ownership and the receiver or the buyer should be able to protect and enforce those rights against the carrier. To make a document transferable, rules must inevitably be developed to regulate the rights and obligations that arise under such a transferable document if the document is to facilitate the international trade. As mentioned before, the Rotterdam rules specifically states that electronic transport record is a receipt for the goods received by the carrier and also it evidences or contains a contract of carriage. The rules intentionally drop out the document of title part. That is because the term 'electronic transport record' includes both negotiable and also non-negotiable transport records. This may be because the Rotterdam

rules do not consider the non-negotiable transport records as a document of title. The English law considers straight bills of lading as a document of title since it is at least transferable once, from the shipper to the consignee. But, this may not be the same in other countries.

Article 51, paragraph 4 of the Rotterdam Rules states that, when a negotiable electronic transport record is issued:

- The holder is the controlling party;
- The holder may transfer the right of control to another person by transferring the negotiable electronic transport record;
- In order to exercise the right of control, the holder shall demonstrate, that he is the holder.

The Article 1, paragraph 10(b) defines the word “holder” as;

“The person to which a negotiable electronic transport record has been issued or transferred in accordance with procedures referred to in Article 9, paragraph 1”.

This definition specifically applies only to negotiable electronic transport records. This shows that negotiable electronic transport record is capable of transferring constructive possession of the goods, which is important under the ‘document of title’.

Rotterdam rules define the word “transfer” as, “transfer of a negotiable electronic transport record means the transfer of exclusive control over the record”. Diamond QC<sup>[12]</sup> argues whether this concept of “exclusive control” is an apt one or will be workable. He further adds that when the conventional bill of lading is being transferred, even though endorsements are added during each transfer, the original paper remains the same. In electronic transport record, every successive version includes a new set of data and also new information (the latest endorsement), but, there is nothing regarding the transfer and survival of the paper document. It is the nature of the electronic documents that even if the information is the same, the presented version would be different from the former one. It may not affect the legality of an electronic document since it is the nature of it. In here, the term “exclusive control” is provided to indicate the new holder has the possession of the cargo, he has the right to transfer the possession of the cargo again and he has the right to take the delivery of the cargo when it is not transferred. In simple terms, what it means is the new holder can do whatever he likes with the cargo.

At the same time he (Diamond QC<sup>[12]</sup>) argues that “What is important is, not so much that a holder can ‘control’ the record, as that, at any one time, there is only one holder. An alternative solution would have been to omit the references to ‘exclusive control’ and to adapt Article 9 so that it requires procedures that provide ‘an assurance that at any one time there is only one holder’”. Under Rotterdam Rules there will not be any doubts in relation to the number of holders of an electronic transport record, because, Article 1 does not define any words like “Holders” (in plural). It defines the word “holder” (which is a singular) as;

“The person to which a negotiable electronic transport record has been issued or transferred in accordance with the procedures referred to in article 9, paragraph 1”.

The above Article talks about a “person”, but, not about “persons”. It means at any one time there can be only one holder. The Article 9, paragraph 1 states that there must be procedures for the issuance and transfer of that record to an intended holder, the holder should be able to demonstrate that he is the holder and manner of providing confirmation that delivery to the holder has been affected..... This shows that throughout Article 9, the word ‘holder’ is used instead of ‘holders’. Even in Article 47 the singular word (holder) is used throughout. This confirms that under Rotterdam rules there can be only one holder to an electronic transport document at any one time.

Van<sup>[16]</sup> states that the term ‘right of control’(which is used through the chapters 9 to 11) is solely related to the contract of carriage and it gives rights to the party to amend the contract with the carriers consent which may include instructions to return the goods, discontinue the carriage, deliver the goods to another consignee. This confirms the ownership of the goods under a contract of carriage by sea.

The Article 47 states that, generally, the carrier shall deliver the goods at the time and location, upon demonstration by the holder of the negotiable electronic transport record, also it further adds, the carrier shall refuse the delivery if the negotiable electronic transport record is not produced. The paragraph 1, sub-paragraph (c) of the same Article specifies that validity of the negotiable electronic transport record ceases upon the delivery of the goods to the holder of the record. The method of identifying the holder is left for the parties to determine in their contract and allows for future technological developments.

