

# Compliance of Electronic Bill of Lading Regulation in Korea with Model Law on Electronic Transferable Records\*

JKT 23(3)

Received 7 April 2019  
Revised 4 May 2019  
Accepted 20 May 2019

Seok-Beom Choi<sup>†</sup>

Department of International Business, Cheju Halla University, South Korea

## Abstract

**Purpose** – The UNCITRAL Model Law on Electronic Transferable Records (Model Law) is based on the principles of non-discrimination against the use of electronic means, functional equivalence, and technology neutrality underpinning all UNCITRAL texts on electronic commerce. Investigating the disagreements between the Model Law and the Korean Commercial Act (KC Act), including the B/L Regulation, and suggesting the revision of the KC Act including the B/L Regulation, could be a valuable study. The purpose of this paper is to contribute to the harmonization of Korean legislation regarding electronic bill of lading in compliance with the Model Law.

**Design/methodology** – The Model Law is flexible to accommodate the use of all technologies and models, such as registries, tokens, and distributed ledgers: that is, blockchain. In 2007, the KC Act was revised to regulate electronic bills of lading to promote the widespread legal use of electronic bills of lading. In addition, The Regulation on Implementation of the Provisions of the Commercial Act Regarding Electronic Bills of Lading (the B/L Regulation) was enacted to regulate the detailed procedures in using electronic bills of lading in 2008. This paper employs a legal analysis by which this paper does find differences between two rules in light of technology neutrality and global standard of electronic bills of lading model.

**Findings** – The main findings are as follows: i) the Korean registry agency has characteristics of a closed system. ii) The KC Act has no provision regarding control. iii) The KC Act discriminates other electronic bills of lading on the ground that it was issued or used abroad. Moreover, this study does comprehensive analysis of Korean Acts in comparison with the Model Law and, in particular, this study analyzes the differences between the KC Act and the Model Law by comparing article by article in view of the harmonization of the two rules.

**Originality/value** – The subject of previous several studies was draft provisions on Electronic Transferable Records before completion of the Model Law; thus, these studies did not take into consideration the character of the Model Law as the Model Law was chosen at the final stage of legislation. This study is aimed at the final version of the Model Law. So, this study is meaningful by finding the suggestion and directions for the Korean government to revise the KC Act and the B/L Regulation in line with the Model Law.

**Keywords:** Model Law, Electronic Transferable Records, Electronic Bill of Lading, Bill of Lading, Control, Korean Commercial Act

**JEL Classifications:** K22, K24, K33

## 1. Introduction

The UNCITRAL Model Law on Electronic Transferable Records (Model Law) is based on the principles of non-discrimination against the use of electronic means, functional equivalence, and technology neutrality underpinning all UNCITRAL texts on electronic commerce. It is flexible to accommodate the use of all technologies and models, such as

\*This work was supported by the Ministry of Education of the Republic of Korea and the National Research Foundation of Korea (NRF-2017S1A2A2036758).

<sup>†</sup>Corresponding author: sbchoi777@naver.com

© 2019 Korea Trade Research Association. All right reserved.

registries, tokens, and distributed ledgers: that is, blockchain. In 2007, the Korean Commercial Act (hereinafter referred to as “the KC Act”) was revised to regulate electronic bills of lading to promote the widespread legal use of electronic bills of lading. In addition, Regulation on Implementation of the Provisions of the Commercial Act Regarding Electronic Bills of Lading (hereinafter referred to as “the B/L Regulation”) was enacted to regulate the detailed procedures in using electronic bills of lading in 2008. The United Nations Commission on International Trade Law (hereinafter referred to as “the Commission”) adopted the UNCITRAL Model Law on Electronic Transferable Records (hereinafter referred to as “the Model Law”), annexed to the report of the fiftieth session of the Commission on July 13, 2017. The General Assembly of the United Nations (hereinafter referred to as “the General Assembly”) adopted the Resolution on December 7, 2017. The Model Law aims to permit the legal use of electronic transferable records both domestically and between states by inducing each nation to adopt related acts in line with the Model Law. Electronic transferable records have functional equivalency as transferable documents or instruments in a paper environment. Transferable documents or instruments are paper-based documents or instruments for the holder to claim the performance of the obligation indicated therein, and for the holder to transfer the right to the claim to that performance by endorsement and delivery of the documents or instruments. These documents or instruments typically include bills of lading, bills of exchange, promissory notes, and warehouse receipts. Therefore, Article 862 of the KC Act and the B/L Regulation are related to the Model Law. The KC Act and the B/L Regulation are needed to recognize the same legal effect of an electronic bill of lading as a bill of lading, and to solve problems with the letter of guarantee that allows a carrier to make delivery of the goods without original bills of lading at destination (Kim Jae-Woo, 2016, 294), even though the carrier must not deliver the goods in any way other than against presentation of an original bill of lading (Pejović, 2006, 6).

According to the purpose of the Model Law, where there are disagreements between the Model Law and the KC Act, including the B/L Regulation, this Act and Regulation should be revised for the harmonization of legislation by each nation on e-Commerce and e-Trade.

Several studies have been done. Lim Sung-Chul (2018), Jung Gyung-Young (2014/2015/2017) and Choi Kyoung-Jin (2013/2014) studied draft provisions on Electronic Transferable Records before completion of the Model Law; thus, their studies did not take into consideration the character of the Model Law as the Model Law was chosen at the final stage of legislation. Lim Byung-Ha and Choi Seok-Beom (2018) studied the final version of the Model Law, and made suggestions in view of Korean Acts, such as Issuance and Distribution of Electronic Bills Act, Electronic Financial Transactions Act, and Article 862 of the KC Act. The findings of this study were: i) Korean Acts discriminate against other electronic Bills, electronic bonds and electronic bills of lading on the ground that were issued or used abroad; ii) the approach of Korean Acts is different from the Model Law in the definition and operation of such alternatives based on the electronic registration or/and electronic security. However, this study did not do comprehensive analysis of Korean Acts in comparison with the Model Law and, in particular, this study did not analyze the differences between the KC Act and Model Law by comparing article by article in view of the harmonization of the two rules.

