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THE LEGAL RECOGNITION OF ELECTRONIC BILLS OF LADING

by

ALI ABBAS KHAYOON



WMU RESEARCH REPORT SERIES
No. 17, November 2021

THE LEGAL RECOGNITION OF ELECTRONIC BILLS OF LADING

WMU RESEARCH REPORT SERIES

No. 17, November 2021

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ISBN: 978-91-986526-2-8

DOI: 10.21677/phd202010b

Published in Sweden in 2021 by


WMU PUBLICATIONS
PO Box 500
201 24 Malmö, Sweden

Suggested Citation:

Khayoon AA (2021). *The Legal Recognition of Electronic Bills of Lading*. WMU Publications: Malmö, Sweden.

Dedication

To

The cradle of civilizations in Mesopotamia, Iraq,

for the sake of my mother's continued prayers and,

for the innocent souls of my father and elder brother

Acknowledgement

I am very grateful for the wonderful people who supported me in completing this dissertation. I extend my deep thanks and appreciation to my supervisor, Dr. Aref Fakhry, for his huge support, guidance, time, encouragement and tolerance throughout the whole long journey of my studies. Dr. Fakhry's specific, accurate and valuable advice made a difference when it came to the final dissertation to stand up as a reference in the field.

I would also like to express my deep gratitude to Professor Max Mejia for his support throughout my studies at WMU. I will never forget Professor Mejia's exceptional efforts to make my physical viva come true in 2020.

Moreover, my special thanks and appreciation go to Professor George Theocharidis for his valuable and specific advice, comments, time, encouragement and kindness from the very beginning of my studies until the successful end.

My thanks and gratitude also go to the WMU Progression Board Members who participated in my progression seminars for their valuable comments that put my dissertation on the right track. In this regard, I would like to express my special thanks and appreciation to Dr. Henning Jessen for his accurate comments and kind encouragement. My special thanks also go to Professor Patrick Donner for his valuable advice, comments and time. I also would like to thank Professor Proshanto K. Mukherjee for his valuable participation in my second progression seminar and his relevant comments.

I also would like to express my thanks and appreciation to the external examiner, Dr. Abhinayan Basu Bal and internal examiner, Dr. Maria Carolina Romero for their valuable recommended corrections that enabled me to place the final and important touches on the dissertation.

My thanks and appreciation also go to the WMU family, specially the WMU President, Dr. Cleopatra Doumbia-Henry for her kind support, encouragement and words. I truly thank all WMU staff, with special appreciation to Ms. Carla Escalante Fischer for her kind cooperation and assistance.

I am deeply thankful and appreciative to my family, particularly my mother and siblings for their support, prayers and encouragement. I also thank my friends from around the world for their support and encouragement.



The Legal Recognition of Electronic Bills of Lading

Ali Abbas Khayoon
Iraq

A dissertation submitted to the World Maritime University in partial fulfillment
of the requirements for the award of the degree of Doctor of Philosophy in
Maritime Affairs

WMU RESEARCH REPORT SERIES
No. 17, November 2021
WMU Publications

Abstract

Title of Dissertation: **The Legal Recognition of Electronic Bills of Lading**

Degree: **Ph.D.**

The increasing use of electronic devices, new means of communication and Internet affects many areas of life, including trade and transportation. One effect is the dematerialization of bills of lading. Paper bills of lading have traditionally performed three main functions in maritime transportation: (1) as a receipt for the goods, (2) as containing or evidencing the contract of carriage of goods and (3) as a document of title. This legal research examines whether electronic bills of lading can legally perform these three functions as functional equivalents to paper bills of lading. It studies the recognition of electronic bills of lading under the current law.

The research combines two approaches: the international approach and the English law approach. The international approach deals first with paper bills of lading, as a foundation for the research, since electronic bills of lading are intended to be functional equivalents to paper bills. It studies the origin, definition, types and, most importantly, functions of paper bills to be dematerialized by electronic bills, as well as the current international framework that governs paper bills of lading. This approach studies the electronic bills of lading and traces their path of evolution from first attempts until their use in the market nowadays.

The international approach examines the recognition of electronic bills of lading under key instruments of relevant international convention, model laws and contract forms. The relevant international convention is the Convention on Contracts for Carriage of Goods Wholly or Partly by Sea (Rotterdam Rules). The model laws involve the study of CMI Uniform Rules for Electronic Bills of Lading 1990 and UNCITRAL Model Law on Electronic Transferable Records, 2017 (MLETR). The contract forms deal with the Bills of Lading Electronic Registry Organization (Bolero) Rulebook and Electronic Shipping Solutions (essDOCS) Databridge Services and Users Agreement (DSUA).

The English law approach studies if and how the current case law and statutes recognize electronic bills of lading. It examines whether electronic bills of lading can function as legal equivalents to paper bills of lading under current English law. Some other national laws of the

common law system are generally addressed in relation to the recognition of electronic bills of lading, such as the laws of the United States, Australia, India and Singapore.

The thesis finds that electronic bills of lading may perform the three functions under the key instruments of the international approach. However, the Rotterdam Rules are still not in force yet and MLETR provides for the third function only. The contract forms provide a provisional solution based on agreement of parties to the contract of carriage to bridge the legal gap under international law. As far as the English law approach is concerned, the thesis finds that the case law may admit the electronic bill of lading as a receipt for the goods and evidencing or containing the contract of carriage. There are cases that already recognized the evidence in electronic forms, electronic signatures, electronic messages and electronically stored information. Some statutory provisions also may apply to the electronic bill of lading as a receipt for the goods and evidencing or containing the contract of carriage. However, some other statutory provisions may not apply in this regard since the intended regulations under subsection 1(5) of Carriage of Goods by Sea Act (COGSA 1992) have not been issued yet. Moreover, there is no case law nor statutory provision to recognize the third function of electronic bill of lading as a document of title. Since electronic bills of lading should duplicate the three functions of paper bills, the present English law does not recognize the electronic bills of lading. However, as under the present international law, the electronic bills of lading are used under the contract forms.

Key words: Paper bills of lading, electronic bills of lading, receipt for the goods, evidencing or containing the contract of carriage, document of title, principle of functional equivalence, Rotterdam Rules, Model laws, CMI Rules, MLETR, Contract forms, Bolero, essDOCS and English law.

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List of Abbreviations

ACL	Atlantic Container Line
ASEAN	Association of South East Asian Nations
BBL	Bolero Bill of Lading
BIMCO	Baltic and International Maritime Council
Bolero	Bills of Lading Electronic Registry Organization
BTR	Bolero Title Registry
CargoDocs	Cargo Documents: an online web-based platform of essDOCS
CFR	Cost and Freight
CIF	Cost, Insurance & Freight
CIP	Carriage and Insurance Paid To
CLIA	Cruise Lines International Association
CMI	Comité Maritime International
CPT	Carriage Paid To
COGSA 1924	Carriage of Goods by Sea Act 1924 (UK)
COGSA 1936	Carriage of Goods by Sea Act of 1936 (US)
COGSA 1971	Carriage of Goods by Sea Act 1971 (UK)
COGSA 1992	Carriage of Goods by Sea Act 1992 (UK)
CPT	Carriage Paid To
DAF	Delivered at Frontier
DDG	Databridge Development Group
DDU	Delivered Duty Unpaid
DES	Delivered ex-ship
DEQ	Delivered Ex Quay
DFR	Data Freight Receipt
DLT	Distributed Ledger Technology
DSUA	Databridge Services and Users Agreement
EDI	Electronic Data Interchange
ERS	Electronic Release System
E-Sign	Electronic Signatures in Global and National Commerce Act (US)
ESCWA	Economic and Social Commission for Western Asia
essDOCS	Electronic Shipping Solutions
E-Title	Electronic Title
ETUA	Electronic Title User Agreement
ETUG	Electronic Title User Group
EU	European Union
ICC	International Chamber of Commerce
ICS	International Chamber of Shipping
IEC	International Electrotechnical Commission
ILA	International Law Association
IMO	International Maritime Organization
Incoterms	International Commercial Terms
INTERCARGO	International Association of Dry Cargo Shipowners
INTERTANKO	International Association of Tanker Owners
ISO	International Organization for Standardization
IUMI	International Union of Marine Insurance
MLES	(UNCITRAL) Model Law on Electronic Signatures
MLETR	(UNCITRAL) Model Law on Electronic Transferable Records
MSC	Mediterranean Shipping Company

NIST	National Institute of Standards and Technology
OCIMF	Oil Companies International Marine Forum
OSCOLA	Oxford University Standard for the Citation of Legal Authorities
P&I	Protection and Indemnity
REC	WMU Research Ethics Committee
SITPRO	Simplification of Trade Procedures Board (UK)
SWIFT	Society for Worldwide Interbank Financial Telecommunication
TT Club	Through Transport Mutual Insurance Association
UCC	Uniform Commercial Code (US)
UETA	Uniform Electronic Transactions Act (US)
UN	United Nations
UNCEFACT	Centre for Trade Facilitation and Electronic Business
UNECE	United Nations Economic Commission for Europe
UN/EDIFACT	United Nations Rules for Electronic Data Interchange for Administration, Commerce and Transport
UNICID	Uniform Rules of Conduct for Interchange of Trade Data by Teletransmission.
UNCITRAL	United Nations Commission on International Trade Law
UNCTAD	United Nations Conference on Trade and Development
VDU	Visual Display Unit
WCO	World Customs Organization
WTO	World Trade Organizatio

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Chapter One: Introduction

1 Problem statement

The use of electronic communications and technologies in international trade and transportation may dematerialize the paper documents including paper bills of lading. Using electronic communications may save the time, effort and cost of document production and transfer compared to paper communications. This research examines whether electronic bills of lading can legally be functional equivalents to paper bills of lading. It includes two approaches: the international approach and the English law approach. The international approach has two prongs: the first studies paper bills of lading and the second examines electronic bills of lading. It discusses the recognition of electronic bills of lading under current international conventions, model laws and contract forms. The English law approach examines the recognition of electronic bills of lading in current case law and statutes.

2 Legal questions

Paper bills of lading perform three main functions: as a receipt for the goods, as evidencing or containing the contract of carriage of goods by sea and as a document of title. The main legal question underlying this research is whether an electronic bill of lading can legally perform these three functions as a functional equivalent to the paper bill of lading under the relevant international conventions, model laws and contract forms as well as English law. This main legal question generates three consequent legal questions. The first is whether an electronic bill of lading is a receipt for the goods. The second is whether an electronic bill of lading evidences or contains the contract of carriage of goods. The third is whether an electronic bill of lading is a document of title. These three legal questions are being examined in separate chapters in the thesis. Therefore, Chapter Four of the thesis deals with the first consequent legal question and comes under the title of "Can an Electronic Bill of Lading Function as Receipt for Goods?". Chapter Five examines the second consequent legal question under the title of "Can an Electronic Bill of Lading Function as Evidence or Containing the Contract of Carriage of Goods by Sea?". Chapter Six deals with the third consequent legal question, which is the challenging question of the thesis. It comes under the title of "Can an Electronic Bill of Lading Function as a Document of Title?".

3 Aim

The research aims to find out whether electronic bills of lading are recognized under the current international conventions, model laws and contract forms as well as under English law. This aim is based on the main legal question of the thesis, that is whether electronic bills of lading can legally perform the functions of paper bills of lading and be functional equivalents. Following the international law approach, the thesis intends to examine the provision for the use of electronic bills of lading to perform the three functions of paper bills of lading under the relevant international conventions, model laws and contract forms. In this context, the recognition of electronic bills of lading that this thesis aims to discover must apply to all the three functions of paper bills of lading: as a receipt for the goods, as evidencing or containing the contract of carriage of goods by sea and as a document of title. As far as the English law approach is concerned, the thesis also intends to explore the recognition of electronic bills of lading to perform all three functions of paper bills of lading mentioned earlier under the case law and present statutes.

4 Methodology

This thesis is legal. It essentially studies the legal texts that involve cases, statutes, international conventions, modal laws and contract forms. Therefore, it is based on the ‘legal doctrinal methodology’.¹ This methodology is also called the ‘black-letter’ approach.² McConville and Chui describe the ‘black-letter law’ approach as it ‘focuses heavily, if not exclusively, upon the law itself as an internal self-sustaining set of principles which can be accessed through reading court judgments and statutes with little or no reference to the world outside the law’.³ In other words, according to Morris and Murphy, this approach ‘focuses almost entirely on law’s own language of statutes and case law to make sense of the legal world’.⁴ The legal doctrinal methodology is ‘the traditional legal methodology’.⁵ Dobinson and Johns simply describe this approach by saying that the ‘[d]octrinal or theoretical legal research can be defined in simple terms as research which asks what the law is in a particular area’.⁶ This thesis

¹ Mike McConville and Wing Hong Chui, *Research Methods for Law* (2nd edn, Edinburgh University Press 2017) 1-4.

² Caroline Morris and Cian Murphy, *Getting a PhD in Law* (Heart Publishing Ltd 2011) 30-31.

³ McConville and Chui (n 1) 1.

⁴ Morris and Murphy (n 2) 31.

⁵ *ibid* 30.

⁶ Ian Dobinson and Francis Johns, ‘Legal Research as Qualitative Research’ in Mike McConville and Wing Hong Chui (es), *Research Methods for Law* (2nd edn, Edinburgh University Press 2017) 20-21.

examines the relevant legal texts to find the law on whether electronic bills of lading are recognised to perform the three functions of paper bills of lading under present international and English laws.

This thesis is qualitative, in the sense that it might be referred to as ‘non-numerical’.⁷ It collects data from primary and secondary sources.⁸ The primary sources are cases, statutes, international conventions, modal laws and contract forms, mentioned earlier. The thesis depends on the analysis of these primary sources.⁹ It may seem relevant to explain why the sources of cases and statutes are referred to as primary. McConville and Chui may explain that in their description of the doctrinal methodology when they say ‘... upon the law itself as an internal self-sustaining set of principles which can be accessed through reading court judgments and statutes with little or no reference to the world outside the law’.¹⁰ Morris and Murphy may also explain that by saying the ‘[l]aw is seen as a self-contained system which is politically neutral and independent of other academic disciplines’.¹¹

The secondary sources used in this thesis are books, journals, interviews and the discussions that the researcher had with his supervisor and professors in addition to those discussions during progression seminars. The thesis refers to the recent and authoritative books, journals and reports on the subject to assist in the analysis of relevant legal texts.¹² Moreover, the researcher has conducted semi-structured interviews.¹³ This ‘qualitative’ and ‘most widespread’ type of interview, according to Brinkmann, ‘can make better use of the knowledge-producing potentials of dialogues by allowing much more leeway for following up on whatever angles are deemed important by the interviewee’.¹⁴ The semi-structured interviews in this thesis are carried out with two service providers of electronic bills of lading, Bolero and essDOCS.¹⁵ These interviews show the legal mechanism and procedures involved in the creation and transfer of electronic bills of lading in practice. The Research Ethics Committee (REC) of the World Maritime University (WMU) reviewed and approved the interviews’

⁷ *ibid* 21.

⁸ *ibid*.

⁹ *ibid*.

¹⁰ McConville and Chui (n 1) 1.

¹¹ Morris and Murphy (n 2) 31.

¹² See Bibliographies: Book, Contributions in Edited Collections, Articles, Reports, and websites.

¹³ Svend Brinkmann, *Qualitative Interviewing* (Oxford University Press 2013) 21.

¹⁴ *ibid*.

¹⁵ Interviews with Marina Comminos, Co-CEO & COO, essDOCS (UK, 16 September 2016) and Paul Mallon, Head of Customer Engagement and Legal, Bolero (UK, 4 October 2016).

questions and relevant formal forms. The list of questions and topics that were covered during the interviews and responses are provided in the thesis.¹⁶ As far as the citation of references is concerned, the thesis follows the Oxford University Standard for the Citation of Legal Authorities (OSCOLA) 2006,¹⁷ for citing the international law sources, and OSCOLA (4th edition, 2012),¹⁸ for citing the English law sources. The thesis is based on two main approaches to deal with the subject:

4.1 International approach

This thesis deals with three groups of international instruments. The first group includes those instruments that regulate paper bills of lading. Those instruments are: the International Convention for the Unification of Certain Rules of Law Relating to Bills of Lading, 1924 (Hague Rules), the Protocol to Amend the International Convention for the Unification of Certain Rules of Law Relating to Bills of Lading 1924 (Visby Amendments), and the United Nations Convention on the Carriage of Goods by Sea, 1978 (Hamburg Rules). The second group includes those instruments that regulate electronic commerce. International instruments under this group deal with subjects relevant to electronic bills of lading, such as electronic writing and electronic signature. But those instruments do not address electronic bills of lading and their functions specifically. However, these instruments seem to pave the way for the arrival of electronic bills of lading since they try to establish the legal basis of an electronic environment where these electronic bills and other electronic businesses flourish. The study of these instruments may support the chronicle approach of this thesis to trace the evolution of electronic bills of lading. These instruments are: the United Nations Commission on International Trade Law's (UNCITRAL) Model Law on Electronic Commerce of 1996, UNCITRAL Model Law on Electronic Signatures of 2001, United Nations Convention on the Use of Electronic Communications in International Contracts of 2005, and International Commercial Terms (Incoterms).

The third group includes those instruments that regulate electronic bills of lading or electronic transport records. This group of instruments plays a key role in the examination of the legal

¹⁶ See Appendix 1.

¹⁷ Faculty of Law, University of Oxford, 'Oxford Standard for Citation of Legal Authorities (OSCOLA)' 2006 https://www.law.ox.ac.uk/sites/files/oxlaw/oscola_2006_citing_international_law.pdf

¹⁸ Faculty of Law, University of Oxford, 'Oxford Standard for Citation of Legal Authorities (OSCOLA)' (4th edn, 2012), https://www.law.ox.ac.uk/sites/files/oxlaw/oscola_4th_edn_hart_2012.pdf

capability of electronic bills to perform the three functions of paper bills. The instruments under this group include the relevant international convention, model laws and contract forms. The relevant international convention is the Convention on Contracts for Carriage of Goods Wholly or Partly by Sea (Rotterdam Rules). The model laws involve the CMI Uniform Rules for Electronic Bills of Lading 1990 and UNCITRAL Model Law on Electronic Transferable Records, 2017 (MLETR). The contract forms include the Bills of Lading Electronic Registry Organization (Bolero) Rulebook and Electronic Shipping Solutions (essDOCS) Databridge Services and Users Agreement (DSUA).

The thesis examines the relevant provisions under the Rotterdam Rules that deal with the electronic transport records. Therefore, the Rotterdam Rules reflect the only international convention under the international approach of the thesis. As Carver et al. argue, the Rotterdam Rules are ‘the first international sea transport convention to contain framework provisions for the use of electronic means that supersede or offer an alternative to paper documents’.¹⁹ Similarly, Thomas says, ‘the Rotterdam Rules are the first international convention for the carriage of goods by sea to make specific provision for electronic commerce’.²⁰

The thesis deals with the MLETR and the CMI Rules as key instruments of model laws to examine the provision for the use of electronic transferable records or electronic bills of lading. MLETR is the latest model law adopted by UNCITRAL in 2017,²¹ and provides for the transfer question of electronic transport records as documents of title.²² The CMI Uniform Rules for Electric Bills of Lading are the oldest model law adopted in 1990 by the CMI,²³ and seem to be a foundation model law that inspires other instruments that provide for the electronic bills of lading. Todd describes the Rules as ‘as an ingenious method of overcoming the problem of proving title to goods by electronic means’.²⁴

As far as the contract forms are concerned, the Bolero Rulebook and the essDOCS DSUA are chosen as key instruments to examine whether electronic bills of lading can perform the three

¹⁹ GH Treitel, FMB Reynolds and Thomas Gilbert Carver, *Carver on Bills of Lading* (4th edn, Sweet & Maxwell 2017) 781.

²⁰ D Rhidian Thomas, *Carriage of Goods under the Rotterdam Rules* (Informa Law from Routledge 2010) 283.

²¹ UNCITRAL, ‘Texts and Status: Electronic Commerce’ <<https://uncitral.un.org/en/texts/e-commerce>> accessed 12 May 2019.

²² art 11 of MLETR.

²³ Comité Maritime International (CMI), ‘Handbook of Maritime Conventions’ (LexisNexis 2004) 1–58.

²⁴ Paul Todd, ‘Dematerialization of Shipping Documents’ (1994) 9(10) *Journal of International Banking Law* 410-418.

functions of paper bills of lading in practice. There are reasons behind choosing Bolero and essDOCS, among other service providers of electronic bills of lading, such as KTNET and Wave, to be discussed in Chapter Three. First, both Bolero Rulebook and essDOCS DSUA are governed by the English law,²⁵ which is a main approach of the thesis, in comparison with KTNET, as example, is ‘selected’, supervised and audited ‘in accordance with Presidential Decree’.²⁶ Second, Bolero and essDOCS are the first service providers of electronic bills of lading approved by the International Group of P&I Clubs.²⁷ Besides, this first approval may reflect a sort of acceptance and trust in the method used by Bolero and essDOCS to provide the service of electronic bills of lading to their users. Third, more reliable information on Bolero and essDOCS is collected in comparison with that information collected on other service providers of electronic bills of lading such as edoxOnline and Wave, especially these edoxOnline and Wave are recently entered the market and approved by the International Group of P&I Clubs.²⁸ Moreover, information on the multilateral agreements of service providers is essential because this thesis is legal and studies the legal texts, as discussed earlier. Furthermore, interviews are carried out with both Bolero and essDOCS.²⁹ Therefore, information is collected on how the three functions of paper bills of lading are duplicated in practice by electronic bills of lading in Bolero and essDOCS systems.³⁰

4.2 English law approach

The thesis examines whether the current English law recognizes the electronic bills of lading to dematerialize the three functions of paper bills of lading. The thesis tackles the English law as a main approach to deal with the subject of electronic bills of lading since it governs the contract forms. English law governs Bolero Rulebook and essDOCS DSUA, which are key instruments in the thesis, and the E-Title Electronic Title User Agreement (ETUA) which incorporates the UK Carriage of Goods by Sea (COGSA) 1992.³¹ Moreover, English courts have an exclusive jurisdiction as provided under Bolero Rulebook and essDOCS DSUA.³²

²⁵ See subsections 2.4 ‘Bolero’ and 2.5 ‘essDOCS’ in Chapter Seven.

²⁶ Miriam Goldby, *Electronic Documents in Maritime Trade* (2nd edn, Oxford University Press 2019) 332-333.

²⁷ UK P&I Club, Circular Ref. 16/10 in September 2010 on Bolero and essDOCS.

²⁸ UK P&I Club, Circular Ref 7/19 in June 2019 on edoxOnline, and Circular Ref. 16/2019 in December 2019 on Wave.

²⁹ Interviews (n 15).

³⁰ *ibid*, and see Appendix 1.

³¹ Goldby (n 26) 142 and see also Jacqueline Tan, Laura Starr and Chao Wu, ‘Legal Briefing: Electronic Bill of Lading’ (2017) UK P & I CLUB publications.

³² See subsections 2.4 ‘Bolero’ and 2.5 ‘essDOCS’ in Chapter Seven..

Furthermore, English courts took the lead to recognize the three functions of paper bills of lading throughout the ages to meet the commercial needs.³³

The study of English law examines the relevant case law and statutes. The case law is possibly referred to as ‘common law’.³⁴ This common law involves the ‘judicial precedent’ system where ‘a judge must follow any decision that has been made by a higher court in case with similar facts’.³⁵ As regards the statutes, they are known as ‘Act of Parliament’ of the United Kingdom.³⁶ These ‘[s]tatutes are made by Parliament, which consists of the House of Commons, the House of Lords and Monarch’.³⁷ Besides the UK Parliament, the statutes are also enacted by the Parliaments of other countries under the union or United Kingdom, that is, the ‘Scottish Parliament, Welsh Parliament and Northern Ireland Assembly’.³⁸

Since the thesis deals with the English law that involves the common law system, it touches the position under some other national laws of common law system in relation to the recognition of electronic bills of lading. Therefore, the thesis tries to shed a light on the relevant position under the laws of the United States, Australia, India and Singapore. This is not a shift to a comparative approach to deal with the subject. The thesis is still based on the doctrinal legal approach, discussed earlier. The discussion on these laws is tackled in one section only to show how advanced these laws are when it comes to recognize the electronic bills of lading. The current English law does not recognize the electronic bills of lading, especially as a document of title, as the thesis concludes in Chapter Eight. Therefore, the question that may pose itself is whether this position of English law is similar in other common law system countries. The discussion on the above-mentioned laws may provide an answer. The discussion of the laws of the United States and Australia, specifically, shows that these laws provide for the use of electronic bills of lading. This provision may assist in determining the lacuna under English law. In other words, this provision may reflect the need to enact a specific legislation under English law to recognize and regulate the use of electronic bills of lading as functional equivalents to paper bills of lading. Therefore, touching the relevant position under some other national laws of the common law system is advantageous. In this context, Wilson argues that

³³ See section 2 ‘Origin of Paper Bills of Lading’ and relevant cases in this section in Chapter Two.

³⁴ Emily Allbon and Sanmeet Kaur Dua, *Elliot and Quinn’s English Legal System* (19th edn, Pearson 2019) 10.

³⁵ *ibid* 39.

³⁶ *ibid* 7 and 43.

³⁷ *ibid* 43 and 53.

³⁸ [legislation.gov.uk](https://www.legislation.gov.uk/understanding-legislation), ‘Understanding Legislation’ <<https://www.legislation.gov.uk/understanding-legislation>> accessed on 5 January 2021.

‘it has been a particular feature of law reform bodies such the Law Commission in the United Kingdom that they have been ready to look at the work done by their counterparts in other common law countries’.³⁹

5 Structure

The thesis has eight chapters. The essence of these chapters is as follows.

5.1 Chapter One: Introduction

This chapter summarizes the subject matter of the thesis. It presents the aim of the thesis and the legal questions to be answered in the thesis. It explains the methodology followed in the thesis to reach its goals. It also includes a summary for every chapter of the thesis.

5.2 Chapter Two: Paper bills of lading

This chapter deals with the main legal aspects of paper bills of lading. It is intended as a foundation chapter towards understanding electronic bills of lading as long as they are intended as a functional equivalent to paper bills. It studies the origin, definition, main functions and types of paper bills of lading. It deals with the international framework of paper bills, which involves the relevant international conventions, the International Convention for the Unification of Certain Rules of Law Relating to Bills of Lading and Protocol of Signature 1924 (the Hague Rules), the Protocol to Amend the International Convention for the Unification of Certain Rules of Law Relating to Bills of Lading and Protocol of Signature 1924 (the Visby Amendments) and the United Nations Convention on the Carriage of Goods by Sea 1978 (the Hamburg Rules). Then, it explores the position of the English law in relation to paper bills of lading.

5.3 Chapter Three: Electronic bills of lading

This chapter examines the central subject of the thesis, which is electronic bills of lading. Following the international approach of the thesis, it explores the first attempts to use computers, telephone lines, satellites and, recently, Internet to exchange information about cargo. It shows how electronic bills of lading evolved from the use of those devices and technologies. It studies the international conventions, model laws and contract forms in terms

³⁹ Geoffrey Wilson, ‘Comparative Legal Scholarship’ in Mike McConville and Wing Hong Chui (es), *Research Methods for Law* (2nd edn, Edinburgh University Press 2017) 164.

of electronic commerce in general and electronic bills of lading in particular. Following the English law approach, it carries out a general study on the English law position in relation to the use of electronic bills of lading and leaves the details to the subsequent chapters that examine every function of electronic bills of lading. The chapter also discusses the general position under the national laws of the United States, Australia, India and Singapore in relation to the recognition of electronic bills of lading.

5.4 Chapter Four: Can the electronic bill of lading function as receipt for goods?

This chapter studies whether electronic bills of lading can function as a receipt for goods under the relevant international conventions, model laws and contract forms. It studies the provisions for the receipt function in terms of electronic bills of lading through the lens of the Rotterdam Rules), CMI Rules, Bolero and essDOCS. It examines the position of English law in relation to the receipt function of electronic bills of lading.

5.5 Chapter Five: Can the electronic bill of lading function as evidencing or containing the contract of carriage of goods by sea?

This chapter examines whether an electronic bill of lading can be an equivalent of a paper bill to perform the second function, that is, to evidence or contain the contract of carriage of goods. It studies this function under the relevant international conventions, model laws and contract forms. As in the discussion of the receipt function, it studies the provisions for the second function under the Rotterdam Rules, CMI Rules, Bolero and essDOCS. It examines the position of English law in relation to the second function of electronic bills of lading.

5.6 Chapter Six: Can the electronic bill of lading function as a document of title?

This chapter examines the problematic question of whether an electronic bill of lading can be the equivalent of a paper bill in relation to the third function, that is, as a document of title. It is a challenging chapter because an electronic bill of lading has no concrete existence, as does the paper bill of lading, to be possessed and negotiated by endorsement or delivery as a document of title. The chapter discusses the legal solutions to this challenge under the relevant international conventions, model laws and contract forms. As in the discussions of the receipt and evidentiary functions, it studies the provisions for the document of title function in terms of electronic bills of lading under the Rotterdam Rules, MLETR, CMI Rules, Bolero and

essDOCS. It examines the position of English law in relation to the document of title function of electronic bills of lading.

5.7 Chapter Seven: Conflict of laws

This chapter deals with the conflict of laws issue in relation to electronic bills of lading. It deals with how to determine the applicable law when using electronic bills of lading. It studies the provisions for electronic bills of lading under the relevant international conventions, model laws and contract forms. It studies the provisions for the conflict of laws issue in terms of electronic bills of lading in the Rotterdam Rules, MLETR, CMI Rules, Bolero and essDOCS under the international approach of the research. It examines the English law position in relation to the conflict of laws in respect of electronic bills of lading under the English law approach.

5.8 Chapter Eight: Conclusion

Chapter Eight concludes the thesis with the findings reached from the discussions in the core chapters and sets out recommendations to deal with the legal questions. The chapter presents the findings that answer the main and consequential legal questions of the thesis. These answers stem from the content of the Rotterdam Rules, MLETR, CMI Rules, Bolero and essDOCS. It presents findings as to the position of current English law in relation to electronic bills of lading and whether they can perform the same functions as paper bills under English law. It shows how this thesis enriches the knowledge in the branch of maritime law in general and the subject of electronic bills of lading in particular. It also suggests future studies to be carried out on electronic bills of lading.

Chapter Two: Paper Bills of Lading

1 Introduction

This chapter examines the legal concept of paper bills of lading. It is the foundation chapter of the thesis since electronic bills of lading are legally intended to be functional equivalents to paper bills. To be able to duplicate or dematerialize paper bills, there is a need to demystify their origin, definition, types, international framework and, most importantly, their functions. Moreover, the information included in an electronic bill of lading seem similar to that information included in a paper bill of lading, as will be seen in Chapters Four and Five. In this connection, Aikens et al. describe the electronic bill of lading as ‘a series of electronic messages, in a form similar to e-mails, containing information or instructions relevant to the goods concerned and their carriage and delivery, of the same type as in paper bill’.⁴⁰

The use of Electronic Data Interchange (EDI) has changed the way paper bills of lading are transferred.⁴¹ The delivery and negotiation of these bills have been dematerialized.⁴² EDI is defined as ‘the computer-to-computer transmission of information used by contracting commercial parties to send and receive standard forms – generally purchase orders and invoices – in a store and forward message system’.⁴³

This may imply that the information included in electronic bills of lading, such as the condition and quantity of the goods, the named vessel, the ports of loading and discharge, the name of the shipper, the consignee and the carrier would be the same or at least similar to those included in paper bills of lading. Both paper and electronic bills of lading may include the terms of the contract of carriage. In practice, the image of a paper bill of lading can be used in the electronic bills of lading systems because there are two ways to issue electronic bills.⁴⁴ The first way is paper-based, whereby the carrier uses a paper bill or its image and uploads it to the provider’s electronic platform.⁴⁵ The second is completely electronic, based on the data available on the provider’s electronic platform.⁴⁶

⁴⁰ Richard Aikens, Richard Lord and Michael Bools, *Bills of Lading* (Informa 2015) 45.

⁴¹ Thomas J. Schoenbaum, *Admiralty and Maritime Law* (5th edn, West Publishing 2011) 822–823.

⁴² *ibid.*

⁴³ J Hill, ‘The Future of Electronic Contracts in International Sales: Gaps and Natural Remedies under the United Nations Convention’ (2003) 2(2) *Northwestern Journal of Technology and Intellectual Property* Art.1.

⁴⁴ Interviews (n 15).