Article 47 specifically deals with only the negotiable electronic transport record, but, not with the non-negotiable electronic transport record. That means, if a non-negotiable transport record is issued at the request of the shipper, the Rules do not specifically say that it should be produced to take the delivery of the cargo and also it does not say whether to refuse or not to refuse the delivery of the cargo, if a non-negotiable electronic transport record is used.

On the other hand, these Rules deal with non-negotiable transport documents which require surrender prior to the delivery of cargo. In Article 46 (a), it says that, the carrier shall deliver the goods to the consignee upon the consignee properly identifying itself on the request of the carrier and surrender of the non-negotiable document. It further adds, the carrier may refuse delivery if the person claiming to be the consignee fails to properly identify on the request of the carrier, and shall refuse delivery if a non-negotiable document is not surrendered. Finally, it says that, if more than one original non-negotiable document has been issued, the surrender of the one original will suffice and the other originals cease to have any effects or validity. Unlike seaway bills, straight bills of lading should be produced to take the delivery of cargo and also it is not negotiable

(except once from the shipper to consignee). Therefore, the mentioned Article is applicable to straight bills of lading.

Article 51, paragraph 2, subparagraph (a) says that shipper may transfer the right of control to the consignee named in the transport document by transferring the document to that person without endorsement. A transport document is a prima facie evidence of the carrier's receipt of the goods and proof to the contrary by the carrier in respect of any contract particulars shall not be admissible, when such contract particulars are included in a non-negotiable transport document which is required to be surrendered when taking the delivery of the cargo, is transferred to a consignee acting in good faith. Diamond QC<sup>[12]</sup> agrees that the Convention is getting closer to recognizing a "straight" bill of lading as one like a negotiable transport document. That means, the Rotterdam Rules covers straight bills of lading and also it can be considered as a document of title.

After addressing the position of a non-negotiable transport document to be recognized as a document of title, the rules have not addressed the position of non-negotiable electronic transport record as a document of title. As mentioned earlier, electronic transport record (which includes non-negotiable electronic transport record) act as a receipt for the goods received by the carrier and also as an evidence of the contract of carriage. Diamond QC<sup>[12]</sup> also agrees that there are no indications in the Rotterdam Rules which requires surrender of a non-negotiable electronic transport record to take the delivery of cargo.

Sandiforth and Baatz<sup>[19]</sup> says "the Convention does not use the phrase 'bill of lading, although at the Colloquium it was said that should the Convention enter into force the phrase would doubtless continue to be used in practice". "If there is fully functional equivalence, then it should not matter much which type of document is used, provided that it falls within the various Article 1 definitions of paper transport 'document' or electronic transport 'record'". Does this mean that the common law theories on straight bills of lading and seaway bills (seaway bills are not required to surrender to take the delivery of cargo) will be applicable on non-negotiable electronic transport records as well? Since English law is objective than subjective, it is very doubtful that English judges will consider non-negotiable electronic records as straight bills of lading or having the third function of a bill of lading, when the Rules define requirements for non-negotiable transport records clearly but not the non-negotiable electronic transport records.

On the other hand, the Rules define "non-negotiable transport document" and also identify issues when a "non-negotiable transport document that requires surrender is issued". This indicates that "non-negotiable transport document" may include seaway bills and straight bills of lading both. According to Article 46, "Non-negotiable transport document that requires surrender" should indicate that it shall be produced to take the delivery of the cargo. Therefore, if such an indication is provided, a non-negotiable transport

document may be a straight bill of lading. If it is not indicated that it is required to be produced to take the delivery of the cargo, it may be a seaway bill. If the same theory is used on the non-negotiable electronic transport records, it may include electronic version of seaway bills as well as electronic version of straight bills of lading both. Then why do the Rules not address a "non-negotiable electronic transport record that requires surrender"? There is no argument, that an electronic record cannot be surrendered. But, it should address something like "non-negotiable electronic transport record that requires the proof of the holder".

When considering the above factors, it can be stated that a negotiable electronic transport record can be considered as a document of title but, not a non-negotiable electronic transport record. At the same time, it is not clear whether a non-negotiable electronic transport record includes an electronic version of a seaway bill and an electronic version of straight bill of lading. The Rotterdam rules are silent on this, may be because, it is left open to cover future electronic transport record developments.