One study suggested that there is no problem in the B/L Regulation in view of the Model Law (Lee Sang-Cheon and Kim Eun-Young, 2009, 153), but revision of the KC Act and the B/L Regulation is indispensable in accordance with the Model Law as UNCITRAL recommends that all states give favorable consideration to the Model Law when revising the rules on electronic transferable records, and invite states using the Model Law to notify the Commission accordingly. Therefore, this study is meaningful by finding the suggestion and directions for the Korean government to revise the KC Act and the B/L Regulation in line with the Model Law.

This paper shall investigate the disagreements between the Model Law and the KC Act, including the B/L Regulation, and to suggest the revision of the KC Act, including the B/L Regulation. The purpose of this paper is to contribute to the harmonization of Korean legislation regarding electronic bill of lading in compliance with the Model Law.

## 2. Background and Comparison of Model Law with the KC Act

### 2.1. Need for Electronic Transferable Records

Transferable document or instrument is very important commercial document. The widespread use of electronic alternatives may be greatly beneficial for facilitating electronic trade (e-Trade) on a global basis, and e-Trade could benefit from faster and more secure transmission between trading partners. Electronic transferable records could be particularly relevant for certain trade areas, such as transport, logistics and finance as electronic bills of lading, as an electronic transferable record will be used as a document of title, receipt of goods and prima-facie evidence of contract of carriage by sea in regard to transport and logistics areas and be used as collateral for banks who negotiate or honor documentary draft and/or shipping documents being composed of such documents as a bills of lading, commercial invoice, or insurance documents, and so on in regard to finance (Pejović, 2001, 464-467).

The introduction of electronic transferable records could also require existing commercial practices to be reviewed, and new ones to be established in the future. Moreover, only widespread use of electronic transferable records may guarantee fully paperless trade. However, the digitization of transferable documents or instruments may give particular challenges to the established practice of employing various paper-based precautions in order to reduce risks associated with the unauthorized duplication of those documents or instruments (UNCITRAL, 2018, 16).

### 2.2. Comparison of Main Regulations

#### 2.2.1. Definition and Requirement

The Model Law defines three terms: “electronic record”, “electronic transferable record”, and “transferable documents or instrument”. “Electronic record” means information generated, communicated, received, or stored by electronic means, including, where appropriate, all information logically associated with or otherwise linked together so as to become part of the record, whether generated contemporaneously or not.

Electronic record is defined based on data message in the UNCITRAL Model Law on Electronic Commerce (1996) (hereinafter referred to as “the EC Model Law”) and in United Nations Convention on the Use of Electronic Communications in International Contracts (hereinafter referred to as “the EC Conventions”), and is a flexible term to allow for data messages which includes information constituting in itself the electronic transferable record.

“Electronic transferable record” is an electronic record that complies with the requirements of Article 10 of the Model Law.

Electronic transferable record is an electronic alternative functionally equivalent to transferable documents or instruments and flexible enough to include the development and use of electronic transferable records that do not have an equivalent in paper-based system as these records are not governed by the Model Law (UNCITRAL, 2018, 39). The Model Law focuses on transferability, not negotiability (Jung Gyung-Young, 2017, 1606).

“Transferable document or instrument” means a document or instrument issued on paper that entitles the holder to claim the performance of the obligation indicated in the document or instrument, and to transfer the right to performance of the obligation indicated in the

document or instrument through the transfer of that document or instrument.”

A transferable document or instrument is a paper-based document or instrument which makes the holder claim the performance of the obligation or to transfer the right to performance of the obligation by endorsement and delivery of that document or instrument.

Article 862 of Korean Commercial Act does not define the terms defined as in the Model Law, but Article 2 of the B/L Regulation defines terms such as electronic bill of lading, registry agency of bills of lading, legitimate holder of an electronic bill of lading, and issuance and registration of an electronic bill of lading as follows.

“The term “electronic bill of lading” is a bill of lading made out in the form of an electronic document and registered in a registry agency of electronic bills of lading under Article 862 (1) of the Commercial Act.”

According to the definition of electronic bill of lading, only an electronic bill of lading registered in a registry agency in Korea has the same legal effect as an electronic bill of lading.

“The term “register of rights to electronic bills of lading” (hereinafter referred to as “electronic register”) means a register that a registry agency shall keep for managing electronic bills of lading by electronic means in order to maintain records of the issuance, registration, and transfer of electronic bills of lading, and the switch of such bills of lading to paper bills of lading.”

The Korean electronic bill of lading is based on registry agency for a carrier to issue or for a holder to use an electronic bill of lading, so the register of rights for electronic bills of lading in a registry agency is required.

“The term “holder of an electronic bill of lading” means a person who holds an electronic bill of lading registered initially by the registry agency or a transferee of an electronic bill of lading.”

The holder is the party who is entitled to the rights to claim delivery of the goods at destination or to transfer the right to a transferee by sending the related message to the registry agency.

“The term “issuance and registration of an electronic bill of lading” (hereinafter referred to as “issuance and registration”) means that a registry agency registers an electronic bill of lading in the electronic register upon the request of a carrier for the purpose of issuing the electronic bill of lading.”

After the registry agency’s registration of an electronic bill of lading issued according to the carrier’s request, the holder can use an electronic bill of lading.

### 2.2.2. Legal Recognition

The Model Law provides legal recognition of an electronic transferable record in Article 7 as follows:

“1. An electronic transferable record shall not be denied legal effect, validity or enforceability on the sole ground that it is in electronic form.

2. Nothing in this Law requires a person to use an electronic transferable record without that person’s consent.

3. The consent of a person to use an electronic transferable record may be inferred from the person’s conduct.”

The form in which an electronic transferable record is presented or retained cannot be used as ground for denial of legal effect, validity or enforceability of that record, but the above article does not establish the legal validity of that record or any information in that record.