⁴⁵ *ibid.*

⁴⁶ *ibid.*

This chapter examines the main legal aspects of paper bills of lading. It explores the origin of these bills and how they came into existence to play their role in international trade. It examines the definitions of paper bills handed down by authoritative writers, international conventions and English law. Later, it explores the types of paper bills of lading. Significantly, it examines the main three functions of paper bills of lading. The chapter also discusses the international framework that governs the contract of carriage of goods by sea covered by paper bills of lading and explores the position of English law in respect of that international framework.

2 Origin of paper bills of lading

This section focuses on the functional emergence of paper bills of lading. It addresses the three main functions of these paper bills: as a receipt for the goods, as evidencing or containing the contract of carriage and as a document of title.⁴⁷ The section also refers to the leading cases in English law that recognize these functions. The functions of bills of lading will be examined in a separate section in this chapter because of their relevance to the legal question(s) of the thesis.

Bills of lading have come into existence through the ‘trade usage and custom’.⁴⁸ In the medieval ages, according to Gaskell, ‘merchants travelled with their goods and did not need to receive documentation from the carrier, or to give any the buyer of the goods at the foreign ports’.⁴⁹ Sometimes, particularly in the case of charterparties, the practice was to give the shipper the right to appoint a ‘supercargo’, as a ‘representative who can travel with cargo’.⁵⁰ Aikens et al. argue that there was no bill of lading, as it is now known, during the eleventh century; instead, in ‘the port of the Mediterranean’, the practice was to record the goods on the ‘ship's register’.⁵¹ It is thought, according to Aikens et al., that, by the fourteenth century, the bill of lading as a receipt for the goods first came to existence when the practice was to hold ‘an on-board record’, but shippers still travelled with their goods,⁵² as mentioned earlier. Later, ‘merchants’ started

⁴⁷ Thomas Edward Scrutton and Bernard Eder, *Scrutton on Charterparty and Bills of Lading* (23rd edn, Sweet & Maxwell 2015) 9-12.

⁴⁸ Miriam Goldby, ‘Bills of Lading’ in David Joseph Attard and others (eds), *The IMLI Manual on International Maritime Law* (Vol II, Shipping Law, Oxford University Press 2016) 310.

⁴⁹ Nickolas Gaskell, Regina Asariotis and Yvonne Baatz, *Bills of Lading: Law and Contracts* (LLP 2000) 1.

⁵⁰ *ibid.*

⁵¹ Aikens, Lord and Bools (n 40) 1-17.

⁵² *ibid.*

sending 'letters of advice of the cargo shipped' to 'their correspondents' in other places.⁵³ Carriers were also required to send 'copies of the ship's register' to those correspondents'.⁵⁴ Wilson argues that the fourteenth century witnessed the appearance of the bill of lading as a receipt for the goods: 'the bill of lading was originated around the fourteenth century as a non-negotiable receipt issued by a ship owner for cargo received, to a merchant who did not intend to travel with his goods'.⁵⁵ Accordingly, one may conclude that the appearance of the bill of lading as a receipt for the goods took place in the fourteenth century.

Since the bill of lading functioned as a receipt for the goods at that time, it contained 'statements as the type and quantity of goods shipped and the condition in which they were received'.⁵⁶ These statements were, and still are, important because they enable the shipper to claim loss or damage against the carrier if the latter fails to deliver the goods in the same form and state as included in the bill of lading.⁵⁷ This might open the door for the bill of lading to incorporate the terms of the contract of carriage in order to settle disputes that arose between the parties to the contract.⁵⁸ Thus, the second function of bills of lading, being to evidence or contain the contract of carriage, crystallized. One may notice that the functional emergence of the bill of lading from the mercantile needs is evident.⁵⁹

Aikens et al. argue that in 'the second quarter of the sixteenth century', the transferability function of paper bills of lading appeared in 'the files of libels of the High Court of Admiralty'.⁶⁰ Wilson argues that, the negotiability function of paper bills of lading appeared by 'the eighteenth century' when traders needed 'to dispose their goods before the vessel reached its destination'.⁶¹ However, the 'modern history' of paper bills of lading', according to Aikens et al., 'begins at the end of the eighteenth century with the landmark decision in *Lickbarrow v Mason*'.⁶² In this case, the Court of King's Bench recognized the merchants' practice 'that a shipped, negotiable bill of lading was a "document of title", so that a transfer

⁵³ *ibid.*

⁵⁴ *ibid.*

⁵⁵ John Furness Wilson, *Carriage of Goods by Sea* (7th edn, Pearson/Longman 2010) 115.

⁵⁶ *ibid.*

⁵⁷ Gaskell, Asariotis and Baatz (n 49) 1.

⁵⁸ *ibid.*

⁵⁹ Goldby (n 48) 310.

⁶⁰ Aikens, Lord and Bools (n 40) 1-17.

⁶¹ Wilson (n 55) 115.

⁶² [1794] 5 Term Reports 683. See Aikens, Lord and Bools (n 40) 1-17.

of the bill affected a transfer of "property" in the goods covered by the bill'.⁶³ Treitel et al. also argue that the 'custom of merchants' to deal with the paper bill of lading as a document of title to the goods is based on *Lickbarrow*.⁶⁴

Bills of lading are transferable and negotiable by the custom of merchants. And though a consignor may in general stop goods in transit before they reach the consignee, yet he cannot if the consignee has previously indorsed over the bill of lading to a third person, for a valuable consideration and without fraud.⁶⁵

As such, it seems safe to reach that the third function of paper bills of lading as documents of title crystallized in the eighteenth century and admitted in *Lickbarrow*.⁶⁶ The nineteenth century witnessed more cases on paper bills of lading such as *Newsom v Thornton*,⁶⁷ *Sargent v Morris*,⁶⁸ *Patten v Thompson*,⁶⁹ *Barber v Meyerstein*,⁷⁰ *Thompson v Dominy*⁷¹ and *Howard v Shepherd*.⁷² Those cases seem to further recognize the functions of paper bills of lading. In *Barber*,⁷³ for example, 'the bill of lading was confirmand as a document that gave its holder symbolic possession of the goods'.⁷⁴ Those cases 'led to the enactment of the Bills of Lading Act 1855' in the United Kingdom.⁷⁵

The nineteenth century witnessed a 'great commercial strength' of shipowners, particularly 'British shipowners', as a result of 'the introduction of steam-powered vessels and the increase in international trade'.⁷⁶ Gaskell et al. argue that the 'English courts were willing to apply *laissez-faire* notion' of contract that allowed ocean carriers to exclude many of the basic obligations that would have been implied at common law'.⁷⁷ In other words, Wilson argues that 'the bill of lading carrier' exploited its 'superior bargaining power by introducing clauses into the contract of carriage' to exempt itself from liability even sometimes for loss caused by

⁶³ Scrutton and Eder (n 47) 9.

⁶⁴ *Lickbarrow* (n 62) 683. See Treitel, Reynolds and Carver (n 19) 339.

⁶⁵ *Lickbarrow* (n 62) 683.

⁶⁶ *ibid.*

⁶⁷ [1805] 6 East 17.

⁶⁸ [1820] 3 B & Ald 277.

⁶⁹ [1816] 5 M & S 350.

⁷⁰ [1869-70] LR 4 HL 317.

⁷¹ [1845] 14 M & W 403.

⁷² [1850] 9 C.B. 907. See Aikens, Lord and Bools (n 40) 1-17.

⁷³ *Barber* (n 70).

⁷⁴ Aikens, Lord and Bools (n 40) 1-17.

⁷⁵ *ibid.*

⁷⁶ Gaskell, Asariotis and Baatz (n 49) 3.

⁷⁷ *ibid.*

its 'own negligence in the care of cargo'.⁷⁸ Gaskell et al. say that the 'carriers might exclude all liability for unseaworthiness, or for crew negligence'.⁷⁹ As Sturley et al. put it, there were 'exculpatory clauses' in bills of lading to limit carriers' liability. Sturley et al. argue that 'in many countries, including England, the clauses were enforceable, even if the carrier assumed virtually no liability, even for its own negligence'.⁸⁰ Therefore, a reaction against those exculpatory clauses appeared in two ways: first, by adopting model bills of lading in some countries; and second, by enacting legislation in some countries to control the application of laissez-faire.⁸¹

The first way might be reflected in 'the first attempt at codifying the rights and liabilities between owners and cargo interests' led by the Association for the Reform and Codification of the Law of Nations, which later became the International Law Association.⁸² This effort led to the Liverpool Conference in 1882 and the adoption of a draft model bill of lading, and later to the Hamburg Rules of Affreightment,⁸³ or model rules, in 1885.⁸⁴ The second way witnessed the enactment of national legislations, such as the US Harter Act of 1893, which tries 'to ban the exclusion of carrier liability for loss resulting from fault in care and custody of cargo';⁸⁵ the New Zealand Shipping and Seamen Act 1908, 'which was largely based on the US statute', that is, Harter Act; the Australian Sea-Carriage of Goods Act 1904; the Canadian Water Carriage of Goods Act 1919; and the French Morocco Maritime Commercial Code of 1919.⁸⁶

All those actions led to the adoption of the Hague Rules in 1924.⁸⁷ The Hague Rules are one of three international conventions under the current international regime that deals with paper bills of lading and carriage of goods by sea: the International Convention for the Unification of Certain Rules of Law Relating to Bills of Lading and Protocol of Signature 1924 (the Hague Rules), the Protocol to Amend the International Convention for the Unification of Certain Rules of Law Relating to Bills of Lading and Protocol of Signature 1924 (the Visby

⁷⁸ Wilson (n 55) 115.

⁷⁹ Gaskell, Asariotis and Baatz (n 49) 3.

⁸⁰ Michael F Sturley, Tomotaka Fujita and GJ van der Ziel, *The Rotterdam Rules* (Sweet & Maxwell 2010) 9.

⁸¹ Wilson (n 55) 115.

⁸² Aikens, Lord and Bools (n 40) 1-17.

⁸³ *ibid.*

⁸⁴ Sturley, Fujita and Ziel (n 80) 9.

⁸⁵ Wilson (n 55) 115.

⁸⁶ Aikens, Lord and Bools (n 40) 1-17.

⁸⁷ *ibid.*

Amendments) and the United Nations Convention on the Carriage of Goods by Sea 1978 (the Hamburg Rules).

3 Definition of paper bills of lading

This section starts by exploring some scholars' definitions of bills of lading. Next, it discusses the definition in the relevant international conventions. Later, it examines the definition under the English law.

3.1 Scholars' definitions

Treitel et al. define a bill of lading as 'a document issued by or on behalf of a carrier of goods by sea to the person (usually known as the shipper) with whom he has contracted for the carriage of the goods'.⁸⁸ This definition may cover the types and conditions of bills of lading because Treitel et al. give separate definitions for different types of bills of lading, such as bearer bills and order bills. Treitel et al. may take into consideration the peculiarities of each type of bill. Moreover, Treitel et al. seem to consider the 'difficulties' that may be encountered 'in identifying either or both of the parties to the contract of carriage', as in the case of charterparty.⁸⁹

Scrutton and Eder define a bill of lading as 'a type of transport document that may be issued in respect of the carriage of goods by sea or on behalf of the owner, or less commonly the charterer, of the carrying ship'.⁹⁰ Scrutton and Eder, in this definition, address one of the difficulties mentioned in Carver et al.'s definition. Scrutton and Eder may consider the case of a charterparty and that the carrier may be the shipowner or the charterer. Scrutton and Eder also use the term 'transport document', which is used instead of the term 'bill of lading' under the Rotterdam Rules.⁹¹

Gaskell et al. define a bill of lading as 'a document issued by a carrier which acknowledges the receipt of the cargo, contains terms of carriage and may operate as document of title'.⁹² Unlike the two previous definitions, Gaskell et al.'s definition may cover the three main functions of

⁸⁸ Treitel, Reynolds and Carver (n 19) 10.

⁸⁹ *ibid.*

⁹⁰ Scrutton and Eder (n 47) 9.

⁹¹ See subsection 3.9 'Convention on Contracts for Carriage of Goods Wholly or Partly by Sea (the Rotterdam Rules)' in Chapter Three.

⁹² Gaskell, Asariotis and Baatz (n 49) 3.

bills of lading: as a receipt for the goods, as containing or evidencing the contract of carriage and as a document of title.

Aikens et al. may describe the difficulty of defining a bill of lading by saying '[l]ike an elephant, a bill of lading is generally easier to recognize than to define.'⁹³ However, Aikens et al. write:

A bill of lading is a document. Generally, it must be signed by, or on behalf of, the carrier by sea. Three common characteristics of a bill of lading are that (a) it constitutes a receipt for the goods shipped or received by the carrier, (b) it constitutes a document of title for such goods and (c) it contains or evidences the contract of carriage by sea relating to the goods.⁹⁴

Aikens et al. consider the three functions of bills of lading, but call them 'characteristics', not functions. However, Aikens et al. argue that 'there is no universally applicable definition of a bill of lading'.⁹⁵

Tetley, at the beginning of his discussion on bills of lading, describes paper bills of lading as 'contracts'.⁹⁶ Tetley says that 'bills of lading are contracts for the carriage of goods, unlike charterparties, which are contracts of hire of the ship or her service'.⁹⁷ Then Tetley adds that 'a bill of lading is not only a contract of carriage, but a receipt and a document of title'.⁹⁸ However, later in his discussion on the second function of the paper bill of lading as evidence of the carriage contract, Tetley says that 'it is not the "contract", but only the best evidence of the contract'.⁹⁹ Tetley explains that the bill of lading is not the contract, because the bill is 'signed only by one party after the ship leaves and the real contract is the offer, the oral or written arrangements for shipment, the advertisement of the carrier, the booking notes, the carrier's tariff, as well as the bill of lading, waybill or electronic document itself'.¹⁰⁰

⁹³ Aikens, Lord and Bools (n 40) 19.

⁹⁴ *ibid.*

⁹⁵ *ibid.*

⁹⁶ William Tetley, *International Maritime and Admiralty Law* (Editions Y Blais 2002) 65–66.

⁹⁷ *ibid.*

⁹⁸ *ibid.* 66.

⁹⁹ *ibid.* 70.

¹⁰⁰ *ibid.*

Schoenbaum defines the ‘traditional’ bill of lading as ‘a document which is signed by the carrier or his agent acknowledging that goods have been shipped on board a specific vessel that is bound for a particular destination and stating the terms on which the goods are to be carried’.¹⁰¹ This definition may cover only two functions of bills of lading: as a receipt for the goods and as evidencing or containing the contract of carriage. It does not cover the third function of the paper bill as a document of title. However, Schoenbaum discusses the three functions later in his book,¹⁰² even though they are not all included in the definition.

3.2 Definition in international conventions

The Hague Rules-Visby Rules do not define the bill of lading, but the Hamburg Rules do.¹⁰³ Article 1(7) of Hamburg Rules states:

‘Bill of lading’ means a document which evidences a contract of carriage by sea and the taking over or loading of the goods by the carrier, and by which the carrier undertakes to deliver the goods against surrender of the document. A provision in the document that the goods are to be delivered to the order of a named person, or to order, or to bearer, constitute such undertaking.

This definition focuses on the three functions of a bill of lading: as a receipt for the goods, as containing or evidencing the contract of carriage by sea and as a document of title. This definition appears as the first international recognition of the three functions of bills of lading, in that the Hamburg Rules entered into force on 1 November 1992.¹⁰⁴ It is thought that the Law Commission noted in its report that ‘the bill of lading is usually identified by reference to its three *functions*: as a receipt, as evidence of the contract of carriage and as a document of title’.¹⁰⁵

3.3 Definition in English law

Some relevant UK statutes do not define bills of lading, namely, the Carriage of Goods by Sea Act 1971 (COGSA 1971), the Bills of Lading Act 1855 and the Factors Act 1842.¹⁰⁶ However,

¹⁰¹ Schoenbaum (n 41) 815.

¹⁰² *ibid.*

¹⁰³ Gaskell, Asariotis and Baatz (n 49) 3.

¹⁰⁴ *ibid.*

¹⁰⁵ *ibid.*

¹⁰⁶ *ibid.*

section 1(2) of the Carriage of Goods by Sea Act 1992 (COGSA 1992) defines bills of lading, but, according to Gaskell et al. '(for the purposes of the Act) in a negative way',¹⁰⁷ as follows:

(2) References in this Act to a bill of lading— (a) do not include references to a document which is incapable of transfer either by indorsement or, as a bearer bill, by delivery without indorsement; but (b) subject to that, do include references to a received for shipment bill of lading.

Treitel et al. argue that COGSA 1992 'does not define "bills of lading" but it does give two pieces of information about the meaning of this expression'.¹⁰⁸ Treitel et al. explain that the above-mentioned subsection (2) of COGSA 1992 gives the meaning of bills of lading in (a) and (b), in the sense that (a) appears to restrict the meaning of bills of lading to 'order bills and bearer bills respectively'.¹⁰⁹ This means, according to Treitel et al., that "straight consigned" or "non-negotiable" bill would not be a "bill of lading" within the Act even though the document purported by its terms to be a "bill of lading".¹¹⁰ This position, as will be discussed later when dealing with straight bills of lading in this chapter, varies from *JI MacWilliam Co Inc v Mediterranean Shipping Co SA (The Rafaela S)*.¹¹¹ As regards (b), it seems that it may make it clear that the transfer capability includes "a received for shipment bill of lading".¹¹²

4 Types of paper bills of lading

This section selected specific types of paper bills of ladings to discuss based on their functions and characteristics, as follows:

4.1 'Shipped' bill of lading

This type of paper bill of lading, 'is sometimes referred to, particularly in the United States as "on board" bill of lading'.¹¹³ The 'shipped' bill of lading, according to Scrutton et al., 'records goods that have been loaded on board the carrying vessel'.¹¹⁴ Treitel et al. note that this type of bill 'usually' also records the 'date of shipment' so that a bill with a 'false' shipment date is

¹⁰⁷ *ibid.*

¹⁰⁸ Treitel, Reynolds and Carver (n 19) 223.

¹⁰⁹ *ibid.*

¹¹⁰ *ibid.*

¹¹¹ [2005] UKHL 11.

¹¹² Treitel, Reynolds and Carver (n 19) 223.

¹¹³ Aikens, Lord and Bools (n 40) 29.

¹¹⁴ Scrutton and Eder (n 47) 9 and see also Gaskell, Asariotis and Baatz (n 49) 14.

‘defective’ and a buyer of the goods covered by it can reject it’.¹¹⁵ This type of bill may be preferred by buyers or transferees since it records the actual loading of the goods on board the ship in contrast with the ‘received’ or ‘received for shipment’ bill of lading, which records the receipt of the goods (before loading).¹¹⁶

4.2 ‘Received’ or ‘received for shipment’ bill of lading

Scrutton and Eder argue that this type of bill of lading ‘records goods received into the carrier's care and custody before loading’.¹¹⁷ The ‘received’ or ‘received for shipment’ bill of lading also ‘sometimes’ records ‘the fact and date of subsequent shipment’ if it contains an ‘on-board notation’.¹¹⁸ Gaskell et al. argue that in this type of paper bill of lading, ‘the carrier merely acknowledges it has received goods somewhere, e.g. at a container depot’.¹¹⁹ However, these definitions may be general because, according to Treitel et al., this type of bill ‘is capable of referring to several kinds of documents’.¹²⁰

Treitel et al. note that the ‘received’ or ‘received for shipment’ bill of lading can record ‘that the goods specified in it have been received by the carrier for shipment on a named ship or that they are received by the carrier and are intended to be shipped on that ship’, or on ‘an unspecified vessel’,¹²¹ as was the case in *Diamond Alkali Export Corp v Fl. Bourgeois*.¹²² Moreover, Treitel et al. note another type of ‘received’ or ‘received for shipment’ bill of lading that records that the goods are in the possession, not of the carrier, but of another person (e.g. a warehouseman).¹²³ The last possibility may correspond with the meaning of the words ‘carrier's care and custody before loading’, in Scrutton and Elder’s definition of the ‘received’ or ‘received for shipment’ bill of lading, mentioned earlier.¹²⁴ This may mean, in other words, that the goods are not physically in the hands of the carrier, but under its care and responsibility. This possibility, according to Treitel et al., may raise the question of the actual receipt of the goods by the carrier.¹²⁵ The ‘received’ or ‘received for shipment’ bill of lading may not provide

¹¹⁵ Treitel, Reynolds and Carver (n 19) 18–19.

¹¹⁶ Tetley (n 96) 67. See also Scrutton and Eder (n 47) 9.

¹¹⁷ Scrutton and Eder (n 47) 9.

¹¹⁸ *ibid.*

¹¹⁹ Gaskell, Asariotis and Baatz (n 49) 14.

¹²⁰ Treitel, Reynolds and Carver (n 19) 19.

¹²¹ *ibid.*

¹²² [1921] 3 KB 443. See Treitel, Reynolds and Carver (n 19) 19.

¹²³ Treitel, Reynolds and Carver (n 19) 19.

¹²⁴ Scrutton and Eder (n 47) 9.

¹²⁵ Treitel, Reynolds and Carver (n 19) 19.

the 'transferee of a bill of lading' with the "continuous documentary cover" to which he is entitled under a c.i.f. contract',¹²⁶ as was the case in *Yelo v S.M. Machado Ltd.*¹²⁷ Aikens et al. argue that the 'received' or 'received for shipment' bill of lading did not provide an 'evidence of the date of shipment', in comparison with the 'shipped' bill of lading.¹²⁸

4.3 'Bearer' bill of lading

This type of bill is 'negotiable'.¹²⁹ Scrutton and Eder argue that this paper bill of lading does not name a 'consignee', but it is made out 'in favour simply of "bearer" or "holder" or "in blank"'.¹³⁰ 'In blank', according to Gaskell et al., may mean 'that the space for the name of the person to whom the cargo is to be delivered is left totally blank'.¹³¹ Therefore, Aikens et al. argue that the carrier is obliged 'to deliver to the bearer (or holder) without the requirement that the bearer is a named consignee or endorsee'.¹³² This may mean, according to Treitel et al., that 'the person who has the possession of the bill' is entitled to delivery of the goods.¹³³ Aikens et al. note that since the bearer bill of lading 'usually be issued to the shipper, it may be described as a shipper's bill'.¹³⁴ As the bearer bill is negotiable, it is transferred 'by delivery'.¹³⁵ It seems safe to say that the 'bearer' bill may be the best proof that the possession of the paper bill of lading means the possession of the goods.

¹²⁶ *ibid.*

Cost, Insurance and Freight (CIF) means that the seller delivers the goods on board the vessel or procures the goods already so delivered. The risk of loss of or damage to the goods passes when the goods are on board the vessel. The seller must contract for and pay the costs and freight necessary to bring the goods to the named port of destination. The seller also contracts for insurance cover against the buyer's risk of loss of or damage to the goods during the carriage. The buyer should note that under CIF the seller is required to obtain insurance only on minimum cover. Should the buyer wish to have more insurance protection, it will need either to agree as much expressly with the seller or to make its own extra insurance arrangements. Incoterms Rules 2010, iccwbo.org <<https://iccwbo.org/resources-for-business/incoterms-rules/incoterms-rules-2010/>> accessed 2 June 2019.

¹²⁷ [1952] 1 Lloyd's Rep 183. See Treitel, Reynolds and Carver (n 19) 20.

¹²⁸ Aikens, Lord and Bools (n 40) 22.

¹²⁹ Scrutton and Eder (n 47) 9.

¹³⁰ *ibid.*

¹³¹ Gaskell, Asariotis and Baatz (n 49) 150.

¹³² Aikens, Lord and Bools (n 40) 27.

¹³³ Treitel, Reynolds and Carver (n 19) 10.

¹³⁴ Aikens, Lord and Bools (n 40) 27.

¹³⁵ Treitel, Reynolds and Carver (n 19) 10.

4.4 'Order' bill of lading

Treitel et al. categorize this type of paper bill of lading into two types.¹³⁶ The first type includes a bill that 'provides for the delivery of the goods to a named consignee or to his "order or assigns" (or contains in some part of the bill similar words importing transferability)'.¹³⁷ The second type includes a bill that 'simply makes the goods deliverable "to order or assigns" (or, again, contains similar words of transferability) without naming a consignee'.¹³⁸ However, the question about the difference between the first kind of 'bearer' bills and the 'straight' bill of lading or 'waybill' may arise as there is a named consignee in the bill. Although the 'straight' bill of lading and waybill will be examined later in this chapter, the difference is that the 'straight' bill of lading or waybill', according to Wilson, 'only makes provision for delivery to a named consignee' and 'lacks the negotiability feature as a document of title'.¹³⁹

As regards the transfer of 'order' bill of lading is concerned, where there is 'a named consignee or order', the transfer can be done 'by delivery to that named consignee'. Treitel et al. note that '[S]uch delivery entitles the consignee to claim the goods from the carrier, even though he may do so as agent of the transferor',¹⁴⁰ as was the case in *Leigh & Silavan v Aliakmon Shipping Co Ltd (The Aliakmon)*.¹⁴¹ In the case 'where a bearer bill of lading is indorsed in blank, no further indorsement, but only delivery, is normally required for subsequent transfers',¹⁴² as was the cases in *Keppel Tatlee Bank Ltd v Bandung Shipping Private Ltd*,¹⁴³ and *Primertrade AG v Ythan Ltd (The Ythan)*.¹⁴⁴ In this connection, Wilson argues that the 'order' bill of lading is 'not technically negotiable instrument since a bona fide transferee gets no better title to the goods covered by the bill than was held by the transferor',¹⁴⁵ in comparison with what can be done in negotiating a bill of exchange as indicated in *Kum v Wah Bank*.¹⁴⁶ Therefore, Wilson adds that '[T]he bill of lading merely "represents" the goods and possession of the bill of lading

¹³⁶ *ibid.*

¹³⁷ *ibid.*

¹³⁸ *ibid*10–11.

¹³⁹ Wilson (n 55) 132.

¹⁴⁰ Treitel, Reynolds and Carver (n 19) 11–12.

¹⁴¹ [1986] AC 785. See Treitel, Reynolds and Carver (n 19) 12.

¹⁴² Treitel, Reynolds and Carver (n 19) 12.

¹⁴³ [2003] 1 Lloyd's Rep 619. See Treitel, Reynolds and Carver (n 19) 12.

¹⁴⁴ [2005] EWHC 2399 (Comm). See Treitel, Reynolds and Carver (n 19) 12.

¹⁴⁵ Wilson (n 55) 132.

¹⁴⁶ [1971] AC 439 at 446. See Wilson (n 55) 132.

is treated as equivalent to possession of the goods covered by it – no more, no less’,¹⁴⁷ and as indicated in *Sanders v Maclean*.¹⁴⁸

4.5 ‘Straight’ bill of lading

With this type of bill of lading ‘the goods are consigned to a specific person without reference to order or assign’.¹⁴⁹ The ‘straight’ bill, according to Aikens et al., obliges the carrier to deliver the goods to a ‘named party (only), subject to any redirection by the shipper’.¹⁵⁰ Aikens et al., adds that ‘[A]ny purported endorsement to transfer to other parties is of no effect on the carrier’.¹⁵¹ In other words, according to Scrutton and Eder, the ‘straight bill of lading is made out in favour of a named consignee without contemplation of negotiation’.¹⁵² The ‘straight’ bill may contain ‘words negating transferability’ such as ‘not transferable’ or ‘not negotiable’,¹⁵³ as was the case in *Mobile Shipping and Transportation Co v Shell Eastern Petroleum (The Mobile Courage)*.¹⁵⁴ Treitel et al. note ‘that the wording of bill of lading in *The Rafaela S* (“not negotiable unless ‘ORDER OF’)” and in *Scottish & Newcastle International Ltd v Othon Ghalanos Ltd*,¹⁵⁵ ‘the contract of sale called for “non-negotiable” bills’.¹⁵⁶

Though the ‘straight’ bill is not negotiable, as seen earlier, it seems to have a special case of transferability or negotiability. Scrutton and Eder say that this bill ‘is transferable by simple delivery from the shipper to the named consignee, but not otherwise’.¹⁵⁷ Todd argues that ‘[s]uch bills are “non-negotiable”, or, to be more accurate, “negotiable” once, from shipper to consignee. They do not need to be indorsed in the consignee’s favour, merely transferred to him, though they often are indorsed as well’.¹⁵⁸ This may mean that the straight bill is not transferable in the same way where the ‘bearer’ or ‘order’ bills of lading are transferred since the ‘straight’ bill obliges the carrier to deliver the goods only to a named consignee. Consequently, there is a question that may poses itself on whether a ‘straight’ bill of lading is

¹⁴⁷ Wilson (n 55) 132.

¹⁴⁸ [1883] 11 QBD 327. See Wilson (n 55) 132.

¹⁴⁹ Wilson (n 55) 161.

¹⁵⁰ Aikens, Lord and Bools (n 40) 28.

¹⁵¹ *ibid.*

¹⁵² Scrutton and Eder (n 47) 9.

¹⁵³ Treitel, Reynolds and Carver (n 19) 13.

¹⁵⁴ [1987] 2 Lloyd’s Rep 665 at 669. See Treitel, Reynolds and Carver (n 19) 13.

¹⁵⁵ [2008] UKHL 11. See Treitel, Reynolds and Carver (n 19) 13.

¹⁵⁶ Treitel, Reynolds and Carver (n 19) 13–14.

¹⁵⁷ Scrutton and Eder (n 47) 9.

¹⁵⁸ Paul Todd, *Principles of the Carriage of Goods by Sea* (Routledge 2016) 242.

a document of title. *The Rafaela S*¹⁵⁹ answers this question, as will be seen in the next discussion.

4.5.1 *The Rafaela S*

The facts of this case date back to 18 December 1989 when the bill of lading in question was issued.¹⁶⁰ The carrier, the appellant, was Mediterranean Shipping Company SA (MSC), a container liner operator, and the demise charterer of the ships *Rosemary* and *Rafaela S*.¹⁶¹ The shipper, the seller, was Coniston International Machinery Ltd (Coniston International) of Liverpool in the UK. The carrier and shipper contracted to carry four containers of printing machinery from Durban in South Africa to Felixstowe and onward to Boston, in the United States.¹⁶² The consignee, buyer and respondent, was JI MacWilliam Co Inc. (MacWilliam) of Boston.¹⁶³ The straight bill of lading in question was issued by the carrier as three original copies, as stated in box (11) of the bill, and described as a bill of lading.¹⁶⁴ The consignee box (box 2) on the bill contained the printed words 'Consignee: (B/L not negotiable unless "ORDER OF")' and the name and address of the consignee, but without the words 'order of' or their equivalent, which meant that the bill was a straight bill and not transferable by endorsement.¹⁶⁵ It was also required that one of the bills had to be surrendered duly endorsed in exchange for the goods or delivery order.¹⁶⁶ The goods were first shipped on board the *Rosemary* from Durban in South Africa, where the bill was issued, to be carried to the final destination in Boston.¹⁶⁷ However, 'the cargo was discharged at Felixstowe', in the UK, 'and reshipped on a second vessel', which was the *Rafaela S*, 'owned by the same carrier for carriage to Boston', and 'no new bill of lading was issued' for that new voyage.¹⁶⁸ The cargo of four containers was damaged in the course of their voyage to Boston.¹⁶⁹

To claim damage, the claimant who was the consignee or the buyer brought its action in a London maritime arbitration. In that arbitration, the claimant alleged that article 1(b) of Hague-

¹⁵⁹ *The Rafaela S* (n 111).

¹⁶⁰ *ibid.*

¹⁶¹ *ibid.*

¹⁶² *ibid.*

¹⁶³ *ibid.*

¹⁶⁴ *ibid.*

¹⁶⁵ *ibid.*

¹⁶⁶ *ibid.*

¹⁶⁷ *ibid.*

¹⁶⁸ Wilson (n 55) 161.

¹⁶⁹ *The Rafaela S* (n 111).

Visby Rules¹⁷⁰ was applicable to the bill of lading in question and sought to benefit from the generous package limitation totalling US\$ 150,000 under article IV(5) of Hague-Visby Rules (Article 2 of the Visby Amendments),¹⁷¹ which were given the force of law according to COGSA 1971 in the UK,¹⁷² specifically under section 1(2) of the Act.¹⁷³ In return, the respondent, the carrier, contended that section 4(5) of US Carriage of Goods by Sea Act (US

¹⁷⁰ art 1(b) of Hague-Visby Rules states:

'Contract of carriage' applies only to contracts of carriage covered by a bill of lading or any similar document of title, in so far as such document relates to the carriage of goods by sea, including any bill of lading or any similar document as aforesaid issued under or pursuant to a charter party from the moment at which such bill of lading or similar document of title regulates the relations between a carrier and holder of the same.