Courts might question whether an electronically transmitted document would have the same force as a paper bill of lading, and whether it would offer sufficient security in identifying the merchant as the party who has title to the goods. What makes a paper bill negotiable is not that it is paper but what can be done with it. Therefore, as long as the electronic transport record can perform the customary functions of a paper bill of lading there should not be any confusion at law. Goldby also argues that it is sufficiently clear and simple for national courts to continue to apply previously developed principles, regarding the electronic record as well.

#### E. Electronic Bills of Lading and the Banks

UPC 600 states that "A document may be signed by handwriting, facsimile signature, perforated signature, stamp, symbol or any other mechanical or electronic method of authentication". This indicates that the banks are ready to accept electronic signatures on bills of lading, but, their position relating to electronic bills of lading is not clear. Therefore, banks may not accept bills of lading in electronic form against letter of credits. In that case, a printed bill of lading may be required at the last leg of this chain. Since the close systems like ESS-Databridge also have banks as representatives, those banks may accept electronic bills of lading against letters of credit.

#### IV. CONCLUSION

If the consent of the carrier and the shipper is present, the electronic transport record would be deemed equivalent to a paper document for all intents and purposes. Therefore, it is functionally equivalent and also technologically neutral.

The negotiable electronic transport record has all the functions of a negotiable paper bill of lading and

- It is a receipt for the goods received by the carrier,

- It evidences the contract of carriage, and
- It is a document of title

At the same time the negotiable electronic transport record is a functional equivalent of the paper bill of lading, because, the convention states that the issuance, exclusive control, or transfer of an electronic transport record has the same effect of a transport document. On the other hand, chapter 10 of the Rotterdam Rules deals with 'rights of controlling party' by which the Rules become more functional equivalent.

There are advantages and also disadvantages of Rotterdam Rules. Initially, Hague Rules were developed to govern the contracts of carriage of goods by sea. To overcome the problems associated with Hague rules, The Hague/Visby Rules were introduced. Then, to increase the scope of the application, Hamburg Rules were drafted. At this moment, most of the maritime nations have ratified Hague or Hague/Visby Rules. Only few countries have ratified Hamburg Rules. Likewise, questions may arise to the value of the Rotterdam Rules if it fails to command sufficient popularity to be widely adopted, especially by the major maritime nations. Even Peter<sup>[20]</sup> doubts the implementation of Rotterdam Rules if the countries do not ratify it. This is the biggest disadvantage that the Rotterdam rules have. United Kingdom COGSA 1992 states that the "Secretary of State may by regulations make provision for the application of this Act to cases where a telecommunication system or any other information technology is used .....", but, so far no any changes done to facilitate the electronic transport records. If the Rotterdam rules are not accepted internationally, the electronic transport record need to be converted back to paper transport document. Then the one purpose of the electronic transport record is lost.

On the other hand, it does not clearly state the position of a non-negotiable electronic transport record. Even though The Hague/Visby rules do not include seaway bills and straight bills of lading, the COGSA 1992 includes seaway bills. Therefore, the definition of non-negotiable transport record depends upon individual countries. Which may lead to confusions, same as for a straight bill of lading in different countries.

The electronic transport records will help to reduce the delays involved in physical transfer of paper bills of lading and also it will be a good security against misdelivery of cargo. At the same time, Rotterdam rules have a broad spectrum to include any type of technological means to include carrier operated systems such as APL electronic bills of lading, registry operated systems such as Bolero etc. If it is implemented, the users do not have to worry about the legality as in the case of Bolero with CMI rules.

Even though the computer-generated problems are not covered in this paper, it is worth mentioning that the International Group P & I clubs have started covering risks involved in 'cyber risks'. This is a good step forward regarding electronic transport records. The P & I clubs are shipowner's mutual third-party liability insurance providers. They are providing coverages for Bolero and ESS-Databridge users.

Even though the international regime related to electronic bills of lading is still pending, Laryea<sup>[25]</sup> says that Australian local regulations have in-cooperated an electronic bill of lading system and it is functioning well. Therefore, the electronic transport document covered in the Rotterdam rules may have a better future.

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