Article 862 (1) of the KC Act regulates as follows:

“A carrier may issue an electronic bill of lading by means of registration in the registry agency designated by the Minister of Justice with the consent of a consignor or charterer in lieu of issuance of a bill of lading referred to in Article 852 or 855. In such cases, an electronic

bill of lading shall have the same legal effect as a bill of lading referred to in Articles 852 and 855.”

Article 852 regulates the issuance of a bill of lading, and Article 855 does charter party and bill of lading.

In contrast to the Model Law, this Article recognizes the legal effect of an electronic bill of lading registered in such a special way that registry agency registers an electronic bill of lading issued according to a carrier’s request, so the compliance with this special requirement is indispensable in a legal effect as a bill of lading in Korea.

### *2.2.3. Functional Equivalence*

Regarding functional equivalence, the Model Law provides writing, signature, transferable documents or instruments, and control, while the KC Act does not regulate writing, signature, and control. In Korea, regarding the functional equivalences of these terms, the Framework Act on Electronic Documents and Transactions (hereinafter referred to as “the EC ACT”) regulates writing, and the Digital Signature Act regulates signature. The KC Act regulates the electronic bill of lading instead of transferable documents or instruments. While the KC Act and other Acts do not regulate control, control will be examined in the next section regarding the discordance between the Model Law and the KC Act.

#### *a) Writing*

Article 8 of the Model Law regulates writing as follows:

“Where the law requires that information should be in writing, that requirement is met with respect to an electronic transferable record if the information contained therein is accessible so as to be usable for subsequent reference.”

This Article is based on Article 6 (1) of the EC Model Law, except for introducing information instead of communications contained therein. The notion of information in writing has a functional equivalence of writing with respect to electronic transferable records only.

In Korea, Article 4 (1) of the EC Act regulates as follows:

“No electronic document shall be denied legal effect as a document solely because it is in an electronic form, except as otherwise expressly provided for in other Acts.”

This provision is in compliance with Article 8 of the Model Law, even if the KC Act does not provide writing. There is no need to insert a clause regarding writing in the KC Act as the EC Act applies to the electronic bill of lading in regard to writing.

#### *b) Signature*

Article 9 of the Model Law specifies as follows:

“Where the law requires or permits a signature of a person, that requirement is met by an electronic transferable record if a reliable method is used to identify that person and to indicate that person’s intention in respect of the information contained in the electronic transferable record.”

This article is based on Article 7 (1)(a) of the EC Model Law, and Article 9 (3) of the EC Convention and the notion of electronic signature; that is, the information contained in the electronic transferable record has a functional equivalence of signature of a person with respect to the electronic transferable record only.

In Korea, Article 3 (1) of the Digital Signature Act provides the following provision:

“In cases where a signature, signature and seal, or name and seal is, under other Acts and subordinate statutes, required to be affixed on a paper-based document or letter, it shall be deemed that such requirements are satisfied if there is a certified digital signature affixed on an electronic message.”

This provision is in compliance with Article 9 of the Model Law, even if the KC Act does not provide signature. There is no need to insert a clause regarding signature in the KC Act as Digital Signature Act applies to electronic bill of lading in regard to signature.

### *c) Transferable Documents or Instruments and Bill of Lading*

Article 10 of the Model Law stipulates as follows:

“1. Where the law requires a transferable document or instrument, that requirement is met by an electronic record if:

- (a) The electronic record contains the information that would be required to be contained in a transferable document or instrument; and
- (b) A reliable method is used;
  - (i) To identify that electronic record as the electronic transferable record;
  - (ii) To render that electronic record capable of being subject to control from its creation until it ceases to have any effect or validity; and
  - (iii) To retain the integrity of that electronic record.

2. The criterion for assessing integrity shall be whether information contained in the electronic transferable record, including any authorized change that arises from its creation until it ceases to have any effect or validity, has remained complete and unaltered apart from any change.”

The notion of the electronic transferable record has a functional equivalence of transferable documents or instruments conditional on the reliable method to identify the electronic transferable record and to render that electronic record capable of being subject to control during the lifetime of that record and to retain the integrity of that electronic record.

In Korea, Article 862 (1) of the KC Act states “an electronic bill of lading shall have the same legal effect as a bill of lading referred to in Articles 852 and 855.”

This provision is in compliance with Article 10 of the Model Law, except for registration in the registry agency for electronic bills of lading. In contrast to the Model Law, this Article recognizes the legal effect of electronic bill of lading issued and registered in a special way. Compliance with this special requirement is indispensable in the legal effect of a bill of lading in Korea.

In Korea, the notion of an electronic bill of lading has a functional equivalence of paper bill of lading subject to electronic bills of lading being registered in the registry agency.

## *2.2.4. Main Procedures*

### *a) Endorsement*

The Model Law provides endorsement in Article 15 as follows:

“Where the law requires or permits the endorsement in any form of a transferable document or instrument, that requirement is met with respect to an electronic transferable record if the information required for the endorsement is included in the electronic transferable record and that information is compliant with the requirements set forth in articles 8 and 9.”

This article states electronic endorsement has a functional equivalence of endorsement of the paper system as transferable documents or instruments may be transferred by endorsement and delivery of the documents or instruments to a transferee. This requirement is conditional on the satisfaction of the requirements of writing and signature in articles 8 and 9 of the Model Law. When this provision applies, electronic endorsement has the same legal effect regardless of national laws containing a wide spectrum of formal requirements for endorsement of transferable document or instrument. Under this Article, the requirement of endorsement is open for allowance of all types of requirements (UNCITRAL, 2018, 52) .

Article 862 (3) and (4) of the KC Act regulate the endorsement of an electronic bill of lading in view of the procedures and the legal effect of endorsement of an electronic bill of lading.