¹⁷¹ art IV(5) of Hague-Visby Rules states:

(a) Unless the nature and value of such goods have been declared by the shipper before shipment and inserted in the bill of lading, neither the carrier nor the ship shall in any event be or become liable for any loss or damage to or in connection with the goods in an amount exceeding 666.67 units of account per package or unit or 2 units of account per kilogramme of gross weight of the goods lost or damaged, whichever is the higher.

(b) The total amount recoverable shall be calculated by reference to the value of such goods at the place and time at which the goods are discharged from the ship in accordance with the contract or should have been so discharged.

The value of the goods shall be fixed according to the commodity exchange price, or, if there be no such price, according to the current market price, or, if there be no commodity exchange price or current market price, by reference to the normal value of goods of the same kind and quality.

(c) Where a container, pallet or similar article of transport is used to consolidate goods, the number of packages or units enumerated in the bill of lading as packed in such article of transport shall be deemed the number of packages or units for the purpose of this paragraph as far as these packages or units are concerned. Except as aforesaid such article of transport shall be considered the package or unit.

(d) The unit of account mentioned in this Article is the special drawing right as defined by the International Monetary Fund. The amounts mentioned in sub-paragraph (a) of this paragraph shall be converted into national currency on the basis of the value of that currency on a date to be determined by the law of the Court seized of the case.

(e) Neither the carrier nor the ship shall be entitled to the benefit of the limitation of liability provided for in this paragraph if it is proved that the damage resulted from an act or omission of the carrier done with intent to cause damage, or recklessly and with knowledge that damage would probably result.

(f) The declaration mentioned in sub-paragraph (a) of this paragraph, if embodied in the bill of lading, shall be *prima facie* evidence, but shall not be binding or conclusive on the carrier.

(g) By agreement between the carrier, master or agent of the carrier and the shipper other maximum amounts than those mentioned in sub-paragraph (a) of this paragraph may be fixed, provided that no maximum amount so fixed shall be less than the appropriate maximum mentioned in that sub-paragraph.

(h) Neither the carrier nor the ship shall be responsible in any event for loss or damage to, or in connection with, goods if the nature or value thereof has been knowingly mis-stated by the shipper in the bill of lading.

¹⁷² *The Rafaela S* (n 111).

¹⁷³ s 1(2) of COGSA 1971 states 'The provisions of the Rules, as set out in the Schedule to this Act, shall have the force of law'.

COGSA 1936)¹⁷⁴ was applicable and that accordingly the bill of lading in question was to deemed a sea waybill and merely a receipt for the goods.¹⁷⁵ Therefore, a lower limitation package should be applicable according to section 4(5) of US COGSA 1936, which restricts a consignee's claim to US\$ 2,000.¹⁷⁶ Thus, the preliminary question before the arbitration was which system or limitation package was applicable to the carriage of goods by sea in question: was it the Hague-Visby Rules or the US COGSA 1936? More specifically, according to Rix LJ in the Court of Appeal,¹⁷⁷ the arbitrators, Messrs Mabbs, Hamsher and Moss, identified only two issues in their award:

1. Was the shipment from Durban to Boston governed by one contract of carriage or two?
2. Was the [straight] bill of lading a 'bill of lading' within [the 1971 Act]?¹⁷⁸

On 30 May 2001, the arbitrators held 'that a "straight" bill of lading fell outside the scope of Article I(b) of the Rules and that the applicable package limitation regime was therefore under US COGSA'.¹⁷⁹

The arbitration decision was appealed to the Queen's Bench Division (Commercial Court) under section 1 of Arbitration Act 1979.¹⁸⁰ Langley J upheld the arbitral decision and dismissed the consignee's appeal. Langley J held that the straight consigned bill of lading in question was

¹⁷⁴ s 4(5) of US COGSA 1936 states:

Neither the carrier nor the ship shall in any event be or become liable for any loss or damage to or in connection with the transportation of goods in an amount exceeding \$500 per package lawful money of the United States, or in case of goods not shipped in packages, per customary freight unit, or the equivalent of that sum in other currency, unless the nature and value of such goods have been declared by the shipper before shipment and inserted in the bill of lading. This declaration, if embodied in the bill of lading, shall be prima facie evidence, but shall not be conclusive on the carrier.

By agreement between the carrier, master, or agent of the carrier, and the shipper another maximum amount than that mentioned in this paragraph may be fixed: Provided, that such maximum shall not be less than the figure above named. In no event shall the carrier be liable for more than the amount of damage actually sustained.

Neither the carrier nor the ship shall be responsible in any event for loss or damage to or in connection with the transportation of the goods if the nature or value thereof has been knowingly and fraudulently misstated by the shipper in the bill of lading.

¹⁷⁵ *The Rafaela S* (n 111).

¹⁷⁶ *ibid.*

¹⁷⁷ [2003] 2 C.L.C. 94.

¹⁷⁸ *ibid.*

¹⁷⁹ *The Rafaela S* (n 111).

¹⁸⁰ *ibid.*

not a bill of lading within the Hague-Visby Rules and section 1(4) of UK COGSA 1971,¹⁸¹ and that there were two shipments under separate contracts of the cargo from Durban to Felixstowe and thence to Boston.¹⁸²

Therefore, the consignee and buyer appealed the Commercial Court's decision in the Court of Appeal.¹⁸³ The Court of Appeal faced the same essential questions as did the previous courts, namely, whether the Hague-Visby Rules were applicable to the bill of lading in question and whether there was one or two contracts of carriage of goods by sea.¹⁸⁴ On this appeal, Peter Gibson and Rix LJ and Jacob J reversed the decision of the Commercial Court and held that the Hague-Visby Rules applied to the carriage of goods by sea in question and that the limitation provision under article IV Rule 5 of Hague-Visby Rules was applicable.¹⁸⁵

Accordingly, the carrier appealed the decision of the Court of Appeal to the House of Lords.¹⁸⁶ The main question before the House of Lords was whether the carriage of the goods by sea contract was covered by a bill of lading or any similar document of title within article I(b) of Hague-Visby Rules and section 1(4) of UK COGSA 1971.¹⁸⁷ If the answer was that it was so covered, it would lead to the application of the more generous financial limits provided in article IV(5) of Hague-Visby Rules, but if not, the less generous limits in section 4(5) of US COGSA 1936¹⁸⁸ would apply; which is why the consignee and buyer claimed that the Hague-Visby regime applied and the carrier contended for the application of US COGSA 1936.¹⁸⁹

Wilson argue that 'academic writers came to the almost unanimous conclusion that such regimes (Wilson means the Hague-Visby Rules) were not applicable because a straight bill could not be regarded as document of title', but the House of Lords had a different opinion in this case.¹⁹⁰ The House of Lords affirmed the decision of the Court of Appeal that the straight bill of lading in question was a bill of lading or similar document of title within article 1(b) of

¹⁸¹ s 1(4) of UK COGSA 1971 states 'Subject to subsection (6) below, nothing in this section shall be taken as applying anything in the Rules to any contract for the carriage of goods by sea, unless the contract expressly or by implication provides for the issue of a bill of lading or any similar document of title'.

¹⁸² *The Rafaela S* (n 177).

¹⁸³ *The Rafaela S* (n 111).

¹⁸⁴ *ibid.*

¹⁸⁵ *ibid.*

¹⁸⁶ *ibid.*

¹⁸⁷ *ibid.*

¹⁸⁸ *ibid.*

¹⁸⁹ *ibid.*

¹⁹⁰ Wilson (n 55) 161.

Hague-Visby Rules and section 1(4) of UK COGSA 1971, that '[a] "straight" bill of lading, not made out to bearer or order but to a named consignee, was "a bill of lading or any similar document of title" within the Hague Visby Rules Art.I(b)'.¹⁹¹ This is 'because the consignee could not obtain delivery without presentation of the document. The document was still transferable, albeit only once, from consignor to consignee'.¹⁹² Therefore, the legal status of the straight bill of lading was finally decided by the House of Lords in a decision delivered on 16 February 2005: the straight bill of lading in question was a bill of lading or similar document of title within article 1(b) of Hague-Visby Rules and section 1(4) of the UK COGSA 1971.¹⁹³

McMeel finds that the House of Lords 'could see no policy reason' to exclude the straight bill of lading in question from the Hague-Visby Rules regime.¹⁹⁴ Amos and Low finds that the reasoning on which the House of Lords based its ruling is that the document in question 'described itself as a bill of lading' and 'the terms' in it 'resembled those of a classic bills of lading'.¹⁹⁵ Moreover, 'straight bills of lading were clearly within the scope of the Rules (Hague-Visby Rules)' because straight bills of lading were widely used 'at the time when the Rules were drafted'.¹⁹⁶ In addition, the consignee named in the 'a straight bill of lading should be afforded the same protection by the Rules as a consignee under an order bill of lading'.¹⁹⁷ Furthermore, the 'presentation of a straight bill of lading for delivery would be necessary even without any express stipulation'.¹⁹⁸ This presentation 'would protect shippers by ensuring that goods would only be delivered upon full payment'.¹⁹⁹ However, the statutory law in the UK is different in this regard.²⁰⁰ '[s]ection 4 of COGSA 1992 does not apply to straight bills, as its application is limited to bills of lading within the meaning of the Act'.²⁰¹

¹⁹¹ *The Rafaela S* (n 111). See Wilson (n 55) 161 and Simon Baughen, *Shipping Law* (7th edn, Routledge 2015) 24.

¹⁹² Baughen 24.

¹⁹³ *The Rafaela S* (n 111).

¹⁹⁴ Gerard McMeel, 'Straight Bill of Lading in the House Lords' (2005) 3 *Lloyd's Maritime and Commercial Law Quarterly* 273-280.

¹⁹⁵ Bill Amos and Eugene Low, 'The Rafaela S – House of Lords Rule on Straight Bills of Lading' (2005) Mayer Brown, <<https://www.mayerbrown.com/en/perspectives-events/publications/2005/02/the-rafaela-s--house-of-lords-rule-on-straight-bil>> accessed 28 December 2020.

¹⁹⁶ *ibid.*

¹⁹⁷ *ibid.*

¹⁹⁸ *ibid.*

¹⁹⁹ *ibid.*

²⁰⁰ Aikens, Lord and Bools (n 40) 29.

²⁰¹ *ibid.*

4.6 Sea waybill

A 'sea waybill' or "waybill" is a non-negotiable receipt which contains contractual terms'.²⁰² This definition may mean that this bill performs only the first two functions: a receipt for the goods and evidencing or containing the contract of carriage. Therefore, a sea waybill does not perform the third function as 'a negotiable document of title'.²⁰³ This is the difference between the sea waybill and the negotiable bill of lading that performs all functions.²⁰⁴ In sea waybills, the goods are 'to be delivered simply to a named person (or identified person) and not to such a person "or order or assigns"'.²⁰⁵ The sea waybill maybe 'marked' as 'not negotiable'.²⁰⁶ It is issued in 'a short form document with a blank back with a specific clause incorporating the carrier's standards terms and conditions'.²⁰⁷

In some cases a sea waybill is used when there is no need for negotiability.²⁰⁸ Gaskell et al. cite examples of those cases such as when a buyer or 'consignee does not wish to resell the goods, or where an in-house transfers take place within large multinational companies', or to avoid the problem of absence or late arrival of bills of lading at their destination.²⁰⁹ Hence, Wilson argues that 'the presentation problem' of bills of lading 'can be solved by substitution of a waybill for the normal bill of lading'.²¹⁰ Wilson sees that 'the named consignee' in a waybill 'can only identify himself, there is no requirement of presentation of the waybill before he can obtain delivery of the goods'.²¹¹ However, for the purpose of COGSA 1992, the waybill is not a bill of lading in accordance to section 1(3) of the Act.²¹² This section expressly excludes waybills as follows:

(3) References in this Act to a sea waybill are references to any document which is not a bill of lading but—

(a) is such a receipt for goods as contains or evidences a contract for the carriage of goods by sea; and

²⁰² Gaskell, Asariotis and Baatz (n 49) 20.

²⁰³ Wilson (n 55) 159.

²⁰⁴ *ibid.*

²⁰⁵ Treitel, Reynolds and Carver (n 19) 15.

²⁰⁶ *ibid.*

²⁰⁷ Wilson (n 55) 160.

²⁰⁸ Gaskell, Asariotis and Baatz (n 12) 20. See also Wilson (n 20) 159 and Baughen (n 191) 11.

²⁰⁹ Gaskell, Asariotis and Baatz (n 12) 20. See also Baughen (n 191) 11.

²¹⁰ Wilson (n 55) 159.

²¹¹ *ibid.*

²¹² Treitel, Reynolds and Carver (n 19) 15.

(b) identifies the person to whom delivery of the goods is to be made by the carrier in accordance with that contract.

4.7 Through bill of lading or combined transport bill of lading

Aikens et al. describe the ‘through bill of lading’ as:

A through bill of lading is typically used where the main carrier undertakes to perform a portion of the carriage, for example, the sea leg, and also undertakes to arrange, as agent, an additional leg, for example, acting as forwarding agent for the onwards road carriage from the discharge port.²¹³

Scrutton and Eder argue that ‘the through bill of lading is sometimes called a "combined transport bill of lading", when the sea transit is often coupled with a stage of transit by some other means, e.g., by road, rail or air’.²¹⁴ Aikens et al. describe the ‘combined transport bill of lading’ as:

Evidencing the contract between C, the cargo owner, and S, the carrier whereby S agrees to carry or procure carriage of the goods, as principal, from A to B, even if the journey between A and B involves a series of stages of sea carriage and other means of carriage such as road, rail or air carriage.²¹⁵

It may be safe to say that the link between these two bills of lading, if they are considered separate bills, is that both of them are used in or a result from multimodal transportation that involves different transport modes, such as road, rail or air, in addition to the sea leg. However, in the case of ‘transhipment’, ‘it will not always be clear’ whether there is one or more contract involved in the carriage of goods by sea,²¹⁶ as seen earlier in *The Rafaela S*.²¹⁷ Through bills of lading may be the use of multimodal transport that has developed since the late 1950s and 1960s,²¹⁸ as a result of the container revolution and technological development.²¹⁹

²¹³ Aikens, Lord and Bools (n 40) 27.

²¹⁴ Scrutton and Eder (n 47) 450.

²¹⁵ Aikens, Lord and Bools (n 40) 27.

²¹⁶ Scrutton and Eder (n 47) 453.

²¹⁷ *The Rafaela S* (n 111).

²¹⁸ Mahin Faghfour, ‘Multimodal Transport’ in David Joseph Attard and others (eds), *The IMLI Manual on International Maritime Law* (Vol II, Shipping Law, Oxford University Press 2016) 349.

²¹⁹ *ibid.*

4.8 Spent bill of lading

Treitel et al. argue that '[A]bill of lading is referred to as "spent", "exhausted" or "accomplished" when the goods covered by it have been delivered to the person entitled to delivery under the bill'.²²⁰ There are two purposes, according to Treitel et al., for the 'spent bill of lading: the first is to decide whether such a bill is a document a document of title to the goods', and the second is 'to decide whether a person other than the original shipper can acquire rights against, or incur liabilities to, the carrier under the contract of carriage'.²²¹ Aikens et al. argue that '[t]he principle that only delivery to a person entitled to it is "discharges" the bill has subsequently been approved in several cases such,²²² such as *Barclays Bank Ltd. v Commissioners of Customs and Excise*,²²³ *East West Corp. v DKMS 1912*.²²⁴

4.9 Charterparty bill of lading

This type of bill of lading may 'incorporate the terms of a charterparty'.²²⁵ Özdel argues that '[c]harterers are frequently required by their charterparty to issue and present for signature a bill of lading that incorporates the charterparty'.²²⁶ Scrutton and Eder argue that the incorporation of 'some or all of the terms of the charterparty' in a bill of lading is 'a very common practice'.²²⁷ Charterparty bills of lading perform the first and third functions of paper bills of lading.²²⁸ Wilson argue that these bills of lading function 'as receipts for the goods' and 'as potential documents of title, but do not function 'as evidence of the contract of carriage'.²²⁹ Wilson explains that '[t]he relationship between shipowner and charterer is governed solely by the terms of the charterparty', as was the case in *Rodocanachi v Milburn*.²³⁰ Yet, the charterparty may contain 'provision that its terms can be modified or superseded by the subsequent issue of a bill,²³¹ as in the case of *Moscow V/O Export Khleb v Helmville (The Jocelyne)*.²³²

²²⁰ Treitel, Reynolds and Carver (n 19) 361.

²²¹ *ibid* 361-362.

²²² Aikens, Lord and Bools (n 40) 27.

²²³ [1963] 1 Lloyd's Rep. 81, 89. See Aikens, Lord and Bools (n 40) 39.

²²⁴ [2002] 2 Lloyd's Rep. 182, 190-191. *ibid*.

²²⁵ Gaskell, Asariotis and Baatz (n 49) 29.

²²⁶ Melis Özdel, *Bills of Lading Incorporating Charterparties* (1st edn, Hart Publishing Ltd 2015) 35.

²²⁷ Scrutton and Eder (n 47) 108.

²²⁸ Wilson (n 55) 243.

²²⁹ *ibid*.

²³⁰ [1886] 17 QBD 316.

²³¹ Wilson (n 55) 243.

²³² [1977] 2 Lloyd's Rep 121.

4.11 Short form bill of lading

Gaskell et al. may describe this type of bill as 'a single sided "short form bill of lading", used 'instead of the traditional "long form bill"'.²³³ Gaskell et al. add that '[t]he face of a short form bill looks like that of a normal ocean bill of lading, but there are no terms printed on the reverse'.²³⁴ Aikens et al., argue that this type or form of bill of lading 'does not set out the relevant terms expressly in the document but does so by reference to instead refers to specific conditions, usually the carrier's standard terms and conditions'.²³⁵ In other words, according to Gaskell et al., the face of a short form bill of lading contains a 'clause' that 'incorporates the carrier's standard conditions'.²³⁶

4.12 'Clean' and 'claused' bills of lading

According to Baughen, '[a] clean' bill of lading is one that contains an acknowledgment by the person on whose behalf the bills were signed that the goods described therein were loaded in "apparent good order and condition".²³⁷ In contrast, '[i]f the bill of lading contains adverse comments as regards the condition of the goods on loading, it is called a 'claused' bill of lading'.²³⁸

5 Functions of paper bills of lading

Paper bills of lading were functionally developed to meet merchants' commercial needs throughout the ages, as discussed previously.²³⁹ The bills developed to perform three main functions: (1) as a receipt for the goods, (2) as evidencing or containing the contract of carriage of goods, and (3) as a document of title.²⁴⁰ This section discusses these three functions under the Hague-Visby Rules, Hamburg Rules and English law.

²³³ Gaskell, Asariotis and Baatz (n 49) 19.

²³⁴ *ibid.*

²³⁵ Aikens, Lord and Bools (n 40) 37.

²³⁶ Gaskell, Asariotis and Baatz (n 49) 19.

²³⁷ Baughen (n 191) 6.

²³⁸ *ibid.*

²³⁹ See section 2 'Origin of paper bills of lading' in Chapter Two.

²⁴⁰ Scrutton and Eder (n 47) 9-12.

5.1 First function of paper bills of lading as a receipt for the goods

The receipt function, according to Treitel et al., is also called the ‘evidentiary function’ since ‘[a] bill of lading is evidence of the facts stated in it’.²⁴¹ This leads back a little to differentiate between two types of bills of lading before continuing to discuss this function. If the bill of lading is a ‘shipped’ or ‘on-board’ bill it ‘records (or ‘evidences’ - for the purpose of this discussion) goods that have been loaded on board the carrying vessel’.²⁴² If the bill of lading is a ‘received’ or ‘received for shipment’ bill, it ‘records goods received into the carrier’s care and custody before loading’.²⁴³ Thus, in general, through the receipt function, the bill of lading states, *inter alia*,²⁴⁴ ‘the condition and quantity of the goods when they are transferred into the custody of the carrier’.²⁴⁵ Therefore, the carrier can be sued if these condition and quantity are different at delivery as when the goods are lost or damaged.²⁴⁶

5.1.1 Hague-Visby Rules

The Hague-Visby Rules²⁴⁷ oblige the carrier, ‘Master or agent of the carrier’ to issue a bill of lading to the shipper on the latter’s demand.²⁴⁸ The Hague-Visby Rules require that the bill of lading must show information or a description of the goods, such as the ‘leading marks’, the ‘number of packages or pieces’, ‘quantity’, ‘weight’, and ‘apparent order and condition of the goods’.²⁴⁹ The Hague-Visby Rules provide that the bill of lading is a ‘*prima facie* evidence of the receipt by the carrier of the goods’.²⁵⁰ Wilson says that the ‘*prima facie* evidence’ is ‘conclusive evidence against him (the carrier) once the bill has been transferred to a third party acting in a good faith’.²⁵¹ ‘[T]he burden of displacing the *prima facie* evidence is as a heavy one’.²⁵² Scrutton and Eder describe may explain that ‘the rebuttal evidence must show not

²⁴¹ Treitel, Reynolds and Carver (n 19) 39.

²⁴² Scrutton and Eder (n 47) 9 and see also Gaskell, Asariotis and Baatz (n 49) 14.

²⁴³ Scrutton and Eder (n 47) 9.

²⁴⁴ See subsection 4.2 ‘“Received” or “received for shipment” bill of lading’ in Chapter Two.

²⁴⁵ Baughen (n 191) 6.

²⁴⁶ Andrew Tettenborn, ‘Bills of Lading, Multimodal Transport Documents, and Other Things’ in Baris Soyer and Andrew Tettenborn (eds), *Carriage of Goods by Sea, Land and Air: Unimodal and Multimodal Transport in the 21st Century* (Informa Law from Routledge 2013) 127.

²⁴⁷ The Hague Rules are discussed in subsection 6.1 ‘International Convention for the Unification of Certain Rules of Law Relating to Bills of Lading, 1924 (the Hague Rules)’ and Visby Rules or Amendments are discussed in subsection 6.2 ‘The Protocol to Amend the International Convention for the Unification of Certain Rules of Law Relating to Bills of Lading 1924 (the Visby Amendments)’ in Chapter Two.

²⁴⁸ art 3(3) of Hague-Visby Rules.

²⁴⁹ art 3(3) (a), (b) and (c).

²⁵⁰ art 3(4).

²⁵¹ Wilson (n 55) 119.

²⁵² Scrutton and Eder (n 47) 146.

merely must that the statement in the bill may not be accurate but that it is clearly wrong',²⁵³ as in the case of *Smith & Co v Bedouin Steam Navigation Co Ltd*.²⁵⁴

Wilson notes that '[i]n return, the shipper is "deemed to have guaranteed" to the carrier the accuracy of any information given by it in writing for incorporation in the bill'. Wilson may explain the reason for such obligation that it 'is required to indemnify the carrier against all losses, damages and expenses arising in the event of any inaccuracies'.²⁵⁵ However, the carrier is not obliged 'to issue a bill of lading containing such information unless specifically by the shipper',²⁵⁶ as in the case of *Agrosin Pty Ltd v Highway Shipping Co Ltd (The Mata K)*.²⁵⁷ Moreover, the carrier can refuse the bill of lading if it 'reasonably' believes that the information provided by the shipper is 'inaccurate, or if it 'has no reasonable means of checking it',²⁵⁸ as in the case of *Ace Imports Pty v Companhia de Navegacao Lloyd Brasileiro (The Esmeralda J)*.²⁵⁹

5.1.2 Hamburg Rules

The Hamburg Rules oblige the carrier to issue a bill of lading 'on the shipper's demand' when taking the goods in its charge.²⁶⁰ The Hamburg Rules provide that 'a person having authority from the carrier', such as the master, may sign the bill of lading.²⁶¹ As do the Hague-Visby Rules, the Hamburg Rules require specific information referred to as 'particulars' to be included in the bill of lading.²⁶² These particulars are 'much longer' than the information required under the Hague-Visby Rules.²⁶³ Yet, '[t]he absence in the bill of lading of one or more' of these particulars 'does not affect the legal character of the document'.²⁶⁴ Like the Hague-Visby Rules, the Hamburg Rules provide for the '*prima facie* evidence'.²⁶⁵ The Hamburg Rules state that 'the bill of lading is *prima facie* evidence of the taking over or, where a "shipped" bill of lading is issued, loading, by the carrier of the goods as described in the bill

²⁵³ *ibid.*

²⁵⁴ [1896] AC 70. See Scrutton and Eder (n 47) 146.

²⁵⁵ Wilson (n 55) 119.

²⁵⁶ *ibid.*

²⁵⁷ [1998] CLC 1300. See Wilson (n 55) 119.

²⁵⁸ Wilson (n 55) 119. See also Scrutton and Eder (n 47) 144.

²⁵⁹ [1988] 1 Lloyd's Rep 206. See Wilson (n 55) 119

²⁶⁰ art 14(1) of Hamburg Rules.

²⁶¹ art 14(1) and (2).

²⁶² art 15(1).

²⁶³ Goldby (n 48) 314.

²⁶⁴ art 15(3) of Hamburg Rules.

²⁶⁵ art 16(3)(a).

of lading'.²⁶⁶ In this concoction, the Hamburg Rules provide that the 'proof to the contrary by the carrier is not admissible' if the bill is transferred to a bona fide third party.²⁶⁷

5.1.3 English law

In addition to the cases discussed earlier, section 4 of UK COGSA 1992 provides for the receipt function of the paper bill of lading:

A bill of lading which—

(a) represents goods to have been shipped on board a vessel or to have been received for shipment on board a vessel; and

(b) has been signed by the master of the vessel or by a person who was not the master but had the express, implied or apparent authority of the carrier to sign bills of lading, shall, in favour of a person who has become the lawful holder of the bill, be conclusive evidence against the carrier of the shipment of the goods or, as the case may be, of their receipt for shipment.

Treitel et al. argue that this section may try 'to reverse the result in *Grant v Norway*,²⁶⁸ i.e. to make the carrier liable to an endorsee to whom the bill has been transferred, and (presumably) to a consignee named in the bill to whom the bill has been transferred.'²⁶⁹ *Grant v Norway*,²⁷⁰ according to Low, 'established the principle that a third party endorsee had no remedy against a carrier who could prove that no cargo had in fact been shipped, since the master of a ship had no authority to make such statements unless the cargo had been actually loaded on board the ship'.²⁷¹ This principle was abolished by the Hague-Visby Rules, which provide that 'a bill of lading is *prima facie* evidence of the receipt by the carrier of the goods described, and proof to the contrary is not admissible when the bill of lading has been transferred to a third party acting in good faith',²⁷² as discussed earlier in the position the Hague-Visby Rules in relation to the receipt function.

The COGSA 1992 does not provide for the particulars to be included in the bill of lading. This may mean to go back to the Hague-Visby Rules in this regard because these Rules were given

²⁶⁶ art 16(3)(b).

²⁶⁷ art 16(3).

²⁶⁸ [1851] 10 CB 665.

²⁶⁹ Treitel, Reynolds and Carver (n 19) 58.

²⁷⁰ *Grant* (n 268).

²⁷¹ Rouhshi Low, 'Replacing the Paper Bill of Lading with an Electronic Bill of Lading: Problems and Possible Solutions' (2000) 5 International Trade and Business Law Annual 159.

²⁷² *ibid.*

the force of law by section 1(2) of COGSA 1971. Section 5(5) of COGSA 1992 provides for the continuation in the application of the Hague-Visby Rules.²⁷³

5.2 Second function of paper bills of lading as evidencing or containing the contract of carriage

The terms included in a bill of lading ‘do not constitute the contract of carriage itself, but merely provide evidence of it’.²⁷⁴ Wilson submits that ‘[t]he contract of carriage is normally concluded orally long before the bill is issued, and the terms are inferred from the carrier's sailing announcements and from any negotiation with loading brokers before the goods are shipped’.²⁷⁵ Similarly, Scrutton and Eder adopt this view and elaborate that the shipper

[C]an claim that the true terms of the contract are not those contained in a bill of lading, but can be gathered from the mate's receipt, websites, booking notes, emails, exchange of telexes, advice-notes, freight-notes, undertakings or warranties by the broker or other agents of the carrier, just as formally they were gathered from shipping-cards, placards and handbills announcing the sailing of the ship.²⁷⁶

Moreover, ‘a bill of lading is signed only by one party’.²⁷⁷ Gaskell et al. believe that ‘[t]he bill of lading is normally described as containing evidence of the terms of the contract of carriage, rather than being the whole contract’.²⁷⁸

5.2.1 Hague-Visby Rules

The Hague-Visby Rules do not define the contract of carriage, but, according to Berlingieri, ‘merely connect the notion of the contract of carriage to the document issued thereunder, the bill of lading’.²⁷⁹ Therefore, Berlingieri adds that ‘[f]or that reason it has been said that the Hague-Visby Rules adopt a documentary approach’.²⁸⁰ Goldby also submits that article 1(b) of

²⁷³ s 5(5) of COGSA 1992 states that ‘[T]he preceding provisions of this Act shall have effect without prejudice to the application, in relation to any case, of the rules (the Hague-Visby Rules) which for the time being have the force of law by virtue of section 1 of the Carriage of Goods by Sea Act 1971’.

²⁷⁴ Wilson (n 55) 129.

²⁷⁵ *ibid.*

²⁷⁶ Scrutton and Eder (n 47) 99.

²⁷⁷ Tetley (n 96) 70.

²⁷⁸ Gaskell, Asariotis and Baatz (n 49) 2.

²⁷⁹ Francesco Berlingieri, ‘A Comparative Analysis of the Hague-Visby Rules, the Hamburg Rules and the Rotterdam Rules’ (General Assembly of the International Association of Average Adjusters-AMD, Marrakesh, 5-6 November 2009)

https://www.uncitral.org/pdf/english/workinggroups/wg_3/Berlingieri_paper_comparing_RR_Hamb_HVR.pdf.

²⁸⁰ *ibid.*

Hague-Visby Rules provides ‘only a partial definition of the term "contract of carriage" linking it with the bill of lading’.²⁸¹

Contract of carriage’ applies only to contracts of carriage covered by a bill of lading or any similar document of title, in so far as such document relates to the carriage of goods by sea, including any bill of lading or any similar document as aforesaid issued under or pursuant to a charter party from the moment at which such bill of lading or similar document of title regulates the relations between a carrier and a holder of the same.²⁸²

This view also notes that the ‘moment’ at which the bill of lading regulates the relations between a carrier and a holder, mentioned in the definition, is not defined by the Hague-Visby Rules and is left to the applicable law of the contract.²⁸³ In light of these different views, it may be safe to say that the Hague-Visby Rules are not clear in their provision for the evidence function of the bill of lading in comparison with the provision under the Hamburg Rules, as will be seen in the next section.

5.2.2 Hamburg Rules

Article 1(7) of Hamburg Rules expressly defines the bill of lading as evidencing the contract of carriage:

‘Bill of lading’ means a document which evidences a contract of carriage by sea and the taking over or loading of the goods by the carrier, and by which the carrier undertakes to deliver the goods against surrender of the document. A provision in the document that the goods are to be delivered to the order of a named person, or to order, or to bearer, constitutes such an undertaking.

Moreover, art 1(6) of Hamburg Rules defines the ‘contract of carriage by sea’ as follows:

‘Contract of carriage by sea’ means any contract whereby the carrier undertakes against payment of freight to carry goods by sea from one port to another; however, a contract which involves carriage by sea and also carriage by some other means is deemed to be a contract of carriage by sea for the purposes of this Convention only in so far as it relates to the carriage by sea.

²⁸¹ Goldby (n 48) 316.

²⁸² art 1(b) of Hague-Visby Rules.

²⁸³ Goldby (n 48) 316.

Therefore, it appears that the Hamburg Rules clearly recognize the function of the paper bill lading as evidencing the contract of carriage of goods by sea in comparison with the Hague-Visby Rules.