Article 862 (3) of the KC Act states as follows:

“A holder of a right of an electronic bill of lading may transfer such right in a way that he makes out an electronic document stating his intention of endorsement, attaches an electronic bill of lading thereto, and transmits them to the other party through the designated registry agency.”

This section explains the procedures of endorsement of an electronic bill of lading, but the notion that electronic bill of lading itself could be attached or forwarded is wrong. The reason is that this approach does not need the registry agency for registering an electronic bill of lading because an electronic bill of lading has no physical substance in view of document of title. The registry agency is required in Korea like a Bolero Bill of Lading.

Article 862 (4) of the KC Act states as follows:

“Where the other party has received an electronic document in which the intention of endorsement is stated according to the method prescribed in paragraph (3), it has the same effect as endorsement and delivery of a bill of lading under Articles 852 and 855, and a holder of a right who has received an electronic document under paragraphs (2) and (3) shall acquire the same right as a holder who has received a bill of lading under Articles 852 and 855.”

According to this section, electronic endorsement of electronic bill of lading has a same legal effect of endorsement of paper bill of lading. In particular, the holder has the right at the time of receiving the document to the effect that an electronic bill of lading is endorsed by the endorser.

#### *b) Amendment*

The Model Law provides amendment in Article 16 as follows:

“Where the law requires or permits the amendment of a transferable document or instrument, that requirement is met with respect to an electronic transferable record if a reliable method is used for amendment of information in the electronic transferable record so that the amended information is identified as such.”

According to this Article, an electronic transferable record could be amended in such a way that a transferable document or instrument is amended in the case of a reliable method being used to amend and identify the electronic transferable record as amended.

This Article is concerned not with the amendment of technical nature of system or technology, but with the amendment of the contents of electronic transferable record. (UNVITRAL, 2018, 53). All amended information should be traced and evidenced in order for a user to identify easily such amendments of electronic transferable record.

Article 862 of the KC Act does not regulate the amendment of bill of lading, but Article 9 of the B/L Regulation does as follows:

“(1) When the holder of an electronic bill of lading intends to amend the electronic bill of lading, he shall send an application for such an amendment to a registry agency by way of electronic document.

(2) Upon receipt of an application for amendment under paragraph (1), a registry agency shall immediately send to the carrier an electronic document to that effect.

(3) Upon receipt of the document under paragraph (2), a carrier shall send to the registry agency an electronic document as to whether it consents to the amendment.

(4) Upon receipt of document as to whether a carrier consents under paragraph (3), a registry agency shall give immediate notice to that effect to the holder of the bill of lading. Where a carrier consents to an amendment of electronic bill of lading, the registry agency shall amend the electronic bill of lading in the electronic register and shall give notice thereof to the carrier.”



### c) *Switch from Electronic Media to Paper*

The Model Law states replacement of a transferable document or instrument with an electronic transferable record in Article 18 as follows:

“1. A transferable document or instrument may replace an electronic transferable record if a reliable method for the change of medium is used.

2. For the change of medium to take effect, a statement indicating a change of medium shall be inserted in the transferable document or instrument.

3. Upon issuance of the transferable document or instrument in accordance with paragraphs 1 and 2, the electronic transferable record shall be made inoperative and ceases to have any effect or validity.

4. A change of medium in accordance with paragraphs 1 and 2 shall not affect the rights and obligations of the parties.”

A printout of an electronic transferable record is required to satisfy the requirements of this Article so as to have effect as a transferable document or instrument replacing the corresponding electronic transferable record. All information contained in an electronic transferable record needs not be included in the replacing transferable document or instrument (UNCITRAL, 2018, 57).

Article 862 of the KC Act does not regulate the change of electronic media to paper, but Article 12 of the B/L Regulation does as follows:

“(1) Upon receiving a request from the holder of an electronic bill of lading to switch the electronic bill of lading to a paper bill of lading, a registry agency shall issue the paper bill of lading to the holder. In such cases, a name and seal or signature reproduced by electronic means shall be deemed the name and seal or signature affixed in accordance with Article 853 (1) of the Act.

(2) A registry agency shall notate records of transfers of an electronic bill of lading on the back of the relevant paper bill of lading under paragraph (1).

(3) Records of transfers notated on the back of a paper bill of lading pursuant to paragraph (2) shall be as effective as endorsements.

(4) When a registry agency issues a paper bill of lading pursuant to paragraph (1), it shall notate the switch to the paper bill of lading in the electronic register, close the electronic register of the relevant electronic bill of lading, and give notice to that effect to the carrier by way of electronic document.

(5) A registry agency shall be deemed to guarantee the accuracy of notations in a paper bill of lading switched pursuant to paragraph (1).”

The registry agency shall issue the paper bill of lading to the holder of an electronic bill of lading according to a request from the holder to switch the electronic bill of lading to a paper bill of lading. A registry agency shall notate on the back of the relevant paper bill of lading records of transfers of an electronic bill of lading, which are as effective as endorsements.

## 3. Discordance between the Model Law and the KC Act

### 3.1. Designation of Registry Agency in the KC Act

Under Article 862 (1), a carrier may issue an electronic bill of lading by means of registration with the registry agency designated by the Minister of Justice with the consent of a consignor or charterer like a Bolero Bill of lading based on title registry, which registers any change of interest in the goods (Pejović, 2004, 77).

Under Article 862 (1), requirements for the designation of registry agency of electronic bills of lading shall be prescribed by Presidential Decree, which is the B/L Regulation.

The requirements for designation of registry agency are i) corporate body, ii) technical



capacity including over 12 technical personnel (an information and communications engineer, etc.), iii) financial capacity including net assets worth at least 20 billion Korean won, iv) facility and equipment including those for registration, endorsement and transfer of electronic bill of lading, and so on, and v) management and operations requirements including business rules of registry agency, among others.

The Korean registry agency has characteristics of a closed system since only an agency that has been designated by the Ministry of Justice is recognized as a valid registry agency, such as KTNET. Even if any agency possesses equal competences satisfying such requirements as required under Article 3 of the B/L Regulation, it cannot act as an agency unless it is appointed. According to Article 864 of the KC Act, an electronic bill of lading could be issued, only by registering it in a registry agency designated by the Minister of Justice, and because of that, as long as an electronic bill of lading has not been registered in a designated registry agency, the legal validity of such an electronic bill of lading cannot be recognized in Korea.

Such a closed system could lead to disagreements with global standards such as the Model Law. During the enactment of laws regarding e-trade, transparency, and openness of enforcement of law have to be secured, but there are limitations in securing transparency and openness under the KC Act and the B/L Regulation. In other words, in order to secure the transparency and openness for enforcement of law, the legal system shall not be dependent on a special system and technology. Models and technologies used in e-trade and e-commerce are on an ever-changing trend, and every country shows tendencies to maintain law systems which focus on keeping the neutrality of models, technologies, and systems, lest the laws and regulations be dependent on such models, technology, and systems. International conventions maintain those tendencies strongly.

This neutrality opinion is presented in the Framework for Global Electronic Commerce signed by Clinton in July 1997. The European Parliament had the same opinion in 2000, and stated that the regulations of e-commerce have to maintain technological neutrality. The European Parliament first proposed the concept of technological neutrality and declared that “regulations have to be technology-neutral and every possible new rule, policy or process as a new service cannot be particular” (EUROPA 1998); such a concept has been reflected in EU’s technology law system. Consequently, when thinking about its global usage, it can be said that the designation system of a registry agency in the electronic bill of lading in Korea is not advisable in view of technology neutrality of law.

### 3.2. Functional Equivalence in the Model Law

The Model Law has a specific provision of control as follows:

“1. Where the law requires or permits the possession of a transferable document or instrument, that requirement is met with respect to an electronic transferable record if a reliable method is used:

- (a) To establish exclusive control of that electronic transferable record by a person; and
- (b) To identify that person as the person in control.

2. Where the law requires or permits transfer of possession of a transferable document or instrument, that requirement is met with respect to an electronic transferable record through the transfer of control over the electronic transferable record.”

Thus, functional equivalence of possession is fulfilled when a trustworthy method is used to prove control of that record by a person, and to confirm the person in control. The provision of control is based on the provision of control of electronic document of title of the Uniform Commercial Code in America (Choi Kyoung-Jin, 2013, 296).

The control performs essentially the same function as possession of transferable document or instrument in cases in which the security rights would be created and made in force against a third party, such as banks in letter of credit transactions, by possession of a transferable

document or instrument.

The exclusive control of the electronic transferable record has a functional equivalence of the possession of a transferable document or instrument conditional on the reliable method to establish exclusive control of that electronic transferable record and to identify the person in control; however, the notion of control does not affect or limit the legal consequences arising from possession (UNCITRAL, 2018, 42).

### 3.3. Non-discrimination of Foreign Electronic Transferable Records in the Model Law

Article 19 of the Model Law stipulates as follows:

“1. An electronic transferable record shall not be denied legal effect, validity, or enforceability on the sole ground that it was issued or used abroad.

2. Nothing in this Law affects the application to electronic transferable records of rules of private international law governing a transferable document or instrument.”

This Article is to eliminate obstacles to cross-border recognition of an electronic transferable record arising exclusively from which it was issued or used abroad, but does not affect the rules of private international law governing a transferable document or instrument.

## 4. Review of Revision of the KC Act in Compliance with the Model Law

### 4.1. Dichotomous Approach to the Notion of Electronic Bill of Lading

Under the B/L Regulation, an electronic bill of lading is an electronic document in physical form registered in a registry agency for an electronic bill of lading in accordance with Article 862 (1) of the KC Act.

Such a definition brings an inaccurate understanding of the definite identity of an electronic bill of lading. The reason is that an electronic bill of lading has no physical form, different from the paper bill of lading, and an electronic bill of lading cannot be used functionally in the same way as a paper bill of lading. Because of these differences in view of usage and functionality, a registry agency is a necessity for using an electronic bill of lading in Korea. In other words, a paper bill of lading can function as a receipt of goods, a prima-facie proof of the contract of carriage, and a document of title, but an electronic bill of lading cannot function in the same way since such a bill of lading does not have a physical form in view of document of title.

With regard to this point, Article 862 (3) of the KC Act states that “A holder of a right of an electronic bill of lading may transfer such right in a way that he makes out an electronic document stating his intention of endorsement, and attaches an electronic bill of lading thereto, and transmits them to the other party through the designated registry agency.”

Article 8 (1) of the B/L Regulation specifies that:

“When the holder of an electronic bill of lading transfers electronic bills of lading, he shall make out an electronic document stating his intention of endorsement, attaches an electronic bill of lading thereto, and then transmit them to the registry agency, who transmits them to the transferee.”

In addition, the holder is requested to attach his own electronic bill of lading when sending the related documents to the registry agency under Article 10(1) of the B/L Regulation.

It is illogical to attach an electronic bill of lading and exchange it between the related parties in view of the notion of electronic bill of lading as this approach is different from global approaches, such as the CMI Rules for Electronic Bills of Lading (hereinafter referred to as

“the CMI Rules”) and the Bolero Bill of Lading, which are dichotomous in view of functions.

In the case of CMI Rules, the receipt message plays roles of a receipt of goods and prima-facie proof of the contract of carriage, and Private Key plays the role of document of title for control and transfer under Articles 4 and 8 of the CMI Rules. In case of a Bolero Bill of Lading, the BBL Text plays roles of a receipt of goods and a prima-facie proof of the contract of carriage, title registry plays the role of document of title for control and transfer under Article 3.1 and Article 3.4 of the Bolero Rulebook.

The functional approach under the Model Law implies the notion is constructed on two basic components, of which one is the electronic record as a formal component through which the information is manifested and perceivable, and one is material components, such as document of title (Šafranko, 2016, 7).