5.2.3 English law

The case law recognizes the second function of a bill of lading as an evidence of the contract of carriage as in *Sewell v Burdick (The Zoe)*.²⁸⁴ In this case, Lord Blackburn said:

There is, I think, another inaccuracy in the statute, which indeed is universal. It speaks of the contract contained in the bill of lading. To my mind there is no contract in it. It is a receipt for the goods, stating the terms on which they were delivered to and received by the ship, and therefore excellent evidence of those terms, but it is not a contract. That has been made before the bill of lading was given. Take for instance goods shipped under a charterparty, and a bill of lading differing from the charterparty; as between shipowner and shipper at least the charterparty is binding: *Gledstanes v. Allen*.²⁸⁵

In *Crooks v Allan*,²⁸⁶ it was held that ‘a bill of lading is not the contract but only evidence of the contract’.²⁸⁷ Therefore, according to McGowan, ‘[t]he shipper does not have to rely on the issue of a bill of lading as a contractual document before he can sue for breach of contract’.²⁸⁸ In *Pyrene Co Ltd v Scindia Navigation Co Ltd*,²⁸⁹ ‘the shipper was entitled to damages where a fire tender was dropped and damaged whilst being loaded on board the ship before the bill of lading had been issued’.²⁹⁰ According to Low, the ‘evidence is admissible to show the existence of an oral agreement differing from the terms of the bill of lading’,²⁹¹ as in *Owners of Cargo Lately Laden on Board the Ardennes v Owners of the Ardennes (The Ardennes)*.²⁹² In this case, ‘[i]t was held that the contract came into existence before the bill of lading was signed, therefore the oral contract prevailed and the plaintiff was entitled to damage’.²⁹³

²⁸⁴ [1884]10 App Cas 74, 105. See Low (n 271).

²⁸⁵ *The Zoe* (n 284) 105.

²⁸⁶ [1879] 5 QBD 38. See Kelly T. McGowan, ‘The Dematerialisation of the Bill of Lading’ (2007) 7 *Hibernian Law Journal* 68-104.

²⁸⁷ McGowan (n 286).

²⁸⁸ *ibid.*

²⁸⁹ [1954] 2 QB 402. See McGowan (n 286).

²⁹⁰ McGowan (n 286).

²⁹¹ Low (n 271).

²⁹² [1951]1 KB 55. Low (n 271) and McGowan (n 286).

²⁹³ McGowan (n 286).

As regards the words ‘evidences’ and ‘contains’ in relation to the contract of carriage, according to Scrutton and Eder, ‘once the bill been transferred however, the bill provides conclusive evidence as between the carrier and the new holder as to the terms of the contract of affreightment’.²⁹⁴ Therefore, Scrutton and Eder add that ‘the bill may be said to "contain" the contract’.²⁹⁵ In other words, according to Goldby, once the bill has been transferred to a subsequent holder, as between the carrier and the new holder, the terms contained in the bill constitute the contract of carriage for all intents and purposes’,²⁹⁶ as in *Leduc & Co v Ward*.²⁹⁷ This concept is ‘confirmed’ by the UK ‘statutory law’, under both the Bills of Lading Act 1855 and the COGSA 1992.²⁹⁸

5.3 Third function of paper bill of lading as a document of title

According to Treitel et al., ‘there is no authoritative definition of a "document of title to goods" at common law’; yet, Treitel et al. add ‘but it is submitted that in its original or traditional sense, the expression refers to a document relating to goods the transfer of which operates as a transfer of the constructive possession of the goods, and may if so intended operate as a transfer of the property in them’.²⁹⁹ In other words, according to Law, the ‘[p]ossession of a bill of lading is equivalent to the possession of the goods’, as in *Cole v North Western Ban*.³⁰⁰ Low adds that this ‘possession entitles’ the ‘holder’ of the bill ‘to claim possession of the goods’.³⁰¹ Pejovic argues that ‘[t]he phrase "document of title" is a common term used to denote documents issued by a carrier or by a warehouseman acting as a bailee’.³⁰² The ‘bailee’ must issue a document which serves as a receipt for the goods and enables the person who produces the document to receive the goods’.³⁰³ Girvin argues that ‘the essentials are that bills of lading in the correct form can, by endorsement or delivery, transfer constructive possession in the goods to the holder’.³⁰⁴

²⁹⁴ Scrutton and Eder (n 47) 10.

²⁹⁵ *ibid.*

²⁹⁶ Goldby (n 48) 318.

²⁹⁷ [1888] 20 QBD 475. See Goldby (n 48) 318.

²⁹⁸ Goldby (n 48) 318.

²⁹⁹ Treitel, Reynolds and Carver (n 19) 323.

³⁰⁰ [1875] LR 10 CP 354, 361–63. See Low (n 271).

³⁰¹ Low (n 271).

³⁰² Caslav Pejovic, ‘Documents of Title in Carriage of Goods by Sea: Present Status and Possible Future Directions’ (2001) *Journal of Business Law* 461–88.

³⁰³ *ibid.*

³⁰⁴ Stephen Girvin, ‘Bills of Lading and Straight Bills of Lading: Principles and Practice’ (2006) *Journal of Business Law* 86–116.

‘Negotiable bills of lading originated in sea transport because the voyages were normally lengthy, and invariably slow’.³⁰⁵ Therefore, as Wilson explains, ‘[t]he ‘owners of cargo required a document of title to raise credit for an international sale or to take advantage of an opportunity to sell the goods in transit’.³⁰⁶ In other words, Clarke argues that ‘[t]he essence of a traditional bill of lading is that the traders will "buy" it because they are satisfied that it gives them the rights they need, notably rights against the carrier, and that it is a document that will be accepted by others, if the goods are to be sold on’.³⁰⁷ Moreover, McGowan argues that ‘[a] bank may hold a bill of lading as security for a loan’.³⁰⁸ Furthermore, through such a document of title, ‘a seller could protect himself against the buyer’s insolvency and require payment for the goods before their delivery to the buyer’.³⁰⁹ The negotiability of a bill of lading may depend on the type of bill.³¹⁰ Wilson argues that ‘[a] bill will only operate as a document of title, however, if it is drafted as an "order", i.e. a bill under which the carrier agrees to deliver the goods at their destination to a named consignee or to his "order or assigns”,³¹¹ as discussed previously.³¹²

5.3.1 Hague-Visby Rules

The Hague-Visby Rules use the term ‘holder’, but ‘without defining it’.³¹³

‘Contract of carriage’ applies only to contracts of carriage covered by a bill of lading or any similar document of title, in so far as such document relates to the carriage of goods by sea, including any bill of lading or any similar document as aforesaid issued under or pursuant to a charter party from the moment at which such bill of lading or similar document of title regulates the relations between a carrier and a holder of the same.³¹⁴

Neither do the Hague-Visby Rules define the bill of lading.³¹⁵ It seems that the reference to the term ‘holder’ in the Hague-Visby Rules involves the function of the document of title, but without providing more details about the negotiability of bills of lading and its procedures in

³⁰⁵ Wilson (n 55) 132.

³⁰⁶ *ibid.*

³⁰⁷ Malcolm Clarke, ‘Transport document: their transferability as document of title: electronic documents’ (2000) 3 *Lloyd’s Maritime and Commercial Law Quarterly* 356-369.

³⁰⁸ McGowan (n 286).

³⁰⁹ *ibid.*

³¹⁰ Wilson (n 55) 132.

³¹¹ *ibid.*

³¹² See section 4 ‘Types of paper bills of lading in Chapter Two’.

³¹³ Goldby (n 48) 321.

³¹⁴ art 1(b) of Hague-Visby Rules. See Goldby (n 48) 321.

³¹⁵ *ibid.* See also Gaskell, Asariotis and Baatz (n 49) 3.

comparison with, for instance, the provisions for negotiability of transport documents or electronic transport records under the Rotterdam Rules.³¹⁶

5.3.2 Hamburg Rules

The Hamburg Rules follow the same position of the Hague-Visby Rules in that they use the term ‘holder’, in articles 2(3) and 22(2), but ‘without defining it’.³¹⁷ Article 2(3) of Hague-Visby Rules states:

The provisions of this Convention are not applicable to charter-parties. However, where a bill of lading is issued pursuant to a charter-party, the provisions of the Convention apply to such a bill of lading if it governs the relation between the carrier and the holder of the bill of lading, not being the charterer.

Article 22(2) states:

Where a charter-party contains a provision that disputes arising thereunder shall be referred to arbitration and a bill of lading issued pursuant to the charter-party does not contain a special annotation providing that such provision shall be binding upon the holder of the bill of lading, the carrier may not invoke such provision as against a holder having acquired the bill of lading in good faith.

The difference between the Hamburg Rules and the Hague-Visby Rules is that the former provide that the bill of lading can be a document of title through the use of words ‘to order, or to bearer’ in the definition of the bill of lading:

‘Bill of lading’ means a document which evidences a contract of carriage by sea and the taking over or loading of the goods by the carrier, and by which the carrier undertakes to deliver the goods against surrender of the document. A provision in the document that the goods are to be delivered to the order of a named person, or to order, or to bearer, constitutes such an undertaking.³¹⁸

³¹⁶ See subsection 2.1 ‘Rotterdam Rules’ in Chapter Six.

³¹⁷ Goldby (n 48) 321.

³¹⁸ art 1(7) of Hamburg Rules.

5.3.3 English law

In *Lickbarrow*,³¹⁹ the Court of King's Bench recognized 'the custom and practice of merchants that a shipped, negotiable bill of lading was a "document of title", so that a transfer of the bill effected a transfer of "property" in the goods covered by the bill of lading'.³²⁰ More cases were decided after *Lickbarrow*,³²¹ that recognized the functions of paper bills of lading, including the document of title function, as in *Barber*.³²² However, as mentioned earlier, according to Wilson, 'the bill of lading merely represents the goods and possession of the bill of lading is treated as an equivalent to possession of the goods covered by it, no more, no less',³²³ as in *Sanders*.³²⁴

Wilson's argument may reflect the need to differentiate between 'the terms 'transferable' and 'negotiable''.³²⁵ Pejovic explains the 'confusion' that may arise in the use of these two terms. Pejovic says that 'a document is transferable when it can be transferred by one person to another, passing to the transferee the rights of the original holder but no more'.³²⁶ As regards the term 'negotiable', Pejovic says that 'a negotiable document can give to the transferee rights that are better or greater than the right of the transferor, provided that consideration is given for the transfer'.³²⁷ Goldby argues 'that the transferee of a bill of lading, as a general rule, does not take it free from defects in the transferor's title'.³²⁸ Pejovic may cite an example in this regards that '[i]f a bill of lading is stolen or endorsed without the shipper's authority, a subsequent bona fide transferee cannot acquire the rights to the goods represented by the bill', in comparison with other documents, specifically 'a bill of exchange or promissory note'.³²⁹ Therefore, the bill of lading might be referred to as 'quasi-negotiable'.³³⁰

As regards the UK statutory law, Baughen differentiates between the position under the old regime of the Bills of Lading Act 1855 and the new regime of COGSA 1992.³³¹ Under the old

³¹⁹ *Lickbarrow* (n 62) 683. See Treitel, Reynolds and Carver (n 19) 323.

³²⁰ Scrutton and Eder (n 47) 9.

³²¹ *Lickbarrow* (n 62).

³²² *Barber* (n 70). See section 2 'Origin of paper bills of lading' in Chapter Two.

³²³ Wilson (n 55) 132.

³²⁴ *Sanders* (n 148) 327. See Wilson (n 55) 132.

³²⁵ Pejovic (n 301).

³²⁶ *ibid.*

³²⁷ *ibid.*

³²⁸ Goldby (n 48) 319.

³²⁹ Pejovic (n 302).

³³⁰ Clarke (n 307).

³³¹ Baughen (n 191) 37-38.

regime, there seems a lacuna in the right of the transferee to sue the carrier in case of transfer, as the bill of lading requires a ‘property link’.³³² This ‘property link’ refers to ‘the connection between the passing of property and the transfer of contractual rights’.³³³ The new regime of COGSA 1992 ‘abolishes the property link’ requirement.³³⁴ Under s 2(1)(a) of COGSA 1992, ‘the transfer of a bill of lading can vest in the transferee "all rights of suit under the contract of carriage"’.³³⁵ Hence, ‘[g]enerally the lawful holder of a bill of lading can sue the carrier ‘under the COGSA 1992.’³³⁶ s 5 of COGSA 1992 lays down the requirements ‘to make a person "holder" of a bill of lading.’³³⁷ Goldby may summarize these requirements that a person ‘must have possession of the bill of lading’, and ‘must be either the consignee(s. 5(a)), an endorsee to whom the bill has been delivered, or a person to whom a bearer bill has been delivered (s. 5(2)(b))’.³³⁸

6 International framework of paper bills of lading

This section discusses the international framework that regulates the contract of carriage of goods by sea covered by bill of lading. The international framework involves three international conventions in existence. The first is the International Convention for the Unification of Certain Rules of Law Relating to Bills of Lading, 1924 (the Hague Rules). The second is the Protocol to Amend the International Convention for the Unification of Certain Rules of Law Relating to Bills of Lading, 1924 (the Visby Amendments). The third the United Nations Convention on the Carriage of Goods by Sea, 1978 (the Hamburg Rules). Thereafter, the section will explore the position under English law.

6.1 International Convention for the Unification of Certain Rules of Law Relating to Bills of Lading, 1924 (the Hague Rules)

The Hague Rules were drafted by the Comité Maritime International (CMI) and adopted on 25 August 1924 in Brussels.³³⁹ These Rules came into force on 2 June 1931.³⁴⁰ Baughen argues

³³² *ibid* 38.

³³³ Gaskell, Asariotis and Baatz (n 49) 122.

³³⁴ *ibid*.

³³⁵ Treitel, Reynolds and Carver (n 19) 23.

³³⁶ Sean Thomas, ‘Transfers of Documents of Title Under English Law and the Uniform Commercial Code’ (2012) 4 *Lloyd’s Maritime and Commercial Law Quarterly* 573-605.

³³⁷ Goldby (n 48) 321.

³³⁸ *ibid*.

³³⁹ CMI (n 23) 1–2.

³⁴⁰ *ibid*.

that '[t]he Hague Rules attempted to impose uniformity into contractual terms relating to the carriage of goods under bills of lading'.³⁴¹ In other words, '[t]he Hague-Visby Rules set out the rights and liabilities of both cargo-owners and ship-owners'.³⁴² These Rules were intended 'to protect cargo-owners from widespread exclusion clauses frequently incorporated into the contract of carriage by the shipowner as the stronger bargaining party'.³⁴³ The Hague Rules were adopted by 'all of the world's major maritime nations'.³⁴⁴

6.1.1 Definitions

The Hague Rules define some terms in article 1, for example 'carrier',³⁴⁵ 'contract of carriage',³⁴⁶ 'goods',³⁴⁷ 'ship',³⁴⁸ and 'carriage of goods'.³⁴⁹ However, the Hague Rules do not define the term bills of lading.³⁵⁰ Moreover, the definition of 'contract of carriage' in article 1(b) is thought not to be a definition, as discussed earlier.³⁵¹ Furthermore, it is pointed out that the Hague Rules do not clarify the meaning of the term 'covered' provided in this definition in article 1(b) which states that "[c]ontract of carriage" applies only to contracts of carriage "covered" by a bill of lading or any similar document of title ...'.³⁵² Carr argues that 'there is ambiguity whether the H/V Rules can be applied when there is a time lapse between the contract of carriage and the issue of a bill of lading'.³⁵³ It is also argued that the Hague Rules 'do not define such meaning' provided in article 1(b) that states '... including any bill of lading or any similar document as aforesaid issued under or pursuant to a charter party from the "moment" at which such bill of lading or similar document of title regulates the relations between a carrier and a holder of the same'.³⁵⁴ Goldby also argues that the word 'moment' 'is left to the applicable of the contract'.³⁵⁵

³⁴¹ Baughen (n 191) 95.

³⁴² McGowan (n 286).

³⁴³ *ibid.*

³⁴⁴ Sturley, Fujita and Ziel (n 80) 10.

³⁴⁵ art 1 (a) of Hague Rules.

³⁴⁶ art 1 (b).

³⁴⁷ art 1 (c).

³⁴⁸ art 1 (d).

³⁴⁹ art 1 (c).

³⁵⁰ Gaskell, Asariotis and Baatz (n 49) 3.

³⁵¹ See subsection 5.2.1 'Hague-Visby Rules' in Chapter Two.

³⁵² Indira Mahalingam Carr, 'The Scope of Application of Hamburg Rules and Hague-Visby Rules: a comparison' (1992) 3(6) *International Company and Commercial Law Review* 214-17.

³⁵³ *ibid.*

³⁵⁴ Goldby (n 48) 316.

³⁵⁵ *ibid.*

6.1.2 Scope of application

The Hague Rules ‘apply to all bills of lading issued in Contracting States’.³⁵⁶ Article 1(e) states that the “carriage of goods” covers the period from the time when the goods are loaded on to the time they are discharged from the ship’. Baughen explains that “[t]his definition entails that the Rules have mandatory effect on “tackle to tackle” basis from the start of lading to the conclusion of discharge’.³⁵⁷ Article 1(a) states that the term “[c]arrier” includes the owner or the charterer who enters into a contract of carriage with a shipper’. Berlingieri describes this definition as ‘wide’ and ‘loose’, and says that ‘the definition of carrier is wide, since reference is made to owner and charterer, who may be a charterer by demise, or a time or, albeit unlikely, a voyage charterer. In addition, it is loose, for it is stated that the term carrier “includes” the above persons’.³⁵⁸ Article 1(c) states that the term “[g]oods includes wares, merchandise, and articles of every kind whatsoever except live animals and cargo which by the contract of carriage is stated as being carried on deck and is so carried’. This definition, according to Berlingieri, ‘is very wide but contains two exceptions’: ‘live animals’ and the deck cargo.³⁵⁹ Article 1(d) provides that the term “[s]hip includes any vessel for the carriage of goods by sea’.

6.1.3 Obligations of the carrier

Article 3(1) of Hague Rules obliges the carrier ‘to exercise due diligence to: (a) Make the ship seaworthy; (b) Properly man, equip and supply the ship; (c) Make the holds, refrigerating and cool chambers, and all other parts of the ship in which goods are carried, fit and safe for their reception, carriage and preservation’.³⁶⁰ Sturley et al. argue that ‘the central compromise of the Harter Act’ as set forth in the Hague Rules consist of ‘two key elements’.³⁶¹ The first key element is that ‘the carrier need not assume strict liability for the unseaworthiness of the vessel but it must exercise due diligence to provide a seaworthy vessel’.³⁶² The second key element is that ‘the carrier could escape liability for the negligence of its employees in the navigation or management of the vessel, but must accept responsibility for the negligence of its employees

³⁵⁶ art 10 Hague Rules. See the discussion in Francesco Berlingieri, *International Maritime Conventions: Volume 1, The Carriage of Goods and Passengers by Sea* (Informa Law from Routledge 2014) Chapter 1.

³⁵⁷ Baughen (n 191) 100.

³⁵⁸ Berlingieri (n 356) Chapter 1.

³⁵⁹ *ibid.*

³⁶⁰ art 3(1) of Hague Rules.

³⁶¹ Sturley, Fujita and Ziel (n 80) 78.

³⁶² *ibid.*

in the care and custody of the cargo'.³⁶³ Berlingieri also argues that the carrier's obligations 'relating to the ship' under the Hague Rules 'are not absolute, they are to exercise due diligence', which 'originates from the Harter Act'.³⁶⁴ In other words, Baughen says that 'Article IV(1) grants the carrier a "due diligence" defence in respect of "loss or damage" caused by unseaworthiness'.³⁶⁵

Neither the carrier nor the ship shall be liable for loss or damage arising or resulting from unseaworthiness unless caused by want of due diligence on the part of the carrier to make the ship seaworthy, and to secure that the ship is properly manned, equipped and supplied, and to make the holds, refrigerating and cool chambers and all other parts of the ship in which goods are carried fit and safe for their reception, carriage and preservation in accordance with the provisions of paragraph 1 of Article 3. Whenever loss or damage has resulted from unseaworthiness the burden of proving the exercise of due diligence shall be on the carrier or other person claiming exemption under this article.³⁶⁶

Article 3(2) obliges the carrier to 'properly and carefully load, handle, stow, carry, keep, care for, and discharge the goods carried'. Article 3(3) obliges the carrier, shipmaster or agent of the carrier, after receiving the goods, to issue a bill of lading to the shipper on the latter's demand, as discussed earlier.³⁶⁷ Baughen argues that the Hague Rules 'grant the carrier immunity in respect of "loss or damage"' in 'a list of causes', in article 4(2).³⁶⁸ Yet, Baughen adds that 'these additional defences will be unavailable to a carrier where the loss or damage is caused by the carrier's failure to take due diligence to provide a seaworthy ship'.³⁶⁹

As far as the limitation of liability is concerned, article 4(5) provides for this limitation stating that '[n]either the carrier nor the ship in any event be or become liable for any loss or damage to or in connection with goods in an amount exceeding 100 pounds sterling per package or unit ...'. This limitation intends 'to achieve what is known as a "compromise" between cargo owners and carriers'.³⁷⁰ However, '[t]his limitation may be avoided', since article 4(5) states

³⁶³ *ibid.*

³⁶⁴ Berlingieri (n 356) Chapter 1.

³⁶⁵ Baughen (n 191) 112.

³⁶⁶ art 4(1) of Hague Rules.

³⁶⁷ See section 5.1.1 'Paper bill of lading as receipt for the goods under the Hague-Visby Rules' in Chapter Two.

³⁶⁸ *ibid* 112

³⁶⁹ *ibid.*

³⁷⁰ Sukhninder Panesar, 'Carriage of Goods by Sea: Limitation of Liability Under the Hague Rules' (1998) 6(2) *International Insurance Law Review* 50-53.

‘... unless the nature and value of such goods have been declared by the shipper before shipment and inserted in the face of the bill’.³⁷¹

6.1.4 Obligations of the shipper

Sturley et al. point out three elements concerning the shipper’s responsibility in relation to the goods, as provided in the Hague Rules.³⁷² The first element is ‘the shipper's guarantee of the accuracy of the information it furnishes concerning the goods’.³⁷³ The second element is ‘the shipper's exoneration for loss or damage sustained by the carrier resulting from any cause that was without the shipper's fault’.³⁷⁴ The third element is ‘the shipper's liability for dangerous goods’.³⁷⁵

6.2 The Protocol to Amend the International Convention for the Unification of Certain Rules of Law Relating to Bills of Lading 1924 (the Visby Amendments)

This Protocol was drafted by the CMI and adopted on 23 February 1968 in Brussels.³⁷⁶ It came into force on 23 June 1977.³⁷⁷ Since the Visby Protocol amends some provisions of the Hague Rules, both international instruments are integrated and have to ‘be read and interpreted together as one single instrument’, according to article 6 of the Protocol. Article 6 of the Protocol may explain why these two regimes are usually referred to as the ‘Hague-Visby Rules’:

As between the Parties to this Protocol the Convention and the Protocol shall be read and interpreted together as one single instrument.

A Party to this Protocol shall have no duty to apply the provisions of this Protocol to Bills of Lading issued in a State which is a Party to the Convention but which is not a Party to this Protocol.

Baughen argues that ‘[t]he most important change perhaps was the package limitation (Art. IV(5))’.³⁷⁸ Article 2 of Visby Amendments deleted article 4(5) of Hague Rules. It replaced the amount of ‘100 pounds sterling per package or unit’ for limitation of liability to ‘10,000 francs per package or unit or 30 francs per kilo or gross weight of the goods lost or damaged,

³⁷¹ Baughen (n 191) 121-122.

³⁷² Sturley, Fujita and Ziel (n 80) 177

³⁷³ *ibid.*

³⁷⁴ *ibid.*

³⁷⁵ *ibid.*

³⁷⁶ CMI (n 23) 1–9.

³⁷⁷ *ibid.*

³⁷⁸ Todd (n 158) 312.

whichever is higher'. However, according to Aikens et al., the problems resulting from the use of the 'gold-based unit (the Poincaré franc)' under the Hague-Visby Rules 'led to the adoption of the Special Drawing Right (SDR) as a unit of account based on the value of several currencies'.³⁷⁹ This SDR was adopted in the 'Protocol Amending the International Convention for the Unification of Certain Rules of Law Relating to Bills of Lading (SDR Protocol) in 1979'.³⁸⁰

Article 1(1) of Visby Amendments amended article 3(4) of the Hague Rules in respect of 'the value of statements in bills of lading when the bill has been negotiated',³⁸¹ to be read as follows:

In Article 3, paragraph 4, shall be added:

"However, proof to the contrary shall not be admissible when the Bill of Lading has been transferred to a third party acting in good faith".

Article 3 of Hague Rules was changed in respect of 'protecting carriers, savants and agents when the action is brought in tort, rather than contact',³⁸² as follows:

In Article 3, after paragraph 6, shall be added the following paragraph *6bis*:

"An action for indemnity against a third person may be brought even after the expiration of the year provided for in the preceding paragraph if brought within the time allowed by the law of the Court seized of the case. However, the time allowed shall be not less than three months, commencing from the day when the person bringing such action for indemnity has settled the claim or has been served with process in the action against himself".

6.3 The United Nations Convention on the Carriage of Goods by Sea, 1978 (the Hamburg Rules)

The Hamburg Rules were drafted by the United Nations Commission on International Trade Law (UNCITRAL) and adopted on 31 March 1978 in Hamburg.³⁸³ These Rules came into force

³⁷⁹ Aikens, Lord and Bools (n 40) 15.

³⁸⁰ The SDR Protocol was adopted on 21 December 1979 in Brussels, drafted by the Comité Maritime International (CMI) and entered into force on 14 February 1984. CMI (n 23) 1-14.

³⁸¹ Todd (n 158) 312.

³⁸² *ibid.*

³⁸³ CMI (n 23) 1-24.

on 1 November 1992.³⁸⁴ Todd argues that Hamburg Rules ‘offers a regime that generally favours cargo-owners to a greater extent than Hague-Visby’.³⁸⁵

6.3.1 Definitions

The Hamburg Rules define some terms in article 1, bringing in new definitions as compared with the Hague-Visby Rules. The Hamburg Rules define the terms of ‘carrier’,³⁸⁶ ‘actual carrier’,³⁸⁷ ‘shipper’,³⁸⁸ ‘consignee’,³⁸⁹ ‘goods’,³⁹⁰ ‘contract of carriage’,³⁹¹ ‘bill of lading’³⁹² and ‘writing’.³⁹³ ‘Contractual carrier’ is a new term under the Hamburg Rules and is defined in article 1(2):

‘Actual carrier’ means any person to whom the performance of the carriage of the goods, or of part of the carriage, has been entrusted by the carrier, and includes any other person to whom such performance has been entrusted.

Both the ‘contractual carrier’ and the ‘actual carrier’ are subject to the Hamburg Rules, as provided in article 10.³⁹⁴ The contractual carrier remains responsible for the part of the contract performed by another carrier (the actual carrier), but it can exclude its liability for loss or damage to the goods while in the custody of the actual carrier.³⁹⁵ The actual carrier is responsible only for the part of the contract that it personally performs.³⁹⁶

Unlike the Hague-Visby Rules, the Hamburg Rules define the bill of lading, as discussed earlier.³⁹⁷ It may be possible to say that that definition of the bill of lading provided in the Hamburg Rules seems to be the first provision to set out the three functions of paper bills of lading in an international convention. The other new definition in the Hamburg Rules is the definition of the term ‘shipper’ provided in article 1(3):

³⁸⁴ *ibid.*

³⁸⁵ Todd (n 158) 364.

³⁸⁶ art 1(1) of Hamburg Rules.

³⁸⁷ art 1(2).

³⁸⁸ art 1(3).

³⁸⁹ art 1(4).

³⁹⁰ art 1(5).

³⁹¹ art 1(6).

³⁹² art 1(7).

³⁹³ art 1(8).

³⁹⁴ Baughen (n 97) 132.

³⁹⁵ *ibid.*

³⁹⁶ *ibid.*

³⁹⁷ art 1(7) Hamburg Rules. See subsection 3.2 ‘Definition in international conventions’ in Chapter Two.

‘Shipper’ means any person by whom or in whose name or on whose behalf a contract of carriage of goods by sea has been concluded with a carrier, or any person by whom or in whose name or on whose behalf the goods are actually delivered to the carrier in relation to the contract of carriage by sea.

Unlike the Hague-Visby Rules, the Hamburg Rules define the ‘consignee’ in article 1(4):

‘Consignee’ means the person entitled to take delivery of the goods.

The last new definition in the Hamburg Rules is ‘writing’ which is defined as follows:

‘Writing’ includes, *inter alia*, telegram and telex.

6.3.2 Scope of application

The Hamburg Rules attach apply “to all contracts of carriage by sea”, except charterparties’.³⁹⁸ Carr argues that there are ‘basic requirements for triggering’ the Hamburg Rules.³⁹⁹ The first is that ‘the contract for carriage must be for carriage by sea.’⁴⁰⁰ The second is that ‘an element of internationality must be present in that the contract for carriage must be between two different states’.⁴⁰¹ These different States are not required to be ‘all Contracting States’, but the Hamburg Rules apply ‘to the contract if one of the operations involved in the handling of goods takes place in a Contracting State’.⁴⁰²

The Hamburg Rules extend the responsibility period provided under the Hague-Visby Rules to includes ‘any period of storage at the port of loading in the carrier’s custody prior to actual loading and any equivalent period at the port of discharge prior to taking of delivery’.⁴⁰³ Therefore, this responsibility ‘covers the full period of the carrier’s responsibility under “port to port” carriage’, compared to the ‘tackle to tackle’ responsibility under the Hague-Visby.⁴⁰⁴

As regards the goods, article 1(5) of Hamburg Rules provides that the “Goods” includes live animals; where the goods are consolidated in a container, pallet or similar article of transport

³⁹⁸ Baughen (n 191) 131.

³⁹⁹ Carr (n 352).

⁴⁰⁰ *ibid.*

⁴⁰¹ *ibid.*

⁴⁰² *ibid.*

⁴⁰³ Baughen (n 191)133.

⁴⁰⁴ *ibid* 137-138.

or where they are packed, ‘goods’ includes such article of transport or packaging if supplied by the shipper’.

6.3.3 Basic liability

The carrier’s liability under the Hamburg Rules is intended to ‘be based exclusively on fault and that a carrier should be responsible without exception for all loss of, and damage to, cargo that results from his own fault or the fault of his servants or agents’.⁴⁰⁵ If ‘the claimant proves that the loss damage took place while the goods were in the charge of the carrier, as defined by article 4, the carrier will be presumed to be liable for the loss or damage’.⁴⁰⁶ This ‘presumption of liability’ is ‘rebutted’ in accordance with article 5 of the Hamburg Rules,⁴⁰⁷ which states ‘... unless the carrier proves that he, his servants or agents took all measures that could reasonably be required to avoid the occurrence and its consequences’. As regards the delay, article 5(2) provides that the ‘[d]elay in delivery occurs when the goods have not been delivered at the port of discharge provided for in the contract of carriage by sea within the time expressly agreed upon or, in the absence of such agreement, within the time which it would be reasonable to require of a diligent carrier ...’.

However, there are ‘only two exceptions to the carrier who is unable to rebut the presumption of fault’ under the Hamburg rules: ‘fire’ and ‘live animals’ in accordance to article 5(4) and (5) respectively.⁴⁰⁸ Moreover, article 5(6) of Hamburg Rules provides that the carrier may be exempted from liability in case of ‘general average’, ‘where loss, damage or delay in delivery resulted from measures to save life or from reasonable measures to save property at sea’.

As far as the ‘deck cargo’ is concerned, Baughen explains that such a ‘cargo is treated in exactly the same way as any other cargo in that its carriage cannot be taken outside the ambit of the Hamburg Rules’, in accordance to article 9(1).⁴⁰⁹ This article provides that ‘[t]he carrier is entitled to carry the goods on deck only if such carriage is in accordance with an agreement with the shipper or with the usage of the particular trade or is required by statutory rules or regulations’.

⁴⁰⁵ Wilson (n 55) 216.

⁴⁰⁶ Baughen (n 191) 133.

⁴⁰⁷ *ibid.*

⁴⁰⁸ *ibid* 134.

⁴⁰⁹ *ibid.*

6.3.4 Limits of liability

Article 6(1)(a) of Hamburg Rules provides that the carrier's liability for loss or damages to the goods 'is limited to an amount equivalent to 835 units of account per package or other shipping unit or 2.5 units of account per kilogram of gross weight of the goods lost or damaged, whichever is the higher'. Additionally, article 6(1) goes on to provide for a limit of liability for delay as follows:

(b) The liability of the carrier for delay in delivery according to the provisions of article 5 is limited to an amount equivalent to two and a half times the freight payable for the goods delayed, but not exceeding the total freight payable under the contract of carriage of goods by sea.

(c) In no case shall the aggregate liability of the carrier, under both subparagraphs (a) and (b) of this paragraph, exceed the limitation which would be established under subparagraph (a) of this paragraph for total loss of the goods with respect to which such liability was incurred.