Article 862 (3) of the KC Act should be revised as follows:

“A holder of a right of an electronic bill of lading may transfer such right in a way that he makes out an electronic document stating his intention of endorsement, and attaches a contents or text of electronic bill of lading or receipt message thereto, and transmits them to the other party through the designated registry agency or other trusted registry agency.” Article 8 (1) and Article 10 (1) of the B/L Regulation should be revised to that effect.

#### 4.2. Revision of Regulation Regarding Designation of Registry Agency

In order to operate the registry agency of the electronic bill of lading more efficiently, it is necessary to revise the regulations regarding the registry agency in view of system-neutrality, openness, and technology-neutrality. In particular, technology-neutrality and functional equivalence are two pillars of the Model Law (Choi Kyoung-Jin, 2014, 207). Technology-neutrality is that the Model Law is not dependent on specific technology (Jung Gyung-Young, 2015, 197).

In view of system-neutrality, a Korean electronic bill of lading is not system-neutral as the KC Act and the B/L Regulation require the special registry agency in which an electronic bill of lading must be registered. To be system-neutral, the KC Act and the B/L Regulation should recognize other registry agency operated in other countries as legitimate registry agencies, and recognize the legal effect of an electronic bill of lading registered in another registry agency instead of registry agency designated by the Ministry of Justice in Korea.

The Model Law is not intended to limit the creation of security rights, where those rights would be made effective against third parties by their registration in a public registry (UNCITRAL, 2018, 43). Thus, the Model Law includes all technologies, not specifying only registration (Lim Sung-Chul, 2018, 163).

In view of openness, the Korean electronic bill of lading model is based on domestic registry agency; therefore, it is a closed operation system. A registry agency based on a specific country such as the Korean electronic bill of lading cannot function as a trusted third party owing to its regional limitations. To be an open-oriented system, a transnational registry agency model is necessary to ensure that the electronic bill of lading can be used on a global basis. A transnational registry agency model should be based on the most important standards, which are technology-neutral and nation-neutral.

In order to solve the problem of the closed system, it is necessary to include in the KC Act a provision that establishes an equal treatment of foreign and domestic registry agencies. In other words, since it is virtually impossible for a foreign registration agency to be appointed by the Korean Minister of Justice, if it is operating internationally, it is advisable to treat it equal to a Korean registry agency and guarantee its legal validity.

For negotiability of electronic bill of lading, it is necessary to interconnect between foreign and domestic registry agencies. Since an electronic bill of lading should never fail to be endorsed by a domestic consignor to a foreign consignee or vice versa, there is a need for a

Korean registration agency to enter into agreements with a foreign registration agency for international negotiability of the electronic bill of lading (Kim Hyoung-Cheol and Yu Kwang-Hyun, 2014, 354).

In view of technology-neutrality, blockchain is a new technology using a decentralized, distributed, and public digital ledger that is used to record transactions across many computers. Blockchain technology does not require a central registry or authority (Choi Seok-Beom, 2018).

Blockchain technology has the possibility to herald a long-awaited breakthrough in the dematerialization of bills of lading, since it could provide the guarantee of uniqueness, an essential function of bills of lading, without the requirement of membership subscription as blockchain is based on an open, distributed ledger (Takahashi, 2016, 202).

Certain electronic transferable record management, such as those based on distributed ledgers, exact blockchain technology, may confirm the person in control by referring to pseudonyms rather than real names.

In consideration of system-neutrality, openness, technology-neutrality, Article 862 (1) of the KC Act should be revised as follows:

“A carrier may issue an electronic bill of lading by means of registration in the registry agency designated by the Minister of Justice or the foreign or international registry agency operated for international negotiability of electronic bills of lading or by means of technologies including blockchain, etc., with the consent of a consignor or charterer in lieu of issuance of a bill of lading referred to in Article 852 or 855. In such cases, an electronic bill of lading shall have the same legal effect as a bill of lading referred to in Articles 852 and 855.”

### 4.3. Insertion of Provision regarding Control

For revising the KC Act in view of the functional equivalence of an electronic bill of lading, the following factors in Table 1 should be taken into consideration.

Compared with the Model Law and the CMI Rules, the KC Act has no provisions regarding control; thus, the following provision or others to that effect must be inserted in the KC Act because the notion of control was suggested in electronic environment as equivalent to possession in paper based environment (Choi Kyoung-Jin, 2017, 205).

“1. Where the law requires or permits the possession of bills of lading, that requirement is met with respect to electronic bills of lading if a reliable method is used:

- (a) To establish exclusive control of electronic bills of lading by a person; and
- (b) To identify that person as the person in control.

2. Where the law requires or permits transfer of possession of bills of lading, that requirement is met with respect to electronic bills of lading through the transfer of control over the electronic Bills of lading.

**Table 1.** Functional Equivalence

Category	Paper System	Electronic Document System	To be Included
Document	bill of lading	electronic bill of lading	X
Writing	in writing	information to be accessible so as to usable for subsequent reference	X
Signature	handwritten signature	electronic signature	X
Right Expression	incorporated right	contained right	X
Singularity	uniqueness	exclusivity	X
Belonging	possession	control	O

Source: Author writes.

#### 4.4. Revision of Other Provisions

As an inclusion in electronic documents regarding transfer requests according to Article 8 (2) of the B/L Regulation, the data indicating identicalness of electronic bills of lading is not reasonable. Since the issuance number of an electronic bill of lading is enough to refer to the electronic bill of lading for that purpose, this requirement is not suitable in view of the basic role of the registry agency of an electronic bill of lading. Also, it is very difficult for a transferor to include data indicating the identicalness of the electronic bill of lading in the electronic document for a transfer request. The authenticity of an electronic bill of lading could be guaranteed by registry agency, so this requirement should be deleted.