6.3.5 Liability of the shipper

The Hamburg rules provides that 'The shipper is not liable for loss sustained by the carrier or the actual carrier, or for damage sustained by the ship, unless such loss or damage was caused by the fault or neglect of the shipper, his servants or agents'.⁴¹⁰ Moreover, this provision extends to include 'any savant or agent of the shipper' in that these persons are also not 'liable for such loss or damage unless the loss or damage was caused by fault or neglect on his (the shipper) part'.⁴¹¹

6.3.6 Transport documents, paper bills of lading

Article 14(1) obliges the carrier to issue a bill of lading on the shipper's demand, as discussed earlier.⁴¹² The detailed particulars to be included in a bill of lading are stated in article 15(1).⁴¹³ Significantly, since this research is about the legal recognition of electronic bills of lading, Article 14(3) of Hamburg Rules allows the use of, inter alia, electronic means to sign the bill of lading. This article provides that '[t]he signature on the bill of lading may be in handwriting, printed in facsimile, perforated, stamped, in symbols, or made by any other mechanical or

⁴¹⁰ art 12 of Hamburg Rules. See the discussion in Berlingieri (n 356) 88.

⁴¹¹ *ibid.*

⁴¹² See subsection 5.1.2 'Hamburg Rules' in Chapter Two.

⁴¹³ *ibid.*

electronic means, if not inconsistent with the law of the country where the bill of lading is issued’.

6.3.7 Time bar

The Hamburg Rules provides that ‘any action relating to carriage of goods under’ the Hamburg Rules, ‘is time-barred if judicial or arbitral proceedings have not been instituted within a period of two years’.⁴¹⁴ This period of two years starts running ‘on the day on which the carrier has delivered the goods or part thereof or, in cases where no goods have been delivered, on the last day on which the goods should have been delivered’.⁴¹⁵

6.4 Position of English law in relation to the international framework

The UK Carriage of Goods by Sea Act 1924 (COGSA 1924) ‘gave effect to the Hague Rules’, according to Sturley et al., ‘a full three weeks before the Convention (the Hague Rules) formally opened for signature’.⁴¹⁶ However, Wilson notes that ‘the operation of the Hague Rules was restricted by the Carriage of Goods by Sea Act 1924 to bills of lading issued in respect of outward voyages from the United kingdom’.⁴¹⁷ Later, ‘the Hague-Visby Rules’ were given the force of law by the COGSA 1971, ‘as a matter of law to contracts of carriage "covered by a bill of lading or any similar document of title"’.⁴¹⁸ The Hague-Visby Rules were ‘attached as a schedule to’ the COGSA 1971 ‘and became effective in the United Kingdom on 23 June 1977’.⁴¹⁹

The COGSA 1992 also provides that ‘[t]he preceding provisions of this Act shall have effect without prejudice to the application, in relation to any case, of the rules (the Hague-Visby Rules) which for the time being have the force of law by virtue of section 1 of the Carriage of Goods by Sea Act 1971’.⁴²⁰ *The Rafaela S*,⁴²¹ may be cited as an example of the application of the Hague Rules in the English law since the main question before the House of Lords was whether the contract of carriage was covered by a bill of lading or any similar document of title

⁴¹⁴ art 20(1) of Hamburg Rules. See the discussion in Baughen (n 191) 135.

⁴¹⁵ art 20(1).

⁴¹⁶ Sturley, Fujita and Ziel (n 80) 10.

⁴¹⁷ Wilson (n 55) 175.

⁴¹⁸ Scrutton and Eder (n 47) 10.

⁴¹⁹ Wilson (n 55) 174.

⁴²⁰ Section 5(5) of COGSA 1992. See the discussion in Wilson (n 55) 174.

⁴²¹ *The Rafaela S* (n 111).

within article I(b) of Hague-Visby Rules and section 1(4) of UK COGSA 1971,⁴²² as discussed earlier.⁴²³

7 Conclusion

Paper bills of lading originated to meet the customary commercial needs of maritime trade and transportation. They evolved until arriving at their current shape,⁴²⁴ and functions. This long evolution started in the fourteenth century and ran until the adoption of the Hague Rules in 1924. Paper bills of lading developed three main functions: as a receipt for the goods, as containing or evidencing the contract of carriage and as a document of title. The international law adapted the above-mentioned commercial needs relating to bills of lading. The Hague Rules, the Visby Amendments and the Hamburg Rules are the current international legal regime that governs the use of paper bills of lading. These international conventions have recognized the three functions of paper bills of lading. The English law has also adapted the functional development of paper bills of lading. The case law recognized the three functions of the bills. Similarly, relevant UK statutes have also adapted the functional development of those bills in the repealed Bill of Lading Act 1855 until the present COGSA 1992.

⁴²² *ibid.* See Baughen (n 191) 95.

⁴²³ See subsection 4.5.1 '*The Rafaela S*' in Chapter Two.

⁴²⁴ See figure 1(a), and figure 1(b) for a sample of paper bill of lading. The first or face page of the paper bill of lading contains the information about the shipper, carrier, consignee, the particulars of the goods, and the signature of the carrier or its agent. The second or reverse page of the paper bill of lading contains the terms and conditions of the contract of carriage evidenced or contained by the paper bill of lading.

SHIPPER:		X Y Z INCORPORATION ADDRESS -1 ADDRESS-2 CITY COUNTRY MOB NO- EMAIL -		
CONSIGNEE:				
OCEAN BILL OF LADING ORIGINAL				
NOTIFY PARTY:		DATE OF ISSUE	B/L NUMBER	
		FOR DELIVERY OF GOODS PLEASE APPLY TO:		
PLACE OF RECEIPT	PORT OF LOADING			
OCEAN VESSEL	VOYAGE NO.			
PORT OF DISCHARGE	FINAL DESTINATION	FREIGHT PAYABLE AT	NUMBER OF ORIGINAL B/L	
MARKS & NUMBER CONTAINER & SEAL NUMBERS	NO. OF PACKAGES	DESCRIPTION OF PACKAGES AND GOODS PARTICULARS FURNISHED BY SHIPPER	GROSS WEIGHT KILOS	MEASUREMENT CBM
				ON BOARD DATE
<small>LAW AND JURISDICTION CLAUSE THE CONTRACT EVIDENCED BY OR CONTAINED IN THIS BILL OF LADING SHALL BE GOVERNED BY THE LAW OF ENGLAND AND ANY CLAIM OR DISPUTE ARISING HEREIN OR IN CONNECTION HEREWITH SHALL BE REFERRED TO THE CARRIER'S RIGHT TO COMENSURE PROCEEDINGS IN ANY OTHER JURISDICTION, BE SUBJECT TO THE JURISDICTION OF THE COURTS OF SINGAPORE.</small>		<small>RECEIVED IN APPROVED GOOD ORDER AND CONDITION FOR TRANSPORTATION FROM THE PLACE OF RECEIPT TO THE PLACE OF DELIVERY SUBJECT TO THE TERMS AND CONDITIONS OF THIS BILL OF LADING AS WELL AS TO THE CONDITIONS AND DISCIPLINES OF THE SHIPPER'S COMPANY'S CARRIAGE CONTRACTS AND TO THE TERMS AND PARTS IN RECEIVING, SHIPPING, CARRYING, FORWARDING, STOWING, HANDLING AND DELIVERY OF THE SAID GOODS THE ABOVE MENTIONED TO BE MARKED AND NUMBERED AS IN THE MANNER WHICH IS REASONABLY QUALITY CONTAINERS AND UNLESS OTHERWISE SUBJECT TO THE CONDITIONS CONTAINED IN THE BILL OF LADING THE DELIVERY SHALL BE EFFECTED AT THE ABOVE DESIGNATED PLACE OF DESTINATION THROUGH THE PORTS CARRIERS DESIGNATED BY THE FORWARDING AGENTS ONE ORIGINAL BILL OF LADING DULY ENDORSED MUST BE PRESENTED TO THE AGENT IN ORDER TO BE RECEIVED FOR THE GOODS OF THE DELIVERY CARRIER WHOSE THE NUMBER OF ORIGINAL B/L OF LADING STATED ABOVE HAS BEEN ISSUED ALL OF THE TENOR AND DATA, OF WHICH BEING ACCOMPANIED THE ORDER TO SEND VOUCHER.</small>		
FREIGHT AND DISBURSEMENTS	RATE AT 1 CBM	PREPAID	COLLECT	
		FOR XYZ CO. LTD (AUTHORIZED SIGNATORY)		

Figure 1: Paper bill of lading (Face page of the paper bill of lading)⁴²⁵

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shippingexchange.com, 'Bill of Lading' <<http://shippingexchange.com/images/Files/UserFiles/editorimages/2014/pkbcnahe.4lf.png>> accessed 4 June 2019.

Chapter Three: Electronic Bills of Lading

1 Introduction

This chapter examines the main subject of the study: electronic bills of lading. It starts with the exploration of the first attempts to use computers, telephone lines, satellites and, more recently, Internet for the purpose of exchanging information about cargo. It shows how the use of these new devices and technologies led to the use of electronic bills of lading that we see nowadays. It addresses the EDI,⁴²⁷ as the base technology for the use of electronic commercial documents including electronic bills of lading. Following the international approach of the study, it examines international endeavours to recognize and regulate the use of electronic documents in general and electronic bills of lading in particular, that is, the adoption of international conventions, models laws and contract forms.

It studies those international endeavours in chronological order to trace the evolution of electronic bills of lading. The chapter starts by discussing the first experience in this regard that involves the Data Freight Receipt (DFR) in the early 1970s until the latest model law that deals with electronic bills of lading, namely, MLETR in 2017. Following the English law approach, the chapter studies the position of English law in relation to the use of electronic bills of lading. The study of English law in this chapter is general in the sense that it presents a panoramic view on the position of English law and leaves the details for the next chapters. The chapter also explores generally the position under other national laws, for example the laws of the US, Australia, Singapore and India in relation to the recognition of electronic bills of lading.

The rapid emergence of scientific technology and ‘the increasing use of electronic means of communication and the Internet’ led to ‘a significant shift towards modern documents’.⁴²⁸ Paper documents may be ‘viewed as comparatively cumbersome and inflexible medium’.⁴²⁹ The increasing use of electronic devices, Internet and EDI affects many aspects of life including trade and transportation. Low argues that ‘[i]t is now possible for parties in any form of business transaction to transact electronically rather than by physical exchange or personal

⁴²⁷ EDI is previously defined in section 1 ‘Introduction’ in Chapter Two.

⁴²⁸ M Dubovec, ‘The Problems and Possibilities for Using Electronic Bills of Lading as Collateral’ (2006) 23(2) *Arizona Journal of International and Comparative Law* 437-466.

⁴²⁹ Goldby (n 48) 311.

contact'.⁴³⁰ The use of 'electronic technology' has advantages such as the storage of 'vast amounts of information', prompt production and transmission of information, reduction of labour and storage costs, elimination of delay, increase of accuracy and speed in executing transactions.⁴³¹ The 'electronic commerce' may include 'any commercial transaction that is effected via electronic means and would include such means as facsimile, telex, EDI, Internet, and the telephone'.⁴³²

2 International approach

The international maritime community has been trying to keep up with the developments in the means of communication and technology. International efforts have involved various projects, conventions, model laws and contract forms as discussed under this approach to trace the emergence of electronic bills of lading.

2.1 Data Freight Receipt (DFR)

Some liner companies, according to Gaskell et al., have 'pioneered in the use of computers to reduce or eliminate the need for documents such as the bills of lading'.⁴³³ Wilson agrees with Gaskell et al. that ACL's DFR system was 'the first venture into the electronic field', carried out 'on an experimental basis in Sweden'.⁴³⁴ Wilson explains that that system works through the shipper providing all the information about the shipment, which is then entered into the 'carrier's computer at the port of loading when the cargo is received by him'.⁴³⁵ The carrier then adds other information 'pertinent to itself, including the amount of the freight due, a "clean bill" notation if appropriate or otherwise the relevant clausung'.⁴³⁶ Then, a DFR receipt of 'all information fed into it' will be printed out and given to the shipper.⁴³⁷ All information will be sent to the 'carrier's second computer' at the port of destination, where 'advance notice' of the cargo's arrival is given to the consignee with a copy of the DFR.⁴³⁸

⁴³⁰ Low (n 271).

⁴³¹ A Boss, 'Emerging Law of International Electronic Commerce' (1992) 6 *The Temple International and Comparative Law Journal* 2.

⁴³² *ibid.*

⁴³³ Gaskell, Asariotis and Baatz (n 49) 22.

⁴³⁴ Wilson (n 55) 167.

⁴³⁵ *ibid.*

⁴³⁶ *ibid.*

⁴³⁷ *ibid.*

⁴³⁸ *ibid.*

Low also agrees that ACL used DFR on North Atlantic shipments in the early 1970s.⁴³⁹ Low argues that this ‘DFR was essentially an electronic sea waybill and it eliminated the need to send paper documents with the shipment’.⁴⁴⁰ Low notes that what the DFR system needed was ‘a computer at the end of each phone line and software to allow computer-to-computer communications’.⁴⁴¹ Low describes how DFR works:

ACL communicated the issuance of the DFR to ACL's office at the consignee's place of business, in conjunction with which it separately sent an arrival notice and manifest. The goods were delivered upon either the consignee's or the notifying party identification, and delivery did not require presentation of the arrival notice.⁴⁴²

2.2 SeaDocs Registry

This system was established in 1986.⁴⁴³ It came upon the initiative of ‘Per Gram, then Chairperson of the International Association of Tanker Owners (INTERTANKO)’.⁴⁴⁴ It is argued that ‘Chase Manhattan Bank worked with INTERTANKO to create the SeaDocs Registry’.⁴⁴⁵ Aikens et al. describe the SeaDocs Registry as [t]he first systems of electronic bills of lading of significance to the English lawyer’.⁴⁴⁶ Holford depicts the SeaDocs Registry as an ‘immobilisation approach under which a paper bill of lading was still issued but was immediately sent to the SeaDocs Registry where it remained until delivery’.⁴⁴⁷ SeaDocs Registry was a ‘central registry’ system.⁴⁴⁸ Low’ description of how the SeaDocs Registry functioned may be summarized as follows:

1. ‘The carrier would issue a paper bill of lading’ and ‘deposited’ it with SeaDocs Registry which ‘acted as a depository’ of the paper bills of lading’.
2. [T]he shipper would receive a ‘code or test key’.
3. ‘When the shipper wanted to negotiate the bill, the shipper would have to notify SeaDocs Registry electronically’ and ‘provide the buyer-endorsee with a portion of the test key’.

⁴³⁹ Low (n 271).

⁴⁴⁰ *ibid.*

⁴⁴¹ *ibid.*

⁴⁴² *ibid.*

⁴⁴³ Aikens, Lord and Bools (n 40).

⁴⁴⁴ Clarke (n 307).

⁴⁴⁵ Mark Holford, ‘A Tricky Problem in Brief’ (2011) 3 *Maritime Risk International* 20. See also Low (n 271).

⁴⁴⁶ Aikens, Lord and Bools (n 40).

⁴⁴⁷ Holford (n 445).

⁴⁴⁸ *ibid.*

4. When the goods arrived at the port of discharge, SeaDocs Registry would transmit an identifying code number to the carrier' and 'to the last endorsee on the original bill of lading'.
5. 'Using this number, the last endorsee or owner of record would obtain the printout of the hard copy of the final bill of lading with which to claim the goods'.⁴⁴⁹

In other words, Faber summarizes how the SeaDocs Registry worked:

It depended on the deposit of a paper bill of lading in a central registry. Changes in entitlement to the goods were notified to the registry by electronic messages. The registry kept computerized records and noted changes on the paper bill of lading. It was also responsible for issuing the new party entitled to the goods with an electronic test key to accompany messages about future changes in entitlement or about delivery.⁴⁵⁰

The SeaDocs Registry project was 'a short-lived experimental system',⁴⁵¹ lasting 'about a year',⁴⁵² and 'unsuccessful'.⁴⁵³ It is thought that it 'did not attract widespread support and was therefore not financially viable'.⁴⁵⁴ Low argues, inter alia, that '[t]he major trading companies did not perceive the Chase Manhattan Bank to be sufficiently neutral to act as a central registry'.⁴⁵⁵

2.3 Electronic Data Interchange (EDI)

Schoenbaum argues that the 'Electronic Data Interchange (EDI) now allows communications, including bills of lading to be transmitted instantaneously between shippers, carriers, and third parties'.⁴⁵⁶ In other words, Low argues that EDI 'permits companies to develop automated data processing systems which generate, transmit, receive and process information electronically, in substitution for the conventional paper based documents'.⁴⁵⁷ Therefore, EDI played and continues to play an important role in the evolution and recognition of electronic bills of lading. The concept of EDI is based on the use of computers.⁴⁵⁸ Examination of the first attempts to use electronic bills of lading shows computers as the basis for those attempts and for future developments to process and transfer information.

⁴⁴⁹ Low (n 271).

⁴⁵⁰ Diana Faber, 'Electronic Bills of Lading' (1996) 2 Lloyd's Maritime and Commercial Law Quarterly 232-244.

⁴⁵¹ Aikens, Lord and Bools (n 40).

⁴⁵² Faber (n 450).

⁴⁵³ Holford (n 445).

⁴⁵⁴ Faber (n 450).

⁴⁵⁵ Low (n 271).

⁴⁵⁶ Schoenbaum (n 41).

⁴⁵⁷ Low (n 271).

⁴⁵⁸ See the definition of EDI in section 1 'Introduction' in Chapter Two.

It may be safe to say that the EDI or computer-based attempts have accelerated the development of electronic bills of lading. Such EDI contribution can be seen, for example, in the CMI Rules, the UNCITRAL Model Law on Electronic Commerce of 1996 and many other instruments and experiences that will be discussed in a chronological order in the next subsections.

2.4 CMI Uniform Rules for Electronic Bills of Lading 1990

These rules were drafted by the CMI and adopted in 1990.⁴⁵⁹ According to Thomas, the CMI Rules are ‘an important source document’ on EDI.⁴⁶⁰ Rule 1 of CMI Rules provides that the ‘Rules shall apply whenever the parties so agree’. The provision means that these Rules apply ‘if they are incorporated into the contract of carriage by the parties’.⁴⁶¹ Todd describes the essence of the CMI Rules system as follows:

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. In addition, a private key is sent to the shipper to be used in subsequent transactions. The private key is known only by the shipper and the carrier. The shipper (and any subsequent holder) can transfer what the CMI calls the ‘Right of Control and Transfer’ to a subsequent holder ...⁴⁶²

Beecher argues that the CMI Rules system depends on EDI, and describes the system as follows:

These rules presumed that: (1) transactions would be conducted using the Electronic Data Interchange (EDI) technology, which was developed in the 1970's; (2) the carrier would act as the custodian of the electronic document; and (3) the parties involved would negotiate the document through the use of an electronic signature based on the use of cryptographic keys. This electronic key would be reissued to the new owner when the previous owner of title to the cargo was prepared to relinquish her property interest.⁴⁶³

⁴⁵⁹ CMI (n 23) 1-58.

⁴⁶⁰ Thomas (n 20) 283.

⁴⁶¹ Miriam Goldby, ‘The CMI Rules for Electronic Bills of Lading, Reassessed in the Light of Current Practices’ (2008) 1 Lloyd’s Maritime and Commercial Law Quarterly 56-70.

⁴⁶² Todd (n 24).

⁴⁶³ Susan Beecher, ‘Can the Electronic Bill of Lading Go Paperless?’ (2006) 40(3) International Lawyer 627-648.

The CMI Rules define the term ‘EDI’ in Rule 1(b) as ‘... i.e. the interchange of trade effected by teletransmission’. Under the CMI Rules, EDI should conform with the United Nations Rules for Electronic Data Interchange for Administration, Commerce and Transport (UN/EDIFACT), but the parties to the contract of carriage may use any other data interchange based on the acceptance of all other users.⁴⁶⁴ Moreover, the conduct of the parties is governed by the Uniform Rules of Conduct for Interchange of Trade Data by Teletransmission, 1987 (UNICID).⁴⁶⁵ The CMI Rules do not only define EDI; they also define the relevant terms required in the application of EDI. Thus, ‘transmission’ is defined in Rule 1(d) as ‘one or more messages electronically sent together as one unit of dispatch which includes heading and terminating data’. Rule 1(e) defines another related term, namely, ‘confirmation’ as ‘[t]ransmission which advises that the content of a Transmission appears to be complete and correct, without prejudice to any subsequent consideration or action that the content may warrant’. The CMI Rules also define ‘Electronic Monitoring System’ in Rule 1(h) as ‘the device by which a computer system can be examined for the transactions that it recorded, such as a Trade Data Log or an Audit Trail’. Equally important, in Rule 1(i), the CMI Rules define ‘electronic storage’, which is an important function relating to the data to be interchanged and transferred in line with EDI, as ‘any temporary, intermediate or permanent storage of electronic data including the primary and the back-up storage of such data’. In conclusion, it seems that by providing these definitions, the CMI Rules have tried to avoid any ambiguity about the technical terms in the application of EDI and electronic bills of lading. The CMI Rules define the terms ‘private key’ and ‘holder’, which are essential terms when it comes to the third function of electronic bills of lading as a document of title, as will be examined in Chapter Six. As far as the three functions of electronic bills of lading are concerned, the CMI Rules provide for these functions as will be discussed in Chapters Four, Five and Six.

2.5 Incoterms

The Incoterms are described, according to Lestrade, as ‘a series of international sales terms that are used widely worldwide’ as ‘a model terms and conditions for international trade contracts’.⁴⁶⁶ Incoterms are established by the International Chamber of Commerce (ICC).⁴⁶⁷ The Incoterms, according to Coetzee, deal with ‘certain duties of a seller and buyer pertaining

⁴⁶⁴ Rule 3(b) and 2(c) of CMI Rules.

⁴⁶⁵ Rule 3(a).

⁴⁶⁶ Edward Lestrade, ‘Model Information Technology Contract Terms and Systems Implementation Contracts in Europe’ (2006) 36 *European Newsletter* 1-5.

⁴⁶⁷ *ibid.*

to delivery of the goods, transfer of risk, the allocation of costs, procurement of the necessary transportation and insurance documents'.⁴⁶⁸ Incoterms also deal with 'export and import of goods' obligations 'such as consular and customs formalities, and packaging and marking of the goods'.⁴⁶⁹ Incoterms, according to Gabriel, are mainly intended 'to facilitate international commercial transactions' and to eliminate the 'barriers' such as 'distance', 'language', 'local business customs' and 'uncertainties and differences in the interpretation of shipping and trade terms'.⁴⁷⁰

The ICC keeps updating the Incoterms 'constantly' to meet 'developments in international commercial practice'.⁴⁷¹ In this vein, the ICC has adopted EDI technology in the Incoterms.⁴⁷² Incoterms are kept updated to meet the 'changes in transportation techniques and to render them fully compatible with the new developments in electronic data interchange'.⁴⁷³ Incoterms 1990 version, according to Ramberg, was 'triggered by the shift from paper documents to electronic communication'.⁴⁷⁴ This argument may mean that the first application of EDI was in Incoterms 1990. Beecher argues that since 1990, 'Incoterms made specific accommodation for the use of electronic documentation'.⁴⁷⁵ The subsequent version of the 2000 Incoterms also tried to address the emergence of electronic communication.⁴⁷⁶ As did the Incoterms 1990, the 2000 Incoterms applied the '(EDI-messages)' based on agreement.⁴⁷⁷ Therefore, EDI might be used by the parties to the international contract of sale to exchange relevant information under certain commercial terms. These terms are like: Ex Work, Cost and Freight (CFR), Cost, Insurance & Freight (CIF), Carriage Paid To (CPT), Carriage and Insurance Paid To (CIP), Delivered at Frontier (DAF), Delivered ex-ship (DES), Delivered Ex Quay (DEQ), Delivered Duty Unpaid (DDU) and Delivered Duty Paid (DDP).⁴⁷⁸

⁴⁶⁸ Juana Coetzee, 'The Interplay between Incoterms and the CISG' (2013) 32(1) *Journal of Law and Commerce* 1-22.

⁴⁶⁹ *ibid.*

⁴⁷⁰ Henry Gabriel, 'International Chamber of Commerce Incoterms 2000: A Guide to Their Terms and Usage' (2000) 5 *Vindobona Journal of International Commercial Law & Arbitration* 41.

⁴⁷¹ Coetzee (n 678).

⁴⁷² Lionel Costes, 'Towards a "Paperless" International Commercial Law?' (1994) 6 *International Business Law Journal* 735-52.

⁴⁷³ Charles Del Busto, 'International Trade: The Evolution of New Technologies and Practices' (1991) 2 *International Company and Commercial Law Review* 4.

⁴⁷⁴ Jan Ramberg, *ICC Guide to Incoterms 2010: Understanding and Practical Use* (Publication no. 720E, 2011) ICC publishing.

⁴⁷⁵ Beecher (n 463).

⁴⁷⁶ Gabriel (470).

⁴⁷⁷ *ibid.*

⁴⁷⁸ *ibid.*

The version of 2010 Incoterms provides for the use of 'electronic records and communication'.⁴⁷⁹ This version equalizes between the paper and electronic communication in the legal vale based on agreement or costumes.⁴⁸⁰ It seems that Incoterms 2010 have tried to recognize the increasing use of electronic records or EDI in trade, and, more specifically, in contracts for the sale of goods.

2.6 KTNET

The Korea Trade Network (KTNET) was established in 1991 by the Korea International Trade Association (KITA) as a platform to provide electronic trade services.⁴⁸¹ KTNET was also chosen as the 'sole Trade Automation Service Provider', by the Korean Customs Service (KCS) in 1991.⁴⁸² As far as the electronic bill of lading service is concerned, KTNET was selected by the Korean government to provide such service.⁴⁸³ Specifically, according to Goldby, the Korean Ministry of Justice selected KTNET to provide the electronic bill of lading service according to the Presidential Decree on Implementation of the Provisions of the Commercial Act Regarding Electronic Bills of Lading No. 20829 of 2008.⁴⁸⁴ The Korean Ministry of Justice, according to the Presidential Decree, supervises and audits the KTNET registry system.⁴⁸⁵ Article 14 of Presidential Decree provides for this supervision:

The Minister of Justice may supervise registry agencies to ensure that they comply with the Act and this Decree, and may conduct inspections on technical capacity and financial capacity of registry agencies and the safe operation, etc. of their facilities and equipment under Article 3 (1).

Article 15 of Decree grants the Minister of Justice to revoke the designation of a registry agency in the following cases:

1. If it is discovered that a registry agency was designated by fraud or other wrongful means;

⁴⁷⁹ Miriam Goldby, 'The Rising Tide of Paperless Trade: Analyzing the Legal Implications' in Baris Soyer and Andrew Tettenborn (eds), *International Trade and Carriage of Goods* (1st edn, Routledge 2016) 148.

⁴⁸⁰ *ibid.*

⁴⁸¹ Junsok Yang, 'Small and Medium Enterprises (SME) Adjustments to Information Technology (IT) in Trade Facilitation: The South Korean Experience' (2009) Asia-Pacific Research and Training Network on Trade (ARTNeT), Working Paper Series, No 61.

⁴⁸² *ibid.*

⁴⁸³ Goldby (n 26) 332.

⁴⁸⁴ *ibid.* The Presidential Decree on Implementation of the Provisions of the Commercial Act Regarding Electronic Bills of Lading No. 20829 of 2008 is available online at: https://elaw.klri.re.kr/eng_mobile/viewer.do?hseq=27964&type=sogan&key=9

⁴⁸⁵ Goldby (n 26) 332-333.

2. If a registry agency substantially violates a requirement for designation referred to in any subparagraph of Article 3 (1);
3. If a registry agency practically closes its business as a consequence of a corporate merger, bankruptcy, business closure, etc.

The electronic bills of lading are recognized under the Korean law, especially the transferability issue of electronic bills of lading is achieved under article 862 of Korean Commercial Act 2001.⁴⁸⁶ This article is implemented by enactment of the aforementioned Presidential Decree.⁴⁸⁷ Article 1 of this Decree states that '[t]he purpose of this Decree is to provide for matters delegated pursuant to Article 862 of the Commercial Act and matters necessary for the implementation thereof'. The Decree defines the term electronic bill of lading in article 2(1), as '... a bill of lading prepared in the form of an electronic document and registered with a registry agency for electronic bills of lading under Article 862 (1) of the Commercial Act (hereinafter referred to as the "Act")'. The Decree recognizes the first two functions performed by electronic bills of lading in article 6 that deals with the issuance of these bills. It first provides for the first function as a receipt for the goods since article 6(1) of Decree obliges the carrier when issuing an electronic bill of lading to provide information to a registry agency that includes the '[d]escriptions under subparagraphs of Article 853 (1) of Act', '[t]he place of receipt or the place of delivery of the shipment' and '[t]he signature of the carrier or its agent, which shall be reproduced by electronic means'. This information seems to be included in the intended electronic bill of lading to evidence the receipt of the goods by the carrier. Article 6(2) of Decree provides for the second function as evidencing or containing the contract of carriage since it obliges the carrier to 'send the standard terms and conditions of the relevant electronic bills of lading to the registry agency'.

As far as the transferability issue of electronic bills of lading is concerned, article 8 of Decree provides for the mechanism of that transfer. Article 8(1) obliges the holder of an electronic bill of lading to send an electronic document, which reflects its intention to endorse the electronic bill of lading, to the transferee via the registry agency. Article 8(2) requires the electronic document referred to in article 8(1) to contain the following information:

1. Information indicating the identity of the electronic bill of lading;

⁴⁸⁶ *ibid* 332.

⁴⁸⁷ *ibid*.

2. Information about the transferee;
3. The transferor's certified digital signature.

Then, according to article 8(3), the registry agency inserts the details of the transfer, including the information required under article 8(2) in the electronic register and send them to the transferee. The transferee may acquire an electronic bill of lading in accordance with article 8(5) that obliges it 'register information about him/ herself, in advance, including his/her name and resident registration number or his/her business registration number and address, with a registry agency'.

As regard delivery of the goods, article 10(1) obliges the holder of an electronic bill of lading to send an electronic document stating its claim for delivery of the goods to the registry agency along with the electronic bill of lading. The registry agency must send the claim to the carrier immediately, and include a statement that the 'electronic bill of lading is no longer transferable in the electronic register', accordance to article 10(2). The carrier may 'refuse a claim for delivery of the shipment' based on reasons to be sent to the registry agency in an electronic document in accordance with article 10(3). In case of accepting the delivery claim, the carrier verifies 'whether the claimant is the legitimate holder of the electronic bill of lading on the electronic register before delivering the shipment' in accordance with article 11(1). Then, the carrier completes the delivery of the goods and 'notify the registry agency of the recipient and the date of delivery by electronic document' as provided in article 11(2).

The Decree preserves the right of the holder to 'convert the electronic bill of lading into a documentary bill of lading' in article 12. The registry agency must issue a documentary bill of lading upon receiving a conversion request from the holder of an electronic bill of lading in accordance with article 12(1).

2.7 UNCITRAL Model Law on Electronic Commerce (MLEC)

This Model Law was adopted on 12 June 1996.⁴⁸⁸ It 'purports to enable and facilitate commerce conducted using electronic means by providing national legislators with a set of internationally acceptable rules aimed at removing legal obstacles and increasing legal predictability for

⁴⁸⁸ UNCITRAL, 'UNCITRAL Model Law on Electronic Commerce (1996) with additional article 5 bis as adopted in 1998' <https://uncitral.un.org/en/texts/e-commerce/modellaw/electronic_commerce> accessed 29 November 2020

electronic commerce'.⁴⁸⁹ It 'applies to any kind of information in the form of a data message used in the context of commercial activities'.⁴⁹⁰ Moreover, Part 2 of MLEC applies to electronic commerce in specific areas that include actions related to contracts of carriage of goods.⁴⁹¹

Similar to the CMI Rules, MLEC defines the term EDI. It provides that EDI 'means the electronic transfer from computer to computer of information using an agreed standard to structure the information'.⁴⁹² It also defines the term 'data message' as the 'information generated, sent, received or stored by electronic, optical or similar means including, but not limited to, electronic data interchange (EDI), electronic mail, telegram, telex or telecopy'.⁴⁹³ It defines other terms relevant to electronic commerce, such as 'originator',⁴⁹⁴ 'addressee',⁴⁹⁵ 'intermediary'⁴⁹⁶ and 'information system'.⁴⁹⁷ Article 6 provides for the requirement of writing as follows:

(1) Where the law requires information to be in writing, that requirement is met by a data message if the information contained therein is accessible so as to be usable for subsequent reference.