In regard to the issuer of the paper bill of lading instead of an electronic bill of lading, the registry agency shall issue a paper bill of lading to the holder as requested under Article 12 (1) of the B/L Regulation and guarantee the accuracy of the paper bill of lading under Article 12 (5) of the B/L Regulation. These provisions are not in line with the practice of carriage of goods by sea. Article 12 (1) of the B/L Regulation should be revised by regulating that the carrier can issue the paper bill of lading and Article 12 (5) of the B/L Regulation should be revised by regulating that the carrier can guarantee the accuracy of paper bill of lading as issued.

### 5. Conclusion

An electronic transferable record is functionally equivalent to a transferable document or instrument under the Model Law when that record contains the same information to be contained in a transferable document or instrument. A reliable method should be used to identify the electronic transferable record, to prove that electronic record is subject to control during life cycle, and to confirm the integrity of that electronic record. Control is an essential notion of the Model Law as it allows an electronic transferable record to have the functional equivalent of possession of a transferable document or instrument. An electronic transferable record satisfies the possession requirement, where a reliable method is used to establish exclusive control of that electronic transferable record by a person, and identify that person as the person in control.

The KC Act and the B/L Regulation require the holder to attach an electronic bill of lading to the documents for transfer of, or switch of electronic bill of lading to paper bill of lading. However, the KC Act and the B/L regulation should be revised to attach a contents or text of electronic bill of lading or receipt message thereto according to the dichotomous approach to functions of electronic bill of lading as in the CMI Rules and Bolero Bill of Lading.

The current inclusion of data indicating identicalness of electronic bills of lading in electronic documents regarding transfer requests according to Article 8 (2) of the B/L Regulation should be deleted since the authenticity of electronic bill of lading could be guaranteed by the registry agency.

In regard to the issuer of the paper bill of lading instead of an electronic bill of lading, the registry agency shall issue the paper bill of lading to the holder as stipulated under Article 12 (1) of the B/L Regulation and guarantee the accuracy of the paper bill of lading under Article 12 (5) of the B/L Regulation.

Article 12 (1) of the B/L Regulation should be revised by regulating that the carrier can issue the paper bill of lading instead of registry agency and Article 12 (5) of the B/L Regulation should be revised by regulating that the carrier can guarantee the accuracy of paper bill of lading instead of a registry agency.

In consideration of system-neutrality, openness, and technology-neutrality in regard to the registry agency of an electronic bill of lading, Article 862 (1) of the KC Act should be revised

to include a variety of ways to issue electronic bills of lading via a transnational registry agency or blockchain technology applied without a registry agency. As the KC Act has no provision regarding control compared with the Model Law and the CMI Rules, an appropriate clause regarding control should be inserted in the KC Act.

The goals of this paper are i) to provide a baseline for future studies on electronic bills of lading in view of Model Law, and ii) to be the beginning of the first work for the Korean government to revise the KC Act and the B/L Regulation as this paper found the discordance between the Model Law and the KC Act and suggested the directions of revision of the KC Act and the B/L Regulation.

## References

- Kim, Hyoung-Cheol and Kwang-Hyun Yu (2014), "A Study on Connection of e-B/L for Improving the Efficiency of International Logistics and E-nego", *Journal of International Trade & Commerce*, 10(3), 354.
- Kim, Jae-Woo (2016), "The Effect of the B/Ls Clause of Reverse Side and Delivery of Cargo without Presentation of the Bill of Lading", *Journal of International Trade & Commerce*, 12(4), 294.
- Choi, Kyoung-Jin (2013), "A Study of UNCITRAL Draft Provisions on Electronic Transferable Records: Focusing on the discussions in the 47th Working Group IV of UNCITRAL", *Korean Forum on International Trade and Business Law*, 22(1), 285-318.
- Choi, Kyoung-Jin (2014), "A Comparative Analysis of UNCITRAL Draft Provisions on Electronic Transferable Records", *Korean Forum on International Trade and Business Law*, 23(2), 203-236.
- Choi, Kyoung-Jin (2017), "A Study of "Possession" of Electronic Transferable Records", *Gachon Law Review*, 10(1), 205.
- Choi, Seok-Beom (2007), "A Study on the Issues on the Introduction of Electronic Bill of Lading: Laying Stress on the Legal Issues", *Korea International Commerce Review*, 22(4), 285-309.
- Lee, Sang-Cheon and Eun-Young Kim (2009), "A Legal Study on the Utilization of ETR", *Dong-A Journal of IBT Law*, 24, 153.
- Lim, Sung-Chul (2018), "A Study on the Application of UNCITRAL Model Law on Electronic Transferable Records to Electronic Bill of Lading", *The International Commerce & Law Review*, 79, 143-167.
- Jung, Gyung-Young (2015), "A Study on Recent International Discussion Relating to the Digitization of Negotiable Instrument", *SungKyunKwan Law Review*, 194-228.
- Jung, Gyung-Young (2014), "A Study on Securing of the Uniqueness of Electronic Transferable Record - Especially around the Discussion on ETR in UNCITRAL", *The Korean Journal of Financial Law*, 11(1), 135-168.
- Jung, Gyung-Young (2017), "A Study on the UNCITRAL Model Act on Electronic Transferable Records Including Analysis on the Introduction into National Law", *The Journal of Comparative Private Law*, 24(4), 1597-1644.
- EUROPA (1998), "Opinion of the Economic and Social Committee on the "Proposal for a Council Recommendation Concerning the Protection of Minors and Human Dignity in Audiovisual and Information Services", *Official Journal C* (214), 25.
- Pejović, Č. (2001), "Document of Title in Carriage of Goods by Sea: Present Status and Possible Future Directions", *Journal of Business Law*, 464-467.
- Pejović, Č. (2004), "Document of Title in Carriage of goods by Sea under English Law: Legal Nature and Possible Future Directions", *Poredbeno Pomorsko Pravo*, 43(158), 77.
- Pejović, Č. (2006), "Legal Issues Arising from Delivery of Goods without a Bill of lading : Case Study of Some Asian Jurisdictions". *Poredbeno Pomorsko Pravo*, 45(160), 6.
- Šafranko, Z. (2016), "The Notion of Electronic Transferable Records", *Journal for International and*