(2) Paragraph (1) applies whether the requirement therein is in the form of an obligation or whether the law simply provides consequences for the information not being in writing.

As regards the requirement of a signature, article 7 of MLEC states:

(1) Where the law requires a signature of a person, that requirement is met in relation to a data message if:

(a) a method is used to identify that person and to indicate that person's approval of the information contained in the data message; and

(b) that method is as reliable as was appropriate for the purpose for which the data message was generated or communicated, in the light of all the circumstances, including any relevant agreement.

(2) Paragraph (1) applies whether the requirement therein is in the form of an obligation or whether the law simply provides consequences for the absence of a signature.

⁴⁸⁹ *ibid.*

⁴⁹⁰ art 1 of MLEC.

⁴⁹¹ art 16.

⁴⁹² art 2(b).

⁴⁹³ art 2(a).

⁴⁹⁴ art 2(c).

⁴⁹⁵ art 2(d).

⁴⁹⁶ art 2(e).

⁴⁹⁷ art 2(f).

Significantly, MLEC recognises the legal value of ‘data message’ in article 5 which provides that the ‘[i]nformation shall not be denied legal effect, validity or enforce- ability solely on the grounds that it is in the form of a data message’. MLEC provides for other relevant matters, such as requirements for originality,⁴⁹⁸ admissibility and evidential weight of data messages,⁴⁹⁹ and retention of data messages.⁵⁰⁰ As far as the three functions of bills of lading are concerned, MLEC may not be as helpful as the CMI Rules, especially in relation to the document of title function. This is because the CMI Rules are drafted specially for electronic bills of lading, unlike MLEC that deals with electronic commerce in general.

2.8 Bills of Lading Electronic Registry Organization (Bolero)

Bolero, according to Thomas, has ‘pioneered the concept of the electronic bill of lading’.⁵⁰¹ It is a ‘joint initiative’.⁵⁰² It was ‘founded by the Society for Worldwide Interbank Financial Telecommunication (SWIFT) and the Through Transport Mutual Insurance Association (TT Club) in London in 1998’.⁵⁰³ Zhao describes Bolero ‘as a neutral secure platform that enables paperless trading throughout the world’.⁵⁰⁴ Bolero is a closed system in the sense ‘that shippers, traders and carriers would have to agree to join Bolero before being able to take of it’.⁵⁰⁵ Scrutton and Eder argue that Bolero system is deemed a closed system to ensure ‘secure transfer of the electronic shipping documents between the subscribing parties’.⁵⁰⁶ Bolero system is defined as follows:

Bolero System: The business processes and methods, together with the digital information system, which are provided by Bolero International for communicating Messages and Documents and facilitating business transactions, as well as the Bolero Rulebook and Operating Rules governing their use. The Bolero System does not include any system, software, or equipment whose use is expressly limited to testing and/or non-binding transactions by agreement with Bolero International.⁵⁰⁷

⁴⁹⁸ art 8.

⁴⁹⁹ art 9.

⁵⁰⁰ art 10.

⁵⁰¹ Thomas (n 20) Chapter 14.

⁵⁰² Wilson (n 55) 170.

⁵⁰³ L Zhao, ‘Control of Goods Carried by Sea and Practice in E-commerce’ (2013) 6 Journal of Business Law 585-597.

⁵⁰⁴ *ibid.*

⁵⁰⁵ Gaskell, Asariotis and Baatz (n 49).

⁵⁰⁶ Scrutton and Eder (n 47) 86.

⁵⁰⁷ Rule 1.1.(16) of Bolero Rulebook.

Thomas says that ‘Bolero achieved the functionality that national legislation could not give it by requiring all its users to subscribe to a multi-party contract called the Bolero Rule Book’.⁵⁰⁸ Bolero users are required to agree ‘to be bound by’ the Bolero Rulebook.⁵⁰⁹ Bolero Rulebook is ‘an agreement between Users, and between each User and the Bolero Association acting on its own behalf, and on behalf of all other Users from time to time, and, where necessary, on behalf of Bolero International’.⁵¹⁰ Therefore, Zhao describes this Rulebook as ‘a multilateral contract between all parties involved in paperless trade transactions’.⁵¹¹ Bolero Rulebook prevents the users from contesting ‘the validity of any transaction, statement or communication made by means of a Signed Message, or a portion drawn from a Signed Message, on the grounds that it was made in electronic form instead of by paper and/or signed or sealed’.⁵¹² It requires the users to agree ‘that a Signed Message or a portion drawn from a Signed Message will be admissible before any court or tribunal as evidence of the Message or portion thereof’.⁵¹³

Bolero Rulebook confirms the *principle of functional equivalence* when it equalizes between writing and the electronic message in the legal value and enforceability in accordance with Rule 2.2.2.(1):

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

English law governs relations between the parties under the Bolero Rulebook, as stated in Rule 2.5.(2) that ‘[t]his Rulebook is governed by and shall be interpreted in accordance with English Law’. Bolero bill of lading ‘has the same functions as a traditional bill of lading’⁵¹⁴: as ‘a receipt from the carrier for the goods shipped, evidence of a contract of carriage of the goods’⁵¹⁵ and ‘a document of title for the delivery of goods’.⁵¹⁶ There are two ways to create a Bolero

⁵⁰⁸ Thomas (n 20) Chapter 14.

⁵⁰⁹ Rule 2.1.2.(1) of Bolero Rulebook.

⁵¹⁰ Rule 2.1.1.(1).

⁵¹¹ Zhao (n 503).

⁵¹² Rule 2.2.2.(3) of Bolero Rulebook.

⁵¹³ Rule 2.2.3.(1)

⁵¹⁴ Zhao (n 503).

⁵¹⁵ Rule 3.1(1) of Bolero Rulebook. See Zhao (n 503).

⁵¹⁶ Rule 3.6. See Zhao (n 503).

electronic bill of lading.⁵¹⁷ The first is to scan a paper document and upload it to the Bolero system.⁵¹⁸ The second uses the platform data in the Bolero system and is completely electronic.⁵¹⁹ A Bolero electronic bill of lading contains the details of the cargo, and confirms that the carrier has either shipped on board or received the goods described in the bill.⁵²⁰ The carrier attaches its terms and conditions that are part of the contract of carriage of goods.⁵²¹ Bolero electronic bill of lading provides for the first and second functions of the bills of lading, as will be examined in the next chapters.

As regards the third function as a document of title, a Bolero bill of lading is 'transferable or non-transferable'.⁵²² Baughen argues that the 'solution' for the negotiability of electronic bills of lading in Bolero is a "novation of the contract", with each change of the party designated as "holder to order".⁵²³ Baughen explains that this '[n]ovation replaces the contract between the previous "holder to order" and the carrier with a new contract, on identical terms, between the new "holder to order" and the carrier'.⁵²⁴ A bill of lading in the Bolero system is "negotiated" by each successive holder transferring to its counterparty in the trade the status of holder in the Registry'.⁵²⁵ Equally important, there must be only one singular holder in each transfer.⁵²⁶ Therefore, Thomas argues that the '[t]ransfer of the status of Holder in the Central Registry, transferred, by means of the provisions of the Bolero Rule Book, constructive possession of the goods'.⁵²⁷ This transferability process was confirmed in the interview with Bolero.⁵²⁸ As the interview may have made it clear, the concept of 'holder' is very important since the 'holder' has control over a singular electronic bill of lading.⁵²⁹ And this 'holder' can pass the 'holdership' to someone else who will be a new 'holder' with control over the electronic bill, as an equivalent to the physical possession of a paper bill of lading.⁵³⁰ In practice, Bolero

⁵¹⁷ Interviews (n 15).

⁵¹⁸ *ibid.*

⁵¹⁹ *ibid.*

⁵²⁰ *ibid.*

⁵²¹ *ibid.*

⁵²² Rule 3.3(1) of Bolero Rulebook. See Zhao (n 503).

⁵²³ Baughen (n 191) 26.

⁵²⁴ *ibid.*

⁵²⁵ Thomas (n 20) Chapter 14.

⁵²⁶ Interviews (n 15). Thomas (n 20) Chapter 14.

⁵²⁷ Thomas (n 20) Chapter 14.

⁵²⁸ Interviews (n 15).

⁵²⁹ *ibid.*

⁵³⁰ *ibid.*

... advises that it currently provides a comprehensive suite of cloud-based applications that link carriers with buyers, sellers, banks and other trading parties and a secure integrated connectivity with specialized document preparation solutions, treasury management systems and other back office business applications. It is continuously working with ports and customs authorities around the world to promote the adoption of digitisation.⁵³¹

The next chapters will examine how the Bolero bill of lading may perform the three functions of electronic bills of lading. Chapter Four will examine the first function to be carried out by Bolero bill of lading as a receipt for the goods. Chapter Five will examine how the Bolero bill of lading may perform the second function as evidencing or containing the carriage contract. Chapter Six will be dealing with how the Bolero bill of lading may dematerialize the third function of the paper bill of lading as a document of title.

2.9 UNCITRAL Model Law on Electronic Signatures (MLES)

UNCITRAL adopted its Model Law on Electronic Signatures (MLES) on 5 July 2001.⁵³² MLES ‘aims to enable and facilitate the use of electronic signatures by establishing criteria of technical reliability for the equivalence between electronic and hand-written signatures’.⁵³³ Senni describes MLES as ‘a significant step towards the standardization of international trade practices’.⁵³⁴ MLES applies ‘where electronic signatures are used in the context of commercial activities. It does not override any rule of law intended for the protection of consumers’.⁵³⁵ The term ‘commercial’ is defined in MLES to cover a wide range of ‘matters arising from all relationships of a commercial nature’, as follows:

The term ‘commercial’ should be given a wide interpretation so as to cover matters arising from all relationships of a commercial nature, whether contractual or not. Relationships of a commercial nature include, but are not limited to, the following transactions: any trade transaction for the supply or exchange of goods or services; distribution agreement; commercial representation or agency; factoring; leasing; construction of works; consulting; engineering; licensing; investment; financing; banking; insurance; exploitation agreement or

⁵³¹ Tan, Starr and Wu (n 31).

⁵³² UNCITRAL, ‘UNCITRAL Model Law on Electronic Signatures, 2001, <https://uncitral.un.org/en/texts/e-commerce/modellaw/electronic_signatures> accessed 10 May 2019

⁵³³ *ibid.*

⁵³⁴ Tommaso Senni, ‘Electronic Signatures: the UNCITRAL Model Law’ (2005) 1 *International Business Law Journal* 55-75.

⁵³⁵ art 1 of MLES.

concession; joint venture and other forms of industrial or business cooperation; carriage of goods or passengers by air, sea, rail or road.⁵³⁶

MLES is based on the principles of ‘non-discrimination, technological neutrality and functional equivalence’.⁵³⁷ It ‘establishes criteria of technical reliability for the equivalence between electronic and handwritten signatures’.⁵³⁸ MLES adopts a ‘functional equivalence approach’ that ‘extrapolates the functions of a paper document to create the criteria that need to be met by the paperless document for attaining a status equivalent to that of the paper document’.⁵³⁹ MLES also establishes ‘basic rules of conduct that may serve as guidelines for assessing duties and liabilities for the signatory, the relying party and the trusted third parties intervening in the signature process’.⁵⁴⁰ MLES provides for three parties who may involve ‘in the use and creation of an electronic signature’: (a) ‘the signatory’, (b) ‘the third party’ and (c) ‘the party who relies on the electronic signature’.⁵⁴¹ The term ‘Signatory’ is ‘a person that holds signature creation data and acts either on its own behalf or on behalf of the person it represents’.⁵⁴² The ‘third party’ is the ‘certificate service provider’, ‘who plays a central role in adding integrity to the electronic signature by issuing certificates that confirm the link between the signatory and the signature creation data’.⁵⁴³ This ‘Certificate service provider’ is a person that issues certificates and may provide other services related to electronic signatures’.⁵⁴⁴ As regards the party who relies on the electronic signature, or the ‘Relying party’ as MLES refers to it, is ‘a person that may act on the basis of a certificate or an electronic signature’.⁵⁴⁵

The basic rules of conduct for these key players, namely, the signatory, the certification service provider and the relying party, are provided in articles 8, 9 and 11 of the MLES. Article 8 provides for the conduct of the signatory. Article 8, according to Senni, ‘establishes that the signatory bears any and all of the liabilities connected to any breach of the duty to exercise reasonable care concerning the electronic techniques used to sign a document’.⁵⁴⁶ Article 9 of MLES states the required conduct of the certification service provider. Article 11 describes the

⁵³⁶ a footnote to art 1 of MLES. See the discussion in Indira Carr, ‘Of Conventions, Model Laws and Harmonization’ (2002) 8(4) *International Trade Law & Regulation* 105-108.

⁵³⁷ UNCITRAL (n 532).

⁵³⁸ *ibid.*

⁵³⁹ Carr (n 536).

⁵⁴⁰ UNCITRAL (n 532).

⁵⁴¹ Carr (n 536).

⁵⁴² art 1(d) of MLES.

⁵⁴³ Carr (n 536).

⁵⁴⁴ art 2(e) of MLES.

⁵⁴⁵ art 2(f).

⁵⁴⁶ Senni (n 534).

conduct of the relying party. This article obliges the relying party to verify the reliability of an electronic signature, and, where it is supported by a certificate, to take ‘reasonable steps to verify the validity, suspension or revocation of the certificate, and to observe any limitation with respect to the certificate’.⁵⁴⁷

Significantly, MLES defines the term ‘Electronic Signature’ as ‘data in electronic form in, affixed to or logically associated with, a data message, which may be used to identify the signatory in relation to the data message and to indicate the signatory’s approval of the information contained in the data message’.⁵⁴⁸ This definition may reflect the importance of the term ‘data message’, since a data message may include the information that the signatory intends to send, and be linked to it, or the parties who want to exchange this information or ‘data message,’ in accordance to article 2(c) as ‘information generated, sent, received or stored by electronic, optical or similar means including, but not limited to, electronic data interchange (EDI), electronic mail, telegram, telex or telecopy’.

The above-quoted definition of ‘data message’ is the same definition of ‘data message’ provided in article 2(a) of the UNCITRAL Model Law on Electronic Commerce 1996.⁵⁴⁹ The term ‘certificate’ used in MLES may also consist of the ‘data message’, as stated in the definition of ‘certificate’ in article 2(b) as ‘a data message or other record confirming the link between a signatory and signature creation data’. MLES also ‘contains provisions favouring the recognition of foreign certificates and electronic signatures based on a principle of substantive equivalence that disregards the place of origin of the foreign signature’.⁵⁵⁰ These provisions are stated in article 12, under the ‘Recognition of foreign certificates and electronic signatures’. Although MLES does not address the electronic bills of lading, it seems safe to say that it has played a role in the evolution of electronic bills of lading. This is because it deals with electronic signatures, which are required in the use of electronic bills of lading. The electronic signatures are used in the issuance and transfer of electronic bills of lading under the contract forms.

⁵⁴⁷ Carr (n 536)

⁵⁴⁸ art 2(a) of MLES.

⁵⁴⁹ art 2(a) of MLEC states: “Data message” means information generated, sent, received or stored by electronic, optical or similar means including, but not limited to, electronic data interchange (EDI), electronic mail, telegram, telex or telecopy”.

⁵⁵⁰ UNCITRAL (n 532).

2.10 E-Title

E-Title was established in 2004.⁵⁵¹ Tan et al. argue that E-Title was ‘founded by three ex-members of Bolero’.⁵⁵² E-Title is intended ‘to assist carriers and logistics operators in issuing and releasing bills of lading in a digitized electronic form without making any changes to the bill of lading or to the functionality of the bill’.⁵⁵³ E-Title seems thus to have had the same mission as Bolero, being to facilitate international trade through the use of electronic communications. Yet, E-Title is ‘a non-centralised system’.⁵⁵⁴ It depends on the ‘peer-to-peer’ technology.⁵⁵⁵ This technology is ‘a type of network in which each workstation (meaning any personal computer or any computer connected to a local area network) has equivalent capabilities and responsibilities’.⁵⁵⁶ It allows

... internet connected users to link their computers together across the world. Free software is used by the computers providing the means to communicate, enabling their users, known as ‘peers’, to search for access and ultimately download content that is stored in ‘shared’ files on the computer’s hard drive.⁵⁵⁷

Similar to Bolero, E-Title relies on a legal framework that involves a multilateral agreement in which users of E-Title are obliged ‘agree to treat e-documentation as the functional and legal equivalent of paper documents and undertake not to challenge the validity of any transaction facilitated by the system’.⁵⁵⁸ This agreement is the Electronic Title User Agreement (ETUA).⁵⁵⁹ Unlike Bolero Rulebook, E-Title ‘does not rely on the principles of novation and attornment’ to deal with the transfer issue of electronic bills of lading and ‘instead incorporates’ COGSA 1992 into ETUA.⁵⁶⁰

⁵⁵¹ E-Title, ‘Introduction’ <https://www.e-title.net/co_press.php> accessed 2 December 2020.

⁵⁵² Tan, Starr and Wu (n 31).

⁵⁵³ *ibid.*

⁵⁵⁴ *ibid.*

⁵⁵⁵ *ibid.*

⁵⁵⁶ Erik Vollebregt, ‘EC Competition Law Aspects of Peer-to-Peer Networking’ (2002) 8(3) *Computer and Telecommunications Law Review* 63-66.

⁵⁵⁷ Anthony Chinn, ‘How Has Technology Affected the Copyright Framework? A Focus on Digital Rights Management and Peer-to-Peer Technology’ (2016) 22(2) *Computer and Telecommunications Law Review* 44-52.

⁵⁵⁸ Tan, Starr and Wu (n 31).

⁵⁵⁹ *ibid.*

⁵⁶⁰ *ibid.*

All formats of E-Title electronic bills of lading may be accepted in terms of performing the receipt function.⁵⁶¹ The E-Title system seems flexible in how its electronic bills of lading are issued. The format of an E-Title electronic bill of lading ‘can be a fully structured document, such as those presented as EDI or XML documents, a document intended for printing, such as an Adobe Acrobat file, or even an image’.⁵⁶² Then, It seems possible to reach that similar E-Title electronic bills of lading may contain the details of the cargo as a confirmation from the carrier that it has either shipped on board or received the goods described in the E-Title electronic bill of lading. Based on such issuance flexibility, the carrier can insert its terms and conditions of the contract of carriage as well as particular of the goods in the E-Title bill of lading. As far as the document of title function is concerned, the E-Title system ‘manages the state of its eBLs (electronic bills of lading) at all times to prevent double trading or illegal transfers’, and ‘maintains secure logs of every eBL transfer’.⁵⁶³ Tan et al. describe how the E-Title system works, including transfer of E-Title bill of adding, and this description might be rearranged in steps as follows:

1. The carrier can choose to deploy the solution via the Singapore TradeXchange portal or it can invest in a secure device commonly known as the “black box” (with obvious reference to the black box used by airlines).
2. This black box will sit behind the carrier’s own in-house system for generating bills of lading.
3. Using the E-Title’s patented software, the Singapore TradeXchange portal or the black box will give the bills issued by the carrier’s own in-house system, e-title and negotiable functionality, ‘locking’ these two qualities into the E-Title bill of lading.
4. The carrier’s customers will access the solution via the carrier’s portal on the internet.
5. Each time an E-Title bill of lading is transferred from holder to holder, the endorsing party signs the endorsement record, ensuring authentication, non-repudiation and data integrity, similar to the physical endorsements on the back of a paper bill of lading.
6. As with paper bills of lading, an E-Title bill of lading can, at any one time, be possessed by only one party.
7. Like Bolero and ESS bills of lading, an E-Title bill of lading can also be converted into a paper bill of lading at any stage of the trade.⁵⁶⁴

⁵⁶¹ E-Title, ‘FAQS’ <http://www.e-title.net/sol_faqs.php> accessed 8 July 2020

⁵⁶² *ibid.*

⁵⁶³ Tan, Starr and Wu (n 31).

⁵⁶⁴ *ibid.*

In practice, E-Title, according to Tan et al., ‘has been working in partnership with carriers and global service providers to extend its services to support the use of eBLs’.⁵⁶⁵

2.11 essDOCS

essDOCS is a ‘company’ that ‘was established in 2005 to promote the use of electronic alternatives to shipping documents’.⁵⁶⁶ Tan et al. say that essDOCS was created by ‘[t]wo MBA students who found that paper trading archaic and who set out to design a system that would propel the shipping industry into modern times’.⁵⁶⁷ Like Bolero, it ‘aims to create a closed system available to members linked by a Databridge Services and Users Agreement (DSUA)’.⁵⁶⁸ This means that all users have to be members to be able to benefit from its services. Therefore, the users or members have to register first in the system and be subject to the DSUA. This DSUA is the ‘principal agreement’ that ‘regulates the operation of the solution and provides the legal framework within which the Users can create and send shipping documents, including Bills of Lading, electronically’.⁵⁶⁹ DSUA is ‘a prerequisite for the creation of legally effective eDocs (and, in particular, electronic Bills of lading), ensuring that all participants are committed to treating electronic documentation as the functional and legal equivalent of paper Bills of Lading’.⁵⁷⁰

Similar to Bolero, DSUA is based on the concepts of ‘attornment’ and ‘novation’.⁵⁷¹ The essDOCS users may have a ‘control’ over the essDOCS bill of lading similar to that over the ‘original’ paper bill of lading, and ‘only one party has access to the originals at any time and control is passed by endorsing and sending the electronic original to the next user in the chain’.⁵⁷² Zhao mentions the function available in the use of essDOCS bill of lading such as “return”, “endorse”, “produce”, “amend” and “convert” (to paper format).⁵⁷³ The interview with essDOCS showed that essDOCS ensures that only one party has control over the original

⁵⁶⁵ *ibid.*

⁵⁶⁶ Goldby (n 26) 338.

⁵⁶⁷ Tan, Starr and Wu (n 31).

⁵⁶⁸ Gaskell (n 49).

⁵⁶⁹ essDOCS, ‘Users Agreement’ <<https://essdocs.com/capabilities/users-agreement-dsua>> accessed 2 December 200.

⁵⁷⁰ *ibid.*

⁵⁷¹ Zhao (n 503).

⁵⁷² *ibid.*

⁵⁷³ *ibid.*

electronic bill.⁵⁷⁴ By having such control, the holder has the power to take action on the bill.⁵⁷⁵ The physical possession of a paper bill of lading is replicated through the electronic rights of control over the electronic record.⁵⁷⁶ According to Tan et al., in practice, essDOCS:

... claims that its electronic solution can link all supply chain participants. Exporters, forwarders and logistics companies can manage the online creation and approval of trade documentation in its system. Original title documents required for export, shipping, trade, finance and import (such as electronic bills of lading) can be electronically signed, presented and exchanged by exporters, importers, carriers, banks (and other relevant parties) in its system. The ESS indicated that work is currently underway to tie its system to customs authorities' 'single windows' to enable a fully digitized process without the need to print out paper copies for local authorities that do not (or cannot) accept eDocs.⁵⁷⁷

Similar to Bolero, essDOCS presents a solution for the negotiability challenge based on 'CargoDocs'.⁵⁷⁸ This CargoDocs is defined as 'a secure, web-based platform which digitizes the creation & approval (via Doc Hub) as well as the exchange (via DocEx) of electronic original documents required for global trade'.⁵⁷⁹

The similarities between Bolero and essDOCS can be realized.⁵⁸⁰ According to Tan et al. Bolero and essDOCS may 'replicate' the paper bills of lading.⁵⁸¹ Bolero and essDOCS rely on 'a legal framework' that involves 'multilateral agreements', namely, the Rulebook in Bolero and DSUA in essDOCS, by which the users in both systems 'agree to treat electronic documentation within the systems as the functional and legal equivalent of paper documents'.⁵⁸² Both Bolero and essDOCS users are also obliged under Rulebook and DSUA 'not to challenge the validity of any transaction or communication made on the ground that the same was made in e-form, instead of in paper form and/or that it is not signed or sealed'.⁵⁸³ Bolero Rulebook and essDOCS DSUA are governed by the English law,⁵⁸⁴ and based on the

⁵⁷⁴ Interviews (n 15).

⁵⁷⁵ *ibid.*

⁵⁷⁶ *ibid.*

⁵⁷⁷ Tan, Starr and Wu (n 31).

⁵⁷⁸ essDOCS, 'Solutions' <<https://essdocs.com/solutions>> accessed 2 December 2020.

⁵⁷⁹ *ibid.*

⁵⁸⁰ Tan, Starr and Wu (n 31).

⁵⁸¹ *ibid.*

⁵⁸² *ibid.*

⁵⁸³ *ibid.*

⁵⁸⁴ Goldby (n 26) 142.

concepts of ‘attornment’ and ‘novation’,⁵⁸⁵ as mentioned earlier, to cope with the transfer issue of electronic bills of lading. Moreover, Both Bolero and essDOCS systems rely on ‘central registries for logging and storing the holdership’ of their bills of lading ‘for future references’.⁵⁸⁶ Furthermore, both Bolero and essDOCS use the ‘Internet’ to provide their services to the users.⁵⁸⁷ Additionally, Tan et al. claim that ‘[b]oth systems are constantly tested against external hacking and viruses and other forms of cyber attacks and both system providers take out insurance against cyber risks for losses caused by their systems’.⁵⁸⁸

The next chapters will examine how essDOCS DSUA provides for the use of electronic bills of lading. Chapter Four will examine how the essDOCS bill of lading may digitalize the first function of the paper bill of lading as a receipt for the goods. Chapter Five will be dealing with how the essDOCS bill of lading may apply the second function of the paper bill of lading as evidencing or containing the contract of carriage. Chapter Six will examine how the essDOCS bill of lading may be transferred to dematerialize the first function of the paper bill of lading as a document of title.

2.12 United Nations Convention on the Use of Electronic Communications in International Contracts

This Convention was adopted by the General Assembly of the United Nations on 23 November 2005 by its resolution 60/21.⁵⁸⁹ It entered into force on 1 March 2013.⁵⁹⁰ It ‘aims at facilitating the use of electronic communications in international trade by assuring that contracts concluded and other communications exchanged electronically are as valid and enforceable as their traditional paper-based equivalents’.⁵⁹¹ Wang describes the Convention as ‘a significant achievement in international legislation. It is designed to remove obstacles to electronic

⁵⁸⁵ Zhao (n 503).

⁵⁸⁶ Tan, Starr and Wu (n 31).

⁵⁸⁷ *ibid.*

⁵⁸⁸ *ibid.*

⁵⁸⁹ UNCITRAL, ‘Explanatory note by the UNCITRAL secretariat on the United Nations Convention on the Use of Electronic Communications in International Contracts’, attached to the Convention body text.

⁵⁹⁰ UNCITRAL, ‘United Nations Convention on the Use of Electronic Communications in International Contracts’ <https://uncitral.un.org/en/texts/ecommerce/conventions/electronic_communications> accessed 10 May 2019.

⁵⁹¹ *ibid.*

commercial transactions and enhance legal certainty'.⁵⁹² , To reach that aim, the Convention establishes the principles of technological neutrality and functional equivalence as follows:

Considering that problems created by uncertainty as to the legal value of the use of electronic communications in international contracts constitute an obstacle to international trade,

Convinced that the adoption of uniform rules to remove obstacles to the use of electronic communications in international contracts, including obstacles that might result from the operation of existing international trade law instruments, would enhance legal certainty and commercial predictability for international contracts and help States gain access to modern trade routes.

Being of the opinion that uniform rules should respect the freedom of parties to choose appropriate media and technologies, taking account of the principles of technological neutrality and functional equivalence, to the extent that the means chosen by the parties comply with the purpose of the relevant rules of law.

The Convention 'applies to the use of electronic communications in connection with the formation or performance of a contract between parties whose places of business are in different States'.⁵⁹³ The term 'Communication' is defined as 'any statement, declaration, demand, notice or request, including an offer and the acceptance of an offer, that the parties are required to make or choose to make in connection with the formation or performance of a contract'.⁵⁹⁴ Faria sees that '[t]he word "contract" in the Convention is used in a broad way and covers, for example, arbitration agreements and other legally binding agreements whether or not they are usually called "contracts"'.⁵⁹⁵ The Convention applies to contracts regardless 'the nationality of the parties or their 'civil or commercial character'.⁵⁹⁶ Significantly, the Convention excludes bills of lading from its scope of application since it expressly provides that the 'Convention does not apply to bills of exchange, promissory notes, consignment notes, bills of lading, warehouse receipts or any transferable document or instrument that entitles the bearer or beneficiary to claim the delivery of goods or the payment of a sum of money'.⁵⁹⁷

⁵⁹² Faye Fangfei Wang, 'E-confidence: Offer and Acceptance in Online Contracting' (2008) 22(3) *International Review of Law, Computers & Technology* 271-278.

⁵⁹³ art 1(1) of United Nations Convention on the Use of Electronic Communications in International Contracts.

⁵⁹⁴ art 4(a).

⁵⁹⁵ Jose Angelo Estrella Faria, 'The United Nations Convention on the Use of Electronic Communications in International Contracts – An Introductory Note' (2006) 55(3) *International and Comparative Law Quarterly* 689-694.

⁵⁹⁶ art 1(3) United Nations Convention on the Use of Electronic Communications in International Contracts.

⁵⁹⁷ art 2(2).

However, the Convention reconfirms the importance and adoption of the *principle of functional equivalence* ‘between paper documents and electronic alternatives, as well as between electronic authentication methods and handwritten signatures’ in article 9,⁵⁹⁸ Hence, according to Faria, this article ‘reiterates the basic rules contained in Articles 6, 7 and 8 of the UNCITRAL Model Law on Electronic Commerce’,⁵⁹⁹ as follows:

1. Nothing in this Convention requires a communication or a contract to be made or evidenced in any particular form.
2. Where the law requires that a communication or a contract should be in writing, or provides consequences for the absence of a writing, that requirement is met by an electronic communication if the information contained therein is accessible so as to be usable for subsequent reference.
3. Where the law requires that a communication or a contract should be signed by a party, or provides consequences for the absence of a signature, that requirement is met in relation to an electronic communication if ...

The *principle of functional equivalence* plays a fundamental role in the solutions provided in the relevant international conventions, model laws and contract forms for the use of electronic documents since it equalizes between electronic and paper documents in the legal value and enforceability. This principle is a foundation for the recognition of electronic bills of lading as functional equivalents to paper bills, as will be seen in the next chapters. Although the Convention does not apply to bills of lading, it may encourage and assist somehow in the evolution and use of electronic bills of lading since it provides for the use of electronic communication in trade in general.

2.13 Convention on Contracts for Carriage of Goods Wholly or Partly by Sea (the Rotterdam Rules)

This Convention was adopted by the UN General Assembly on 11 December 2008.⁶⁰⁰ The discussion of Rotterdam Rules, for the purposes of this thesis, deals only with the use of electronic documents under these Rules, and not with other parts. The Rotterdam Rules establish ‘a uniform and modern legal regime governing the rights and obligations of shippers,

⁵⁹⁸ UNCITRAL (n 590).

⁵⁹⁹ Faria (n 595).

⁶⁰⁰ UNCITRAL, ‘United Nations Convention on Contracts for the International Carriage of Goods Wholly or Partly by Sea (New York, 2008) (the "Rotterdam Rules")’ <https://uncitral.un.org/en/texts/transportgoods/conventions/rotterdam_rules> accessed 3 December 2020.

carriers and consignees under a contract for door-to-door carriage that includes an international sea leg'.⁶⁰¹ These Rules are intended to establish a new international legal regime to govern the carriage of good by sea instead of the current regime of Hague-Visby Rules and the Hamburg Rules.⁶⁰² The current regime 'lacks uniformity and fails to adequately take into account modern transport practices, including containerization, door-to-door transport contracts and the use of electronic transport documents'.⁶⁰³ Bal argues that the current regimes of the Hague-Visby Rules and the Hamburg Rules do not provide for the 'electronic commerce because at the time when these regimes were negotiated, there was no commercial need to address the topic'.⁶⁰⁴ Goldby notes that '[t]he Convention (Rotterdam Rules) do not refer to "bills of lading" or "sea waybills", but use uses the more neutral terms "transport document" and "electronic transport record"'.⁶⁰⁵ Similarly, Diamond argues:

The Convention (the Rotterdam Rules), by contrast, does not refer to the labels under which existing commercial documents are currently known; instead it defines its own terms and those terms are independent of any national law or practice relating to bills of lading. This, in principle, has clear advantages, as different legal systems have different provisions governing the characteristics and use of documents of title in the carriage of goods.⁶⁰⁶

The Rotterdam Rules provide for the 'electronic transport record' as an electronic equivalent of the 'transport document', serving as a receipt for the goods and evidencing or containing the contract of carriage:

'Electronic transport record' means information in one or more messages issued by electronic communication under a contract of carriage by a carrier, including information logically associated with the electronic transport record by attachments or otherwise linked to the electronic transport record contemporaneously with or subsequent to its issue by the carrier, so as to become part of the electronic transport record, that:

(a) Evidences the carrier's or a performing party's receipt of goods under a contract of carriage; and

⁶⁰¹ *ibid.*

⁶⁰² *ibid.*

⁶⁰³ UN General Assembly Resolution 63/122 on 11 December 2008 on the adoption of the United Nations Convention on Contracts for the International Carriage of Goods Wholly or Partly by Sea.