- European Law, Economics and Market Integrations*, 3(2), 7.
- UNCITRAL (2018), *UNCITRAL Model Law on Electronic Transferable Records*, Geneva: United Nations, 16. Available from [https://www.uncitral.org/pdf/english/texts/electcom/MLETR\\_ebook.pdf](https://www.uncitral.org/pdf/english/texts/electcom/MLETR_ebook.pdf)
- UNCITRAL (2011), *A/66/17 - Report of the United Nations Commission on International Trade Law, forty-fourth session (27 June - 8 July 2011)*. Available from <https://undocs.org/en/A/66/17>
- UNCITRAL (2012), *A/67/17 - Report of the United Nations Commission on International Trade Law, forty-fifth session (25 June-6 July 2012)*. Available from <https://undocs.org/en/A/67/17>
- UNCITRAL (2014), *A/69/17 - Report of the United Nations Commission on International Trade Law, forty-seventh session (7-18 July 2014)*. Available from <https://undocs.org/en/A/69/17>
- UNCITRAL (2015), *A/70/17 - Report of the United Nations Commission on International Trade Law, forty-eighth session (29 June-16 July 2015)*. Available from <https://undocs.org/en/A/70/17>
- UNCITRAL (2016), *A/71/17 - Report of the United Nations Commission on International Trade Law, forty-ninth session (27 June-15 July 2016)*. Available from <https://undocs.org/en/A/71/17>
- UNCITRAL (2017), *A/72/17 - Report of the United Nations Commission on International Trade Law, Fiftieth session (3-21 July 2017)*. Available from <https://undocs.org/en/A/71/17>
- UNCITRAL (2004), *A/CN.9/571 - Report of the Working Group on Electronic Commerce on the work of its forty-fourth session (Vienna, 11-22 October 2004)*. Available from <https://undocs.org/en/A/CN.9/571>
- UNCITRAL (2009), *A/CN.9/681 - Possible future work on electronic commerce - Recommendations for future work of Working Group IV (Electronic Commerce) submitted by the United States of America*. Available from <https://undocs.org/en/A/CN.9/681>
- UNCITRAL (2009), *A/CN.9/681/Add.1 - Possible future work on electronic commerce - Proposal of the United States of America on electronic transferable records*. Available from <https://undocs.org/en/A/CN.9/681/Add.1>
- UNCITRAL (2009), *A/CN.9/682 - Proposal of the Delegation of Spain Concerning the Future Work of Working Group IV*. Available from <https://undocs.org/en/A/CN.9/682>
- UNCITRAL (2012), *A/CN.9/737 - Report of the Working Group IV (Electronic Commerce) on the work of its forty-fifth session*. Available from <https://undocs.org/en/A/CN.9/737>
- UNCITRAL (2013), *A/CN.9/768 - Report of Working Group IV (Electronic Commerce) on the work of its forty-seventh session*. Available from <https://undocs.org/en/A/CN.9/768>
- UNCITRAL (2013), *A/CN.9/761 - Report of Working Group IV (Electronic Commerce) on the work of its forty-sixth session*. Available from <https://undocs.org/en/A/CN.9/761>
- UNCITRAL (2014), *A/CN.9/797 - Report of Working Group IV (Electronic Commerce) on the work of its forty-eighth session*. Available from <https://undocs.org/en/A/CN.9/797>
- UNCITRAL (2014), *A/CN.9/828 - Report of Working Group IV (Electronic Commerce) on the work of its fiftieth session*. Available from <https://undocs.org/en/A/CN.9/828>
- UNCITRAL (2016), *A/CN.9/897 - Report of Working Group IV (Electronic Commerce) on the work of its fifty-fourth session*. Available from <https://undocs.org/en/A/CN.9/897>
- UNCITRAL (2014), *A/CN.9/WG.IV/WP.130 - Draft provisions on electronic transferable records*. Available from <https://undocs.org/en/A/CN.9/WG.IV/WP.130>
- UNCITRAL (2014), *A/CN.9/WG.IV/WP.130/Add.1 - Draft provisions on electronic transferable records*. Available from <https://undocs.org/en/A/CN.9/WG.IV/WP.130/Add.1>
- UNCITRAL (2015), *A/CN.9/WG.IV/WP.132 - Draft provisions on electronic transferable records*. Available from <https://undocs.org/en/A/CN.9/WG.IV/WP.132>
- UNCITRAL (2015), *A/CN.9/WG.IV/WP.132/Add.1 - Draft provisions on electronic transferable records*. Available from <https://undocs.org/en/A/CN.9/WG.IV/WP.132>
- UNCITRAL (2015), *A/CN.9/WG.IV/WP.135 - Draft Model Law on Electronic Transferable Records*.



Available from <https://undocs.org/en/A/CN.9/WG.IV/WP.135>

UNCITRAL (2015), *A/CN.9/WG.IV/WP.135/Add.1 - Draft Model Law on Electronic Transferable Records*. Available from <https://undocs.org/en/A/CN.9/WG.IV/WP.135/Add.1>

UNCITRAL (2016), *A/CN.9/WG.IV/WP.137 - Draft Model Law on Electronic Transferable Records*. Available from <https://undocs.org/en/A/CN.9/WG.IV/WP.137>

UNCITRAL (2016), *A/CN.9/WG.IV/WP.137/Add.1 - Draft Model Law on Electronic Transferable Records*. Available from <https://undocs.org/en/A/CN.9/WG.IV/WP.137/Add.1>

UNCITRAL (2016), *A/CN.9/WG.IV/WP.139 - Draft Model Law on Electronic Transferable Records*. Available from <https://undocs.org/en/A/CN.9/WG.IV/WP.139>