⁶⁰⁴ Abhinayan Basu Bal, 'The Legal Framework for Electronic International Trade: The Rotterdam Rules in Perspective' in Maximo Q Mejia, Jr (ed), *Selected Issues in Maritime Law and Policy* (Nova Science Publishers 2013) 188.

⁶⁰⁵ Goldby (n 26) 188.

⁶⁰⁶ Anthony Diamond, 'The Next Sea Carriage Convention?' (2008) 2 *Lloyd's Maritime and Commercial Law Quarterly* 135-187.

(b) Evidences or contains a contract of carriage.⁶⁰⁷

Gaskell sees that '[a]t one level the electronic transport record is merely a collection of data, associated electronically, which does not need to have a particular form, but for it to be used in practice it must be visible in some recognizable way'.⁶⁰⁸

The discussion on the Rotterdam Rules under this subsection is intended to be an introduction to these Rules and more details will be dealt with in the next chapters. As a key instrument to deal with the subject, the Convention or Rotterdam Rules will be examined in the next chapters in terms of the three functions of electronic bills of lading, or more accurately, by negotiable electronic transport records. Chapters Four will examine how the Rotterdam Rules provide for the negotiable electronic transport record to perform the first function of paper bill of lading as a receipt for the goods. Chapter Five will be dealing with how the negotiable electronic transport record may perform the second function of paper bill of lading as evidencing or containing the contract of carriage under the Rotterdam Rules. Chapter Six will examine how the Rotterdam Rules provide for the negotiable electronic transport record to perform the third function of paper bill of lading as a document of title.

2.14 Blockchain technology

Blockchain is defined as 'a database that is recorded and updated via a decentralised registration system, a distributed ledger. The data are stored in a series of interlinked blocks, forming a chain of blocks (literally a "blockchain") that cannot be altered'.⁶⁰⁹ It is also defined as 'a technological and cryptographies process involving a digital decentralized ledger in which transactions are added in chronological order, creating a chain of blocks'.⁶¹⁰ Blockchain is a 'distributed database. It comprises a list of ordered records called blocks. Each block is linked to a previous block and is time stamped'.⁶¹¹ Each block may be looked upon as 'a container data structure', consist[ing] of information about recent transactions, a reference to the previous block in the blockchain, a timestamp and a unique answer to a challenging mathematical

⁶⁰⁷ art 1(8) of Rotterdam Rules.

⁶⁰⁸ Nicholas Gaskell, 'Bills of Lading in an Electronic Age' (2010) 2 Lloyd's Maritime and Commercial Law Quarterly 233-284.

⁶⁰⁹ Olivier Hari and Ulysse Pasquier, 'Blockchain and Distributed Ledger Technology (DLT): Academic Overview of the Technical and Legal Framework and Challenges for Lawyers' (2018) 5 International Business Law Journal 423-47.

⁶¹⁰ Carol R. Goforth, 'How Blockchain Could Increase the Need for and Availability of Contractual Ordering for Companies and Their Investors' (2019) 94(1) North Dakota Law Review 1-64.

⁶¹¹ Arthur Piper, 'Blockchain and Smart Contracts' (2017) 71(4) IBA Global Insight 13.

puzzle, used to validate the data and the transactions included in that block'.⁶¹² A block is 'a collection of data consisting of a header, the transactions incorporated within the block, and a list of uncles (stale blocks)'.⁶¹³ Blockchains also are referred to as 'ledgers' because they commonly track transactions.⁶¹⁴ The term 'distributed ledger technology' (DLT) is used to refer to blockchains.⁶¹⁵ Bacon et al. say:

We use the term distributed ledger technology (DLT) to refer to a ledger that is stored in a distributed manner across a peer-to-peer network. By this definition, a distributed ledger (DL) is also a blockchain if it uses a blockchain data structure to record transactions. However, a blockchain that is stored in a centralised manner is not a DL because it is not distributed.⁶¹⁶

The connection between blockchains and peer-to-peer networks, which is defined earlier in the discussion of E-title, is described as:

Blockchains function on a peer-to-peer network. Computers connecting to the network serve as nodes. Nodes are responsible for validating modifications to data. These modifications are called transactions. Once validated, transactions are converted to blocks and permanently attached to the end of the chain. The collective record of all transactions is called the blockchain. Because prior blocks on the blockchain cannot usually be modified, the blockchain itself serves as a permanent record of all information altered on a blockchain network.⁶¹⁷

Blockchains, as 'distributed ledgers', 'can be updated without the need to rely on any centralised authority to verify that information put in the database is valid'.⁶¹⁸ That is the main difference between Bolero and essDOCS contract forms, on the one hand, and blockchain technology, on the other hand. Bolero and essDOCS are closed systems where all users must be members and subscribers to the systems to be able to use the systems' services, as discussed

⁶¹² M Koulouri-Fyrigou, 'Blockchain Technology: An Interconnected Legal Framework for an Interconnected System'. (2018) 9 Journal of Law, Technology & the Internet 1-15.

⁶¹³ G Karame and E Androulaki, *Bitcoin and Blockchain Security* (Artech House 2016) 183.

⁶¹⁴ Jean Bacon, Johan David Michels, Christopher Millard and Jatinder Singh, 'Blockchain Demystified: A Technical and Legal Introduction to Distributed and Centralized Ledgers' (2018) 25(1) Richmond Journal of Law & Technology 1-106.

⁶¹⁵ *ibid.*

⁶¹⁶ *ibid.*

⁶¹⁷ Tyler Biscontini, 'Blockchain (Technology)' (2020) *Salem Press Encyclopedia of Science* 2.

⁶¹⁸ Chris Berg, Sinclair Davidson and Jason Potts, 'The Blockchain Revolution' (2017) 69(4) Institute of Public Affairs Review 34-37.

earlier in this chapter,⁶¹⁹ whereas blockchain is a decentralized system that is based on a peer-to-peer network. Thus, blockchain is somehow similar to the E-Title system, which is also a non-centralized system (i.e., a peer-to-peer system) that facilitates the secure transfer of electronic bills of lading from one holder to another.⁶²⁰

In this connection, the discussion on distributed ledgers may need to differentiate between the 'permissioned' and 'permissionless' blockchain systems.⁶²¹ In the permissioned blockchain systems, the 'parties have to identify themselves to be registered on the network'.⁶²² On the other hand, the permissionless blockchain systems 'is open for every interested party with Internet access', as in the case of bitcoin.⁶²³ Blockchain is linked to the term 'bitcoin', and the latter seems a result of the former, according to Lilienthal and Ahmad who say that '[t]he available descriptions of the Blockchain technology, and its corollary the Bitcoin so-called currency, are marked by an apparent widespread absence of Sufficiently authoritative description'.⁶²⁴ Bitcoin, as an 'electronic cash', 'allows a user to send an online payment to another user without having to rely on trust in any intermediary' or 'technologies such as a cheque, credit card, debit card, bank wire transfer, or money transfer'.⁶²⁵ "Cryptocurrencies", the best known being Bitcoin, are defined here as private digital currencies that are not—or in principle not—originating from a central or commercial bank or another authorised issuer of electronic money'.⁶²⁶ Karame and Andrulaki argue that '[t]he core idea of Bitcoin is simple. The system allows two or more parties to exchange financial transactions without passing through intermediaries (such as banks or payment processors). These transactions are validated collectively in a peer-to-peer network by all users'.⁶²⁷

⁶¹⁹ See subsections 2.8 'Bills of Lading Electronic Registry Organization (Bolero)' and 2.11 Electronic Shipping Solutions (essDOCS) in Chapter Three.

⁶²⁰ See subsection 2.10 'E-Title' in Chapter Three.

⁶²¹ Christian Albrecht, 'Blockchain Bills of Lading: The End of History? Overcoming Paper-Based Transport Documents in Sea Carriage Through New Technologies' (2019) 43(2) *Tulane Maritime Law Journal*, (2019) 251-288.

⁶²² *ibid.*

⁶²³ *ibid.*

⁶²⁴ Gary Lilienthal and Nehaluddin Ahmad, 'Bitcoin: Is It Really Coinage?' (2018) 24(3) *Computer and Telecommunications Law Review* 49-56. See also Bacon, Michels, Millard and Singh (n 614).

⁶²⁵ Saifedean Ammos, 'Blockchain Technology: What Is It Good For?' (2018) 34 *Banking and Finance Law Review* 239.

⁶²⁶ Andreas Rahmatian, 'Electronic Money and Cryptocurrencies (Bitcoin): Suggestions for Definitions' (2019) *Journal of International Banking Law and Regulation* 34(3) 115-21.

⁶²⁷ Karame and Andrulaki (n 613).

Hari and Pasquier argue that ‘the first Blockchain appeared in 2008’.⁶²⁸ The inventor was ‘Satoshi Nakamoto’, which was a ‘pseudonym, the equivalent of John Doe’.⁶²⁹ ‘[O]n October 31, 2008, Satoshi Nakamoto, following his vision to create a purely peer-to-peer version of electronic cash, published a paper developing a protocol for digital cash that used Bitcoin.’⁶³⁰ Eszteri says that the ‘Bitcoin software was released at the beginning of 2009 and the first Bitcoin transactions were made using a network established according to NAKAMOTO'S thesis’.⁶³¹ Because of the strong connection between blockchain and bitcoin, some commentators on the subject of blockchain use the two terms interchangeably. Hari and Pasquier comment on the background of blockchain, saying that ‘the first blockchain appeared in 2008. Its name: Bitcoin, the most well-known’.⁶³² Hari and Pasquier clearly infer that bitcoin is an application of blockchain, saying ‘blockchain is a technology that can be used for a wide range of applications. It allows its users to buy and exchange digital assets called bitcoins.’⁶³³ Ammous considers that the term blockchain ‘is a name originally given to the design underpinning the operation of the digital currency Bitcoin’.⁶³⁴ Lilienthal and Ahmad take the view that blockchain technology and bitcoin were invented together in 2008.⁶³⁵ Yet, bitcoin may still be an application to the blockchain technology. Goforth says ‘with Bitcoin as its first major and probably still most famous innovation, blockchain is a technological and cryptographic process involving a digital decentralized ledger in which transactions are added in chronological order, creating a "chain" of blocks’.⁶³⁶ In connection to electronic bills of lading, the ‘edoxOnline’ and ‘Wave’ are the recent applications of blockchain bills of lading as shown in the next subsections.

2.14.1 edoxOnline

edoxOnline is a platform provided by GlobalShare.⁶³⁷ It ‘provides an electronic paperless system which is supported by a legal framework to facilitate transfer and endorsement of electronic bills of lading, removing the need for a paper bill although there is scope to revert to

⁶²⁸ Hari and Pasquier (n 609).

⁶²⁹ *ibid.*

⁶³⁰ Fyrigou (n 612).

⁶³¹ D Eszteri, ‘Bitcoin: Anarchist Money or the Currency of the Future’ (2013) 151 *Studia Iuridica Auctoritate Universitatis Pecs Publicata* 23-46.

⁶³² Hari and Pasquier (n 609).

⁶³³ *ibid.*

⁶³⁴ Ammous (n 625).

⁶³⁵ Lilienthal and Ahmad (n 624).

⁶³⁶ Goforth (n 610).

⁶³⁷ Goldby (n 26) 342. See GlobalShare S.A., Home, <<https://www.globalshare.com.ar/>> accessed 11 October 2020.

paper where it is necessary to do so'.⁶³⁸ GlobalShare, according to Goldby, is 'an Argentinian company offering tools and optimization solutions to improve processes in supply chains, logistics, and commercial networks'.⁶³⁹ edoxOnline was approved by the International Group of P&I Clubs in mid of 2019, among other specific paperless trading systems.⁶⁴⁰ Therefore, the liabilities arising in respect of the carriage under edoxOnline are covered by the Group.⁶⁴¹ It seems, like other service providers of electronic bills of lading, edoxOnline is based on a multilateral agreement.⁶⁴² This agreement is referred to as the e-BL Terms and Conditions (T&C).⁶⁴³ edoxOnline is the first system approved by the Group based on the blockchain technology.⁶⁴⁴ It 'is built on the Ethereum,⁶⁴⁵ blockchain and is internet-based'⁶⁴⁶. The edoxOnline users have 'two-factor authentication (2FA) private keys' to use the services and features of the edoxOnline system.⁶⁴⁷ The carrier issues the edoxOnline electronic bill of lading and sends it to the shipper via the edoxOnline features, based on the shipper's request.⁶⁴⁸ The edoxOnline electronic bill of lading can also be amended, transferred or endorsed and converted to a paper bill of lading via these features.⁶⁴⁹ Other parties involved in the carriage of goods such as 'customs brokers, supervision and fumigation companies, maritime agents, forwarders, state authorities, chambers of commerce and so on' can benefit from the edoxOnline system to obtain information about the cargo.⁶⁵⁰

⁶³⁸ UK P&I Club (n 28).

⁶³⁹ Goldby (n 26) 342.

⁶⁴⁰ UK P&I Club (n 28).

⁶⁴¹ *ibid.*

⁶⁴² *ibid.*

⁶⁴³ *ibid.*

⁶⁴⁴ *ibid.*

⁶⁴⁵ Karame and Androulaki describe the term 'Ethereum':

Similarly to Bitcoin, Ethereum leverages proof-of-work blockchain technology to achieve distributed consensus. By providing a fully fledged Turing-complete programming language instead of Bitcoin's simple scripting language, Ethereum allows arbitrary applications referred to as smart contracts to be run on its blockchain. For example, a basic Namecoin version for the Ethereum blockchain can be written with a few lines of code. Creating subcurrencies only requires minimal programming effort as well. Another concrete use case of Ethereum is to build decentralized autonomous organisations (DAOs). Ethereum in fact states a decentralized platform to build smart applications. The contracts run exactly as programmed, with no possibility of downtime, censorship, fraud, or third-party interference. Karame and Androulaki (613).

⁶⁴⁶ Goldby (n 26) 342.

⁶⁴⁷ *ibid.*

⁶⁴⁸ *ibid.*

⁶⁴⁹ *ibid.*

⁶⁵⁰ *ibid.*

2.14.2 Wave

Wave is described as ‘a distributed ledger network which uses blockchain technology to enable carriers, shippers, consignees, endorses, banks, freight forwarders and other parties to issue, exchange and sign, a variety of supply chain encrypted documents with no need for a central server or registry’.⁶⁵¹ Wave is the latest system providing paperless trade services approved by the International Group of P&I Clubs in December 2019.⁶⁵² It is also the second system approved by the Group ‘to use Blockchain technology and the first to be fully decentralised’.⁶⁵³ Wave users can directly transact and exchange the documents via the peer-to-peer technology.⁶⁵⁴

Like other providers, discussed previously, Wave is based on ‘multipartite contractual framework’⁶⁵⁵ This framework contains the ‘legal documentation and terms of use associated with the use and operation of WAVE’.⁶⁵⁶ It is rereferred to as ‘WAVE Application and Network Bylaws, version 1 date 20 Dec 2019’.⁶⁵⁷ These Bylaws, according to Wave, are described as ‘a legal document that defines the roles, rights, and liabilities of all users amongst themselves, setting contractual obligations in regards to the issuing of documents or any other usage of the network’.⁶⁵⁸ The Wave Bylaws may provide for the functional equivalence principle in terms of the legal value and enforceability of WAVE documents, including electronic bills of lading. They prevent the users from challenging the ‘originality’ of WAVE documents before courts.⁶⁵⁹ Like the multilateral agreements of previous providers, such Bolero, essDOCS or E-Title, the Wave agreement is governed by the English law.⁶⁶⁰ According to WAVE, the agreement is ‘built to fully imitate the rules set in the English COGSA-1992 law. The bylaws are governed by the laws of England giving exclusive jurisdiction to the courts of London, UK’.⁶⁶¹

⁶⁵¹ UK P&I Club (n 28).

⁶⁵² *ibid.*

⁶⁵³ *ibid.*

⁶⁵⁴ Goldby (n 26) 351.

⁶⁵⁵ *ibid* 164.

⁶⁵⁶ UK P&I Club (n 28).

⁶⁵⁷ *ibid.*

⁶⁵⁸ Wave BL, ‘faqs’ <<https://wavebl.com/faqs/>> accessed 13 October 2020.

⁶⁵⁹ *ibid.*

⁶⁶⁰ Goldby (n 26) 164.

⁶⁶¹ Wave BL (n 658).

As regards the issuance and transfer of Wave electronic bill of lading, the carrier uses its Trade Management System (TMS) to issue the Wave bill and send it to the shipper.⁶⁶² The issuance of the Wave bill of lading is preceded by arrangements and communications between the carrier and the shipper.⁶⁶³ These arrangements and communications are carried out through the peer-to-peer basis between the carrier and the shipper offered by Wave as a blockchain-based system, as mentioned earlier. Then, Wave is deemed to ‘act as an electronic courier between the two or more transacting parties’.⁶⁶⁴ Therefore, the shipper and carrier may enjoy more flexibility in the exchange of documents or information needed to issue and transfer the electronic bills of lading in comparison with other service providers.

Based on the peer-to-peer basis, the carrier and shipper can directly exchange the contract particulars such as the description of the goods and information about the name and address of the carrier and consignee, the name of the ship, the port of loading and discharge, place and date of delivery and any other information to be included in the Wave electronic bill of lading or required under the international conventions, such as under article 36 of Rotterdam Rules. After exchanging these particulars, the carrier issues the Wave electronic bill of lading that evidences the receipt of the goods. Moreover, since the carrier and shipper transact directly, it seems they can agree on the format of the electronic bill of lading such as in word, pdf, or even the image of a paper bill of lading itself by scanning it and then sending to the shipper.⁶⁶⁵ Therefore, the first function of electronic bill of lading, or electronic transport record according to article 1(8)(a) of Rotterdam Rules, as a receipt for the goods seems to be achieved in the case of Wave electronic bills of lading.

Similarly, the carrier can send the terms and conditions of the contract of carriage directly to the shipper alongside with the information on the goods. Article 1(23) of Rotterdam Rules define the contract particulars to mean ‘any information relating to the contract of carriage or to the goods (including terms, notations, signatures and endorsements) that is in a transport document or an electronic transport record’.⁶⁶⁶ The signatures referred to in article 1(23), as a part of the contract particulars, seem to be reflected under the Wave system in two types of ‘digital signature’: the ‘standard digital signature’ and ‘timestamp digital signature’ or the

⁶⁶² Goldby (n 26) 351.

⁶⁶³ *ibid.*

⁶⁶⁴ *ibid.*

⁶⁶⁵ This way of issuance is used by Bolero. See the interview summary with Bolero in Appendix 1.

⁶⁶⁶ See further discussion on the contract particulars in subsection 2.1 ‘Rotterdam Rules’ in Chapter Four.

‘blockchain signature’.⁶⁶⁷ The Wave users can choose from these two types of signatures based on their features.⁶⁶⁸ Then, the terms and conditions of the contract of carriage together with the information on the goods are to be included in the Wave electronic bill of lading. The carrier and shipper may amend, change or alter these terms and conditions or any other information in the Wave electronic bill of lading directly via the peer-to-peer basis. Therefore, the Wave electronic bill of lading may perform the second function as evidencing or containing the contract of carriage in accordance with article 1(8)(b) of Rotterdam Rules.⁶⁶⁹

As far as the third function as a document of title is concerned, the carrier, after the shipper issues the Wave electronic bill of lading, ‘a new entry is created in the blockchain’.⁶⁷⁰ The carrier and shipper or holder of a Wave electronic bill of lading exclusively exchange the date or contents of the bill.⁶⁷¹ These contents are not recorded in or received by the Wave blockchain system.⁶⁷² Blockchain ‘does not act as intermediary’ and it ‘simply records the transactions between two addresses’ with ‘pseudonyms names’.⁶⁷³ Moreover, under the Wave blockchain system, according to Goldby, there are ‘two separate ledgers’, to ‘track possession and title’ and only the holder can endorse the Wave electronic bill of lading or surrender it for delivery.⁶⁷⁴ This type of confidentiality in the process of issuance and transfer of Wave bill as well as the information exchange between the concerned parties is all carried out through the peer-to-peer method of the blockchain technology. This confidentiality seems advantageous in practice since it may serve the commercial needs to have secured transactions in the electronic paperless trade in general and in the transfer of electronic bills of lading in particular. This confidentiality also may reflect the reliable method requirement under the relevant international instruments, specifically under article 9(1)(a) of Rotterdam Rules and article 10(1)(b) of MLETR, as discussed in Chapter Six. When the Wave electronic bill of lading is transferred, the possession or title takes a few minutes to be confirmed by the Wave blockchain system.⁶⁷⁵ After the

⁶⁶⁷ Goldby (n 26) 351.

⁶⁶⁸ *ibid.*

⁶⁶⁹ See further discussion on art 1(8)(b) of Rotterdam Rules and the second function to be performed by electronic bills of lading as evidencing or containing the contract of carriage in subsection 2.1 ‘Rotterdam Rules’ in Chapter Five.

⁶⁷⁰ Goldby (n 26) 352.

⁶⁷¹ *ibid.*

⁶⁷² *ibid.*

⁶⁷³ *ibid.*

⁶⁷⁴ *ibid.*

⁶⁷⁵ *ibid.*

confirmation, the transferee will be able to transfer the Wave bill to another transferee and so on in a ‘chains of possession and title’, as in the case of paper bills of lading.⁶⁷⁶

The requirement of exclusive control over an electronic transferable record provided under the Rotterdam Rules and MLETR,⁶⁷⁷ may be achieved in the case of blockchain bill of lading.⁶⁷⁸ Takahashi argues that ‘a blockchain-based electronic bill of lading would be subject to the exclusive control of the holder of the private key corresponding to the address where the bill of lading is kept.’⁶⁷⁹ Moreover, the blockchain system records the chains or transactions, as explained earlier, to ensure ‘the singularity of relevant rights’.⁶⁸⁰ This singularity means that there must be a singular electronic bill of lading and a single holder.⁶⁸¹ This singularity principle is already used by other service providers of electronic bills of lading, specifically by Bolero and essDOCS.⁶⁸²

2.15 Single window

The United Nations Economic Commission for Europe (UNECE) in its Recommendation No. 33, ‘developed by its Centre for Trade Facilitation and Electronic Business (UN/CEFACT)’,⁶⁸³ defines the single window as a ‘facility that allows parties involved in trade and transport to lodge standardized trade-related information and/or documents to be submitted once at a single entry point to fulfil all import, export, and transit-related regulatory requirements.’⁶⁸⁴ The term ‘facility’ used in this definition, according to the International Maritime Organization (IMO) Guidelines for Setting Up a Maritime Single Window of 2019, is based on the ‘electronic data transmission’.⁶⁸⁵ IMO Guidelines provide that ‘[t]he facility is generally understood to be based

⁶⁷⁶ *ibid* 352 and 164.

⁶⁷⁷ arts 1(21), (22) and 8(b) of Rotterdam Rules, art 11(1)(a) of MLETR.

⁶⁷⁸ Koji Takahashi, ‘Blockchain technology and electronic bills of lading’ (2016) 22(3) *Journal of International Maritime Law* 202-211.

⁶⁷⁹ *ibid*.

⁶⁸⁰ Goldby (n 26) 164.

⁶⁸¹ Interviews (n 15) and Appendix 1.

⁶⁸² *ibid*.

⁶⁸³ Jonathan Koh Tat Tsen, ‘Ten Years of Single Window Implementation: Lessons Learned for the Future’ (2011) (A discussion paper submitted to the UN Global Trade Facilitation Conference 2011: Connecting International Trade: Single Windows and Supply Chains in the Next Decade), https://www.unece.org/fileadmin/DAM/trade/Trade_Facilitation_Forum/BkgrdDocs/TenYearsSingleWindow.pdf

⁶⁸⁴ United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT), ‘Recommendation and Guidelines on Establishing a Single Window’, Recommendation No. 33, ECE/TRADE/352, https://www.unece.org/fileadmin/DAM/cefact/recommendations/rec33/rec33_trd352e.pdf

⁶⁸⁵ IMO, ‘Guidelines for Setting Up a Maritime Single Window’ FAL.5/Circ. 42, 16 May 2019, <https://www.wco.org/fileadmin/LocalResources/en/OurWork/Facilitation/Documents/FAL.5-Circ.42.pdf>

on electronic data transmission and relies on system software to distribute the data submitted to the receivers in accordance with the system rules and user agreements'.⁶⁸⁶

Similarly, the World Customs Organization (WCO) defines the single window concept in a similar fashion, but it adds the word 'environment', that '[a] Single Window environment is a cross border, 'intelligent', facility that allows parties involved in trade and transport to lodge standardized information, mainly electronic, with a single entry point to fulfil all import, export and transit related regulatory requirements.⁶⁸⁷ The WCO justifies the use of the word 'environment' that [t]he WCO members prefer to use the term Single Window "Environment" because Single Window implementations are invariably a collection of interdependent facilities, regulatory requirements and cross border regulatory agencies' business processes'.⁶⁸⁸ The United Kingdom Simplification of Trade Procedures Board (SITPRO) defines the single window concept as '[a] platform to 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'.⁶⁸⁹ The term 'single window system' is also defined as 'a cross border, "intelligence", facility that allows parties involved in trade and transport to lodge standardised information, mainly electronic, with a single entry point to fulfil all import, export and transit related regulatory requirements'.⁶⁹⁰ There is also the term 'National Single Window' (NSW), which is defined and used by the Association of South East Asian Nations (ASEAN) as a system that enables:

1. A single submission of data and information;
2. A single and synchronous processing of data and information;
3. A single decision-making for customs release and clearance;
4. A single decision-making shall be uniformly interpreted as a single point of decision for the release of cargoes by the customs on the basis of decisions, if required, taken by line ministries and agencies and communicated in a timely manner to the customs.⁶⁹¹

⁶⁸⁶ *ibid.*

⁶⁸⁷ ESCWA, 'Key Factors in Establishing Single Windows for Handling Import/Export Procedures and Formalities: Trade Facilitation and the Single Window' https://www.wto.org/english/tratop_e/tradfa_e/case_studies_e/escwa_e.pdf

⁶⁸⁸ *ibid.*

⁶⁸⁹ *ibid.*

⁶⁹⁰ Dennis Ndonga, 'Increasing Africa's Share of Vertical Investments through Single Window Systems' (2013) 6(2) Law and Development Review 181-216.

⁶⁹¹ Tsen (n 683).

As these definitions show, the single window system aims ‘to simplify border formalities for traders and other economic operators by arranging for a single electronic submission of information to fulfil all cross-border regulatory requirements’.⁶⁹² The single window system may try to cater for the fact that local bureaucracies may delay the movement and development of international trade. It is common knowledge that traders and ship operators are often required to meet complicated or prolonged administrative demands at various ports or borders. Those administrative requirements continue to be paper-based, necessitating much time, cost and effort. According to UN/CEFACT Recommendation No. 33, there are three basic models of single windows as follows:

- a) A Single Authority that receives information, either on paper or electronically, disseminates this information to all relevant governmental authorities, and co-ordinates controls to prevent undue hindrance in the logistical chain.
- b) A Single Automated System for the collection and dissemination of information (either public or private) that integrates the electronic collection, use, and dissemination (and storage) of data related to trade that crosses the border.
- c) An automated Information Transaction System through which a trader can submit electronic trade declarations to the various authorities for processing and approval in a single application.⁶⁹³

The IMO Guidelines define terms of single window such as the Maritime Single Window (MSW), Trade Single Window (TSW)/Customs Single window (CSW), Port Single Window (PSW), and Port Community System (PCS).⁶⁹⁴ The Maritime Single Window (MSW) is as ‘a one-stop service environment that covers maritime and port administrative procedures, such as port entry/departure declaration, notice of security reports, and other related information between private sectors and public authorities nationwide’.⁶⁹⁵ The Trade Single Window (TSW)/Customs Single window (CSW) is defined as ‘an environment that covers procedures related to exports and imports goods such as customs clearance’.⁶⁹⁶ The Port Single Window (PSW) is ‘[a] single window environment that provides information at a local level about a vessel to the authorities at that level, usually a single port. PSW systems should, where possible,

⁶⁹² Jae Young Choi, ‘A Survey of Single Window Implementation’ A World Customs Organization (WCO) Research Paper No. 17, (2011), http://www.wcoomd.org/en/topics/research/activities-and-programmes/~/_/media/2DF5A36D3ECA46CCB7B17BDF77AC021.ashx

⁶⁹³ UN/CEFACT (n 684).

⁶⁹⁴ IMO (n 585).

⁶⁹⁵ *ibid.*

⁶⁹⁶ *ibid.*

be connected to a higher-level NSW or MSW'.⁶⁹⁷ The Port Community System (PCS) is 'defined by International Port Community Systems Association (IPCSA),⁶⁹⁸ as follows:

[A] neutral and open electronic platform enabling intelligent and secure exchange of information between public and private stakeholders in order to improve the competitive position of the sea and air ports' communities; and optimizes, manages and automates port and logistics processes through a single submission of data and connecting transport and logistics chains.⁶⁹⁹

In 2013, WTO adopted the Trade Facilitation Agreement (TFA), which entered into force on 22 February 2017.⁷⁰⁰ Bal and Rajput describe TFA as 'a major milestone for the global trading system as it is the first multilateral deal concluded in the 21 years of existence of the WTO'.⁷⁰¹ The objectives of TFA are summarized as follows:

1. Speedy release and clearance of goods
2. Expedited movement of export, import, and transit cargo
3. Lower costs of international trade by reducing procedural barriers
4. Co-operation and co-ordination among border agencies within the government and between governments
5. Provision of technical assistance in building capabilities.⁷⁰²

Though these objectives may reflect a broad coverage of cross border trade aspects, TFA provides separately for the single window concept in article 10(4). This provision may try to meet the increasing need for the adoption of a single window concept as an intended means to serve WTO aim to facilitate international trade through removing the barriers facing the smooth movement of goods across borders. TFA urges WTO Member States to adopt the single window concept in article 10(4)(1) states:

Members shall endeavour to establish or maintain a single window, enabling traders to submit documentation and/or data requirements for importation, exportation, or transit of goods

⁶⁹⁷ *ibid.*

⁶⁹⁸ *ibid.*

⁶⁹⁹ *ibid.*

⁷⁰⁰ WTO, 'Understanding Single Window Environment' Part 1, Vol. 1. <http://www.wcoomd.org/-/media/wco/public/global/pdf/topics/facilitation/instruments-and-tools/tools/single-window/compendium/swcompendiumvoll1parti.pdf>

⁷⁰¹ Basu Bal and Trisha Rajput, 'Trade in the Digital Era: Prospects and Challenges for an International Single Window Environment' (2017) *Netherlands Yearbook of International Law* 305-326.

⁷⁰² WTO (n 700).

through a single entry point to the participating authorities or agencies. After the examination by the participating authorities or agencies of the documentation and/or data, the results shall be notified to the applicants through the single window in a timely manner.

TFA also urges WTO Member States to use the ‘information technology’ when applying the single window concept, as provided in article 10(4)(4). Bal and Rajput argue:

It is envisaged that the progressive implementation of national single windows by Member States would soon present the possibility for interoperability between them. Such interoperability is conceived through the creation of ISWE that would serve as an electronic data exchange channel fed by dematerialized information.⁷⁰³

The term ‘interoperability’ used in this argument is defined by UNCEFACT, as Bal and Rajput indicate, as ‘the ability of two or more systems or components to exchange and use information across borders without additional effort on the part of the user’.⁷⁰⁴ The terms ISWE means the ‘international single window environment’.⁷⁰⁵ Bal and Rajput argue that ISWE is an ‘interoperable environment’ that ‘reflects the position where national single windows communicate with each other to exchange relevant trade information’.⁷⁰⁶

Besides the regional efforts led by the UNECE and UN/CEFACT to adopt the single window concept in Europe, similar regional initiatives have been carried out in Asia and the Pacific led by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP).⁷⁰⁷ With these efforts, the single window concept is adopted by some countries in Asia and the Pacific to ‘facilitate cross-border e-commerce transactions by reducing procedural, documentary, and coordination requirements for consigners and consignees’.⁷⁰⁸ The ‘ASEAN-6’ group that comprises ‘Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore, and Thailand’, applied the concept of ‘National Single Window (NSW)—a one-stop shop to speed up customs clearances’.⁷⁰⁹

⁷⁰³ Bal and Rajput (n 701).

⁷⁰⁴ UNCEFACT, ‘Recommendation No. 36 on Single Window Interoperability’ https://www.unece.org/fileadmin/DAM/trade/Publications/ECE-TRADE-431E_Rec36.pdf

⁷⁰⁵ Bal and Rajput (n 701).

⁷⁰⁶ *ibid.*

⁷⁰⁷ UNESCAP, ‘Embracing the E-commerce Revolution in Asia and the Pacific’ Report jointly prepared by UNESCAP and Asian Development Bank (ADB) in June 2018 <https://www.adb.org/sites/default/files/publication/430401/embracing-e-commerce-revolution.pdf>

⁷⁰⁸ *ibid.*

⁷⁰⁹ *ibid.*

Moreover, the model laws adopted by the UNICTRAL, discussed earlier, on Electronic Commerce (MLEC) and on Electronic Signatures (MELS), according to Bal and Rajput, ‘provide legal framework for the operation of single window facilities’.⁷¹⁰ Bal and Rajput also argue that the UNCITRAL Model Law on Electronic Transferable Records, 2017 (MLETR),⁷¹¹ ‘is also relevant because the processes connected with single window transactions are electronic but still based on paper’.⁷¹²

The implementation of a single window system, according to the UN/CEFACT Recommendation No. 33, provides benefits for governments and traders:

Benefits for government

- More effective and efficient deployment of resources
- Correct (and often increased) revenue yield
- Improved trader compliance
- Enhanced security
- Increased integrity and transparency

Benefits for trade

- Cutting costs through reducing delays
- Faster clearance and release
- Predictable application and explanation of rules
- More effective and efficient deployment of resources
- Increased transparency⁷¹³

The IMO Guidelines for Setting Up a Maritime Single Window contain examples on the maritime and non-maritime single windows to assist IMO Member States that have not yet established the maritime single windows.⁷¹⁴ These examples are as follows:

1. Portnet in Finland
2. National Single Window (NSW) Deutschland in Germany
3. NACCS (Nippon Automated Cargo and Port Consolidated System) in Japan
4. Maritime single window in Marshall Islands

⁷¹⁰ Bal and Rajput (n 701).

⁷¹¹ See section 2.19 ‘UNCITRAL Model Law on Electronic Transferable Records, 2017 (MLETR)’ in Chapter Three.

⁷¹² Bal and Rajput (n 701).

⁷¹³ UN/CEFACT (n 684).

⁷¹⁴ IMO (n 685).

5. Port-MIS in the Republic of Korea
6. DUEPORT in Spain
7. Reportal (The Swedish Maritime Single Window) in Sweden
8. Maritime single window – MSW (Морське Єдине Вікно – МЄВ) in Ukraine.⁷¹⁵

In the United Kingdom, the applicable maritime single window is called the ‘National Maritime Single Window (NMSW)’.⁷¹⁶ The NMSW aims to simplify and digitise the process of handling legally required pre-arrival/departure paperwork, where necessary, so that data can be submitted simply and quickly via one online portal, alongside existing portals, in an electronic format, and meeting the Directive's requirements’.⁷¹⁷ It is an implementation of the EU Directive 2010/65/EU (the Reporting Formalities Directive, or RFD).⁷¹⁸ This Directive obliges the European Union (EU) Member States ‘to provide a national "Single Window" through which maritime reports can be made, including data covered by the International Maritime Organization's standard forms under the "IMO FAL Convention"’.⁷¹⁹

It may be safe to say that the single window system and electronic bills of lading seem similar in terms of meeting the commercial needs to facilitate the international trade across borders. Moreover, both the single window system and electronic bills of lading use the electronic alternatives. Member states of international organisations, as seen earlier, are recommended to use the electronic technology when applying the single window; and electronic bills of lading are already based on the use of these electronic technologies. The use of electronic bills of lading may lead to benefits similar to those obtained from the use of electronic submission, collection and dissemination of information under the single window system. As mentioned previously, the use of ‘electronic technology’ reduces the time, efforts and costs of transactions.⁷²⁰ The application of a single window may encourage the use of electronic bills of lading since the former creates an electronic environment where electronic bills of lading flourish.

⁷¹⁵ *ibid.*

⁷¹⁶ Department for Transport, ‘UK National Maritime Single Window (Pilot)’, 2015 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/915933/national-maritime-single-window-guidelines-document.pdf

⁷¹⁷ *ibid.*

⁷¹⁸ *ibid.*

⁷¹⁹ *ibid.*

⁷²⁰ Boss (n 431).

However, there is still doubt whether there is an interplay between the concepts of single window and electronic bills of lading for some reasons. First, the single window and electronic bills of lading deal with trade documents which are different in terms of legal value and enforceability. The single window systems may deal with commercial documents required by national customs authorities to clear the goods at borders; whereas, the systems providing electronic bills of lading services deal with the data and electronic records that duplicate paper bills of lading. Moreover, the documents used under the systems of single window and electronic bills of lading are governed by different laws. The documents used by single window systems are governed by national and international laws, while electronic bills of lading are based on agreement mostly governed by English law, as discussed in the methodology in Chapter One. The electronic bills of lading require specific legal framework or provisions whether under international law, model laws or contracts because they are intended to function as receipts for the goods, containing or evidencing the contract of carriage and significantly as a document of title. When functioning as a document of title, the electronic bill of lading is deemed to be possibly transferred among different persons. Moreover, the consignee or holder of paper or electronic bills is required to present that bill, specifically an original paper copy or electronic equivalent, to the carrier in order to deliver the goods.⁷²¹ These functions may not be easily achieved under the single window system. Furthermore, the services of single window and electronic bills of lading are provided by different entities. The single window services seem to be mostly provided by national authorities in general, specially costume authorities, or under their supervision. In the case of electronic bills of lading, the services of these bills are provided by specialized third parties as KTNET, Bolero, essDOCS, E-Title or third parties that rely on the blockchain technology as in edoxOnline and Wave, as discussed earlier.

2.16 BIMCO Electronic Bills of Lading Clause 2014

Another application of electronic bills of lading is the Baltic and International Maritime Council (BIMCO) Electronic Bills of Lading Clause 2014. This Clause was '[o]riginally published in BIMCO Special Circular No. 3, 20 May 2014 - *Electronic Bills of Lading Clause for Charter Parties*'.⁷²² It is intended to meet the 'increasing use of electronic documentation, particularly in the dry cargo sector where it is actively promoted by a member of major

⁷²¹ IMO (n 685).

⁷²² BIMCO, 'Contracts and clauses, BIMCO clauses, BIMCO Electronic Bills of Lading Clause 2014' <<https://www.bimco.org/contracts-and-clauses/bimco-clauses/current/electronic-bills-of-lading-clause-2014>> accessed 4 December 2020.

charterers'.⁷²³ It is '[a]n 'express clause' that 'needs to be incorporated into charterparties if the parties intend that charterers will have the right to order owners to issue eBLs'.⁷²⁴ It states:

- a) At the Charterers' option, bills of lading, waybills and delivery orders referred to in this Charter Party shall be issued, signed and transmitted in electronic form with the same effect as their paper equivalent.
- b) For the purpose of Sub-clause (a) the Owners shall subscribe to and use Electronic (Paperless) Trading Systems as directed by the Charterers, provided such systems are approved by the International Group of P&I Clubs. Any fees incurred in subscribing to or for using such systems shall be for the Charterers' account.
- c) The Charterers agree to hold the Owners harmless in respect of any additional liability arising from the use of the systems referred to in Sub-clause (b), to the extent that such liability does not arise from Owners' negligence.⁷²⁵

BIMCO notes that '*It is important that charterers, their sub-charterers and others in a charter party chain fully understand the need to sign-up to the chosen system or systems if they want to benefit from paperless trading procedures. They cannot participate without registration*'.⁷²⁶ The International Group of P&I Clubs has approved five paperless trading systems, which are third parties providing the services of electronic bills of lading: Bolero, essDOCS, E-Title, edoxOnline and Wave.⁷²⁷ In this connection, BIMCO notes that '[0]wners do **not** need to advise their P&I Clubs prior to using an electronic paperless trading system if the system is already approved by the International Group'.⁷²⁸ It seems necessary to say that BIMCO Electronic Bills of Lading Clause is merely a contractual clause, not a service provider of electronic bills of lading like KTNET, Bolero, essDOCS, E-Title, edoxOnline and Wave. It is for such providers to enable the use of electronic bills of lading if the charterers so choose. However, the Clause may reflect the development of/and demand to use electronic bills of lading in the international maritime transportation.

⁷²³ Goldby (n 479) 148.

⁷²⁴ Tan, Starr and Wu (n 31).

⁷²⁵ BIMCO (n 722).

⁷²⁶ *ibid.*

⁷²⁷ See section 4 'Methodology' in Chapter One. As regards the E-Title, it was approved by the International Group of P&I Clubs in 2015. UK P&I Club, Circular Ref. 12/15 in October 2015 on Bolero, essDOCS and E-Title.

⁷²⁸ BIMCO (n 722).

2.17 Cyber risk

The maritime cyber risk is referred to as ‘a measure of the extent to which a technology asset could be threatened by a potential circumstance or event, which may result in shipping-related operational, safety or security failures as a consequence of information or systems being corrupted, lost or compromised’.⁷²⁹ Following the international approach of the research, the International Maritime Organization (IMO) reacted to the increasing cyberthreats and risks when it adopted the ‘Guidelines on Maritime Cyber Risks Management’ in 2017.⁷³⁰ These guidelines are intended to ‘provide high-level recommendations on maritime cyber risk management to safeguard shipping from current and emerging cyberthreats and vulnerabilities. The Guidelines also include functional elements that support effective cyber risk management’.⁷³¹ The Guidelines define cyber risk management as ‘the process of identifying, analysing, assessing and communicating a cyber-related risk and accepting, avoiding, transferring or mitigating it to an acceptable level, considering costs and benefits of actions taken to stakeholders’.⁷³² The Guidelines provide for the functional elements needed for any effective cyber risk management as follows:

1. Identify: Define personnel roles and responsibilities for cyber risk management and identify the systems, assets, data and capabilities that, when disrupted, pose risks to ship operations.
2. Protect: Implement risk control processes and measures, and contingency planning to protect against a cyber-event and ensure continuity of shipping operations.
3. Detect: Develop and implement activities necessary to detect a cyber-event in a timely manner.
4. Respond: Develop and implement activities and plans to provide resilience and to restore systems necessary for shipping operations or services impaired due to a cyber-event.
5. Recover: Identify measures to back-up and restore cyber systems necessary for shipping operations impacted by a cyber-event.⁷³³

The Guidelines provide that ‘these functional elements encompass the activities and desired outcomes of effective cyber risk management across critical systems affecting maritime

⁷²⁹ IMO, ‘Maritime Cyber Risk’ <[http://www.imo.org/en/OurWork/Security/Guide to Maritime Security/Pages/Cyber-security.aspx](http://www.imo.org/en/OurWork/Security/Guide%20to%20Maritime%20Security/Pages/Cyber-security.aspx)> accessed 12 May 2019

⁷³⁰ IMO Guidelines on Maritime Cyber Risk Management, Document MSC-FAL.1/Circ.3 on 5 July 2017.

⁷³¹ *ibid.*

⁷³² *ibid.*

⁷³³ *ibid.*

operations and information exchange, and constitute an ongoing process with effective feedback mechanisms'.⁷³⁴ In addition to these guidelines, IMO adopted a resolution on the 'Maritime Cyber Risks Management in Safety Management Systems'.⁷³⁵ This resolution provides:

1. AFFIRMS that an approved safety management system should take into account cyber risk management in accordance with the objectives and functional requirements of the ISM Code;
2. ENCOURAGES Administrations to ensure that cyber risks are appropriately addressed in safety management systems no later than the first annual verification of the company's Document of Compliance after 1 January 2021;
3. ACKNOWLEDGES the necessary precautions that could be needed to preserve the confidentiality of certain aspects of cyber risk management;
4. REQUESTS Member States to bring this resolution to the attention of all stakeholders.

There are guidelines on cyber security on board ships issued by other relevant bodies such as BIMCO, the Cruise Lines International Association (CLIA), the International Chamber of Shipping (ICS), the International Association of Dry Cargo Shipowners (INTERCARGO), INTERTANKO, the Oil Companies International Marine Forum (OCIMF), the International Union of Marine Insurance (IUMI), the International Organization for Standardization (ISO), the International Electrotechnical Commission (IEC), and the United States National Institute of Standards and Technology's Framework for Improving Critical Infrastructure Cybersecurity (NIST).⁷³⁶

The European Union (EU) adopted a Directive on privacy and electronic communications in 2002 (ePrivacy Directive).⁷³⁷ This Directive aims to:

Harmonise[...] the provisions of the Member States required to ensure an equivalent level of protection of fundamental rights and freedoms, and in particular the right to privacy, with respect to the processing of personal data in the electronic communication sector and to

⁷³⁴ *ibid.*

⁷³⁵ IMO resolution on Maritime Cyber Risks Management in Safety Management Systems MSC, Document 428(98) on 16 June 2017.

⁷³⁶ IMO (n 730).

⁷³⁷ Directive 2002/58/EC of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on privacy and electronic communications) [2016] OJ L201/37.

ensure the free movement of such data and of electronic communication equipment and services in the Community.⁷³⁸

Wang and Griffiths argue that '[d]ata protection is to protect the rights of data ownership and balance the benefits between the protection of data ownership and the permission of data free-flow, while privacy protection is to protect fundamental human rights'.⁷³⁹

In 2014, the EU adopted the Electronic Identification and Trust Services (eIDAS) Regulation,⁷⁴⁰ to 'creates a new system for secure electronic interactions across the EU between businesses, citizens and public authorities'.⁷⁴¹ The eIDAS 'aims to improve trust in EU-wide electronic transactions and to increase the effectiveness of public and private online services and e-commerce'.⁷⁴² It regulates the use of 'electronic signatures, electronic seals, electronic time stamps, electronic documents, electronic registered delivery services and certificate services for website authentication'.⁷⁴³ It 'applies to electronic identification schemes that have been notified by a Member State, and to trust service providers that are established in the Union'.⁷⁴⁴

In 2016, the EU adopted the Regulation on the 'General Data Protection Regulation (GDPR)'.⁷⁴⁵ The GDPR 'lays down rules relating to the protection of natural persons with regard to the processing of personal data and rules relating to the free movement of personal data'.⁷⁴⁶ It also 'protects fundamental rights and freedoms of natural persons and in particular their right to the protection of personal data'.⁷⁴⁷ In other words according to Wachter, the 'GDPR aims to create

⁷³⁸ art 1 of Directive.

⁷³⁹ Faye Fangfei Wanga and Nathan Griffiths, 'Protecting privacy in automated transaction systems: A legal and technological perspective in the European Union' (2010) 24(2) *International Review of Law, Computers & Technology* 153-162.

⁷⁴⁰ Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC.

⁷⁴¹ EUR-Lex, 'Electronic Identification and Trust Services (eIDAS) Regulation' <https://eur-lex.europa.eu/legal-content/EN/LSU/?uri=uriserv:OJ.L_.2014.257.01.0073.01.ENG> accessed 27 October 2020.

⁷⁴² *ibid.*

⁷⁴³ Article 1(c) of eIDAS.

⁷⁴⁴ Article 2(1).

⁷⁴⁵ Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation, GDPR) [2016] OJ L 119/1.

⁷⁴⁶ Article 1(1) of GDPR.

⁷⁴⁷ Article 1(2).

a harmonised data protection standard across the EU in order to strike a balance between the free flow of data and the fundamental interests of data subjects (e.g. privacy).⁷⁴⁸

Although the ePrivacy Directive, referred to earlier, and GDPR aim ‘to protect fundamental rights and freedoms’, they are different in terms of scope of application.⁷⁴⁹ The GDPR ‘lays down common rules on data processing which serve to ensure a balance between the (potential) benefits of data processing and the (potential) drawbacks’, whereas, the ePrivacy Directive aims to ‘harmonise the national provisions safeguarding the right to privacy and confidentiality in the electronic communications sector and the free movement of data, electronic communications equipment and services in the EU’.

Therefore, the European Data Protection Board (EDPB),⁷⁵⁰ adopted an ‘[o]pinion on the interplay between the ePrivacy Directive and the GDPR, in particular regarding the competence, tasks and powers of data protection authorities’.⁷⁵¹ This Opinion provides that ‘Article 1(1) and (2) ePrivacy Directive should be read in light of Article 94(2) GDPR meaning that the ePrivacy Directive aims to ‘particularise and complement’ the provisions of the GDPR in the electronic communications sector’.⁷⁵² However, according to the Opinion, this difference in scope of application of the ePrivacy Directive and GDPR ‘does not necessarily lead to a conflict between the rules’.⁷⁵³

The term ‘particularise’ provided in the Opinion means that some ‘special provisions’ under ePrivacy Directive ‘prevail over general rules’ of GDPR ‘in situations which they specifically seek to regulate’ in accordance with the principle of ‘*lex specialis derogate legi generali*’.⁷⁵⁴ This principle is applied under ‘Article 6 of the ePrivacy Directive, which concerns the processing of so-called “traffic data”’.⁷⁵⁵ As far as the term ‘complement’ provided in the

⁷⁴⁸ Sandra Wachter, ‘The GDPR and the Internet of Things: a three-step transparency model’ (2018) 10(2) Law, Innovation & Technology 266-294.

⁷⁴⁹ Christina Etteldorf, ‘EDPB on the Interplay between the ePrivacy Directive and the GDPR’ (2019) 5(2) European Data Protection Law Review 224-231.

⁷⁵⁰ The European Data Protection Board (EDPB) ‘was established under Article 68 of (GDPR) as a body of the Union (EU) with an own legal personality’. Etteldorf (n 749).

⁷⁵¹ European Data Protection Board, ‘Opinion 5/2019 on the interplay between the ePrivacy Directive and the GDPR, in particular regarding the competence, tasks and powers of data protection authorities’ adopted on 12 March 2019,

https://edpb.europa.eu/sites/edpb/files/files/file1/201905_edpb_opinion_eprivacydir_gdpr_interplay_en_0.pdf

⁷⁵² Etteldorf (n 749).

⁷⁵³ European Data Protection Board (n 751).

⁷⁵⁴ *ibid.*

⁷⁵⁵ *ibid.*

Opinion is concerned, there are many ‘provisions of the ePrivacy Directive seek to protect "subscribers" and "users" of a publicly available electronic communications service’.⁷⁵⁶ Those subscribers ‘may be natural or legal persons’.⁷⁵⁷ Therefore, ‘[b]y supplementing the GDPR, the ePrivacy Directive protects not only the fundamental rights of natural persons and particularly their right to privacy, but also the legitimate interests of legal persons’.⁷⁵⁸

The EU also in 2016, adopted the Directive on Security of Network and Information Systems.⁷⁵⁹ This Directive ‘lays down measures with a view to achieving a high common level of security of network and information systems within the Union so as to improve the functioning of the internal market’.⁷⁶⁰ The Directive obliges the EU Member States ‘to adopt a national strategy on the security of network and information systems’.⁷⁶¹ It defines the ‘national strategy on the security of network and information’ as ‘a framework providing strategic objectives and priorities on the security of network and information systems at national level’.⁷⁶² It also obliges the EU Member States, inter alia, to establish ‘a computer security incident response teams network (“CSIRTs network”) in order to contribute to the development of trust and confidence between Member States and to promote swift and effective operational cooperation’.⁷⁶³ In this connection, EU Member States are required ‘to designate national competent authorities, single points of contact and CSIRTs with tasks related to the security of network and information systems’.⁷⁶⁴

In the UK, following the English law approach, the Privacy and Electronic Communications (EC Directive) Regulations Shipping were enacted in 2003. These Regulations incorporate articles 2, 4, 5(3), 6 to 13, 15 and 16 of the EU Directive on privacy and electronic communications,⁷⁶⁵ discussed earlier. The Regulations oblige the providers of a public electronic communications service to ‘take appropriate technical and organisational measures to safeguard the security of that service’.⁷⁶⁶ These measures are to:

⁷⁵⁶ *ibid.*

⁷⁵⁷ *ibid.*

⁷⁵⁸ *ibid.*

⁷⁵⁹ Directive 2016/1148 of 6 July 2016 concerning measures for a high common level of security of network and information systems across the Union [2016] OJ L 194/1.

⁷⁶⁰ art 1(1) of Directive.

⁷⁶¹ art 1(2)(a).

⁷⁶² art 4(3).

⁷⁶³ art 1(2)(c).

⁷⁶⁴ art 1(2)(e).

⁷⁶⁵ Explanatory Notes of the Regulations.

⁷⁶⁶ art 5(1) of Regulations.

- a) ensure that personal data can be accessed only by authorised personnel for legally authorised purposes;
- b) protect personal data stored or transmitted against accidental or unlawful destruction, accidental loss or alteration, and unauthorised or unlawful storage, processing, access or disclosure; and
- c) ensure the implementation of a security policy with respect to the processing of personal data.⁷⁶⁷

The UK also enacted the Data Protection Act in 2018. This Act is an implementation of EU GDPR, discussed earlier.⁷⁶⁸ It intends to ‘provide a comprehensive legal framework for data protection in the UK,’ based on GDPR.⁷⁶⁹ According to its introductory text, the Act provides for ‘the processing of information relating to individuals; to make provision in connection with the Information Commissioner’s functions under certain regulations relating to information; to make provision for a direct marketing code of practice; and for connected purposes’. The GDPR and this Act intend to ‘protect individuals with regard to the processing of personal data’, through the following:

- (a) requiring personal data to be processed lawfully and fairly, on the basis of the data subject’s consent or another specified basis,
- (b) conferring rights on the data subject to obtain information about the processing of personal data and to require inaccurate personal data to be rectified, and
- (c) conferring functions on the Commissioner, giving the holder of that office responsibility for monitoring and enforcing their provisions.⁷⁷⁰

The Commissioner referred to in this provision is ‘the supervisory authority in the United Kingdom for the purposes of Article 51 of the GDPR’.⁷⁷¹ As regards the cyber security in the maritime sector, the UK Department of Transport released a ‘Code of Practice: Cyber Security for Ships’ in 2017. This Code ‘considers the cyber security requirement for ships whether underway, moored or berthed, advocating a coherent, ship – or fleet – wide approach’.⁷⁷² The Code intends to:

⁷⁶⁷ *ibid.*

⁷⁶⁸ Explanatory Notes of the Act.

⁷⁶⁹ *ibid.*

⁷⁷⁰ r 2(1) of the Act.

⁷⁷¹ r 115(1).

⁷⁷² s 2 of the Code.

complement the ship security standards and their respective requirements, by providing additional guidance on the cyber-related aspects of the security measures set out. It therefore makes extensive reference to, and assumes knowledge of, the definitions and concepts contained within these regulations.⁷⁷³

The Code applies to ships and excludes the ports:

With the exception of any ship/port interface, it is not the purpose of this Code of Practice to consider the cyber security of the ports and port facilities to which the ISPS Code also applies. The UK Department for Transport (DfT) published separate guidance on ports and port systems during 2016.⁷⁷⁴

The Code defines cyber security as ‘the collection of tools, policies, security concepts, security safeguards, guidelines, risk management approaches, actions, training, best practices, assurance and technologies that can be used to protect the cyber environment and organisation and user’s assets’.⁷⁷⁵

2.18 UNCITRAL Model Law on Electronic Transferable Records, 2017 (MLETR)

The Model Law on Electronic Transferable Records (MLETR) was adopted by UNCITRAL on 13 July 2017.⁷⁷⁶ It is the latest model law adopted by UNCITRAL in relation to electronic commerce.⁷⁷⁷ MLETR ‘aims to enable the legal use of electronic transferable records both domestically and across borders’.⁷⁷⁸ The electronic transport record that MLETR regulates ‘would functionally replicate a paper record ("transferable document or instrument") such as a document of title or a negotiable instrument’.⁷⁷⁹ MLETR 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’.⁷⁸⁰ The principle of

⁷⁷³ *ibid.*

⁷⁷⁴ *ibid.*

⁷⁷⁵ s 3(1) of the Code.

⁷⁷⁶ UNCITRAL, ‘The UNCITRAL Model Law on Electronic Transferable Records’ (2017) <https://uncitral.un.org/en/texts/ecommerce/modellaw/electronic_transferable_records> accessed 12 May 2019.

⁷⁷⁷ UNCITRAL, ‘Texts and Status: Electronic Commerce’ <<https://uncitral.un.org/en/texts/ecommerce>> accessed 12 May 2019.

⁷⁷⁸ UNCITRAL (n 776).

⁷⁷⁹ Charles W Mooney, ‘Fintech and Secured Transactions Systems of the Future’ (2018) 81(1) *Law and Contemporary Problems* 1-20.

⁷⁸⁰ UNCITRAL (n 776).

technological neutrality, as provided in the Explanatory Note to MLETR,⁷⁸¹ ‘entails adopting a system-neutral approach, enabling the use of various models whether based on registry, token, distributed ledger or other technology’. MLETR applies to ‘electronic transferable records’,⁷⁸² without prejudice to the ‘consumer protection’.⁷⁸³ It excludes the ‘investment securities’, such as ‘shares’ and ‘bonds’ from its scope of application.⁷⁸⁴ The term ‘investment instruments’ may ‘include derivative instruments, money market instruments and any other financial product available for investment’.⁷⁸⁵ Electronic transferable records seems possible to be used as collateral as the Explanatory Note provides that ‘[t]he term "securities" does not refer to the use of electronic transferable records as collateral and the Model Law does not prevent the use of electronic transferable records for security rights purposes’. Since MLETR deals with the transfer issue of electronic transport records, a more detailed discussion on this Model will be carried out in Chapter Six, where the third function, to be performed by the electronic bill of lading as a document of title, is examined.

4 English law approach: a general view on the position of English law in relation to the use of electronic bills of lading

Subsection 1(5) and (6) of COGSA 1992 authorizes the Secretary of State to issue regulations to make provision extending the application of COGSA 1992 ‘to cases where "a telecommunication system or any other information technology" is used for effecting transactions involving bills of lading’,⁷⁸⁶ as follows:

(5) 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 for effecting transactions corresponding to

- (a) the issue of a document to which this Act applies;
- (b) the indorsement, delivery or other transfer of such a document; or
- (c) the doing of anything else in relation to such a document.

(6) Regulations under subsection (5) above may—

⁷⁸¹ UNCITRAL, ‘Explanatory Note to the UNCITRAL Model Law on Electronic Transferable Records’, Prepared by UNCITRAL and attached to the Model body text.

⁷⁸² art 1(1) of MLETR.

⁷⁸³ art 1(2).

⁷⁸⁴ art 1(3).

⁷⁸⁵ UNCITRAL (n 781).

⁷⁸⁶ Aikens, Lord and Bools (n 40) 44-50.

- (a) make such modifications of the following provisions of this Act as the Secretary of State considers appropriate in connection with the application of this Act to any case mentioned in that subsection; and
 - (b) contain supplemental, incidental, consequential and transitional provision;
- and the power to make regulations under that subsection shall be exercisable by statutory instrument subject to annulment in pursuance of a resolution of either House of Parliament.

The intended regulations have not been issued so far.⁷⁸⁷ Aikens et al. argue that ‘the presence of these sub-sections may imply that an electronic bill of lading is to be treated as a document for the purposes of the Act’.⁷⁸⁸ Yet, the traditional view to/and nature of the paper bill of lading may play the main challenge to recognize or delay the recognition of electronic bills according to Aikens et al.:

Whatever other disputes there may be about the characteristics of a bill of lading, the traditional common law and statutory definitions all envisage a physical “document” in the form of a piece of paper that can be, amongst other things, signed, indorsed and possessed. An electronic bill of lading has no physical existence in the normal sense.⁷⁸⁹

Similarly, Baughen argues that ‘the fundamental obstacle is the fact that the essence of a paper bill of lading is that it is a signed document’.⁷⁹⁰ There is a lack of a clear case law that may admit the use of electronic bills of lading, especially as documents of title, as will be seen in the next chapters. The case of *Glencore International AG v MSC Mediterranean Shipping Co SA*,⁷⁹¹ deals with an electronic release system, not with an electronic bill of lading, as will be seen in more details on this case in Chapter Six.⁷⁹² Moreover, Aikens et al. note the lack of statutory definition for the term ‘document’:

There is no relevant statutory definition of “document”, and whilst the law recognises computer records as documents for some purposes there is at least serious doubt whether an electronic record or message could fall within the meaning of a bill of lading at common law

⁷⁸⁷ Legislation.gov.uk, ‘Carriage of Goods by Sea Act 1992’, <<https://www.legislation.gov.uk/ukpga/1992/50/section/1>> accessed 4 December 2020. See also Aikens, Lord and Bools (n 40) 36 and Baughen (n 191) 25.

⁷⁸⁸ Aikens, Lord and Bools (n 40) 44-50.

⁷⁸⁹ *ibid.*

⁷⁹⁰ Baughen (n 191) 25.

⁷⁹¹ [2015] EWHC 1989 (Comm).

⁷⁹² See section 3 ‘English law’ in Chapter Six.

or under COGSA 1971 and it is certainly not a "transferable document" in itself. Although the BOLERO and essDOCS schemes both provide contractually for the application of all conventions and rules that would apply by law to a paper bill, there can be a difference in effect between rules applicable by law and those applicable by contract.⁷⁹³

In connection to COGSA 1971, Baughen agrees that 'no equivalent power is contained in the Carriage of Goods by Sea Act 1971 allowing for a similar extension of the provisions of the Hague-Visby Rules'.⁷⁹⁴ Baughen also argues that 'an electronic bill of lading is still unlikely to be regarded as the functional equivalent of a paper bill of lading because it is not in documentary form'.⁷⁹⁵ Baughen explains this argument by saying that '[t]he definition of writing in the Interpretation Act 1978 includes "other modes of representing or reproducing words in a visible form" – this would not cover an electronic message, which is not, in itself, visible'.⁷⁹⁶ Furthermore, Aikens et al. add that '[t]here is no "custom of merchants" pertaining to electronic bills of lading'.⁷⁹⁷ Similarly, Goldby raises the question of 'whether the use of a particular electronic equivalent is "customary"', in respect of Incoterms.⁷⁹⁸ Given the lack of 'necessary provisions' for the use of electronic bills of lading under English law, Goldby argues that 'electronic bill of lading systems designed to operate under English law must be based on multipartite agreements that effect the desired transfers of right through the concepts of novation and attornment'.⁷⁹⁹ The concepts of 'novation' and 'attornment' will be discussed in Chapter Six.⁸⁰⁰

However, the UK enacted the Electronic Communications Act in 2000. This Act intends to 'make provision to facilitate the use of electronic communications and electronic data storage; to make provision about the modification of licences granted under section 7 of Telecommunications Act 1984; and for connected purposes'.⁸⁰¹ The UK also incorporated the

⁷⁹³ Aikens, Lord and Bools (n 41) 44-50.

⁷⁹⁴ Baughen (n 191) 25. The Hague-Visby Rules were given the force of law in COGSA 1971, specifically under section 1(2) which states that 'The provisions of the Rules, as set out in the Schedule to this Act, shall have the force of law'.

⁷⁹⁵ See section 3 'English law' in Chapter Six.

⁷⁹⁶ Baughen (n 191) 25

⁷⁹⁷ Aikens, Lord and Bools (n 40) 44-50.

⁷⁹⁸ Goldby (n 497) 147. Incoterms is dealt with in subsection 2.5 in Chapter Three.

⁷⁹⁹ Miriam Goldby, 'Legislating to facilitate the use of electronic transferable records: A case study, Reforming the Law to Facilitate the Use of Electronic Bills of Lading in the United Kingdom' (Paper prepared for the UNCITRAL Colloquium on Electronic Commerce, New York 14th to 16th February 2011) https://www.uncitral.org/pdf/english/colloquia/EC/Legislating_to_facilitate_the_use_of_electronic_transferable_records_-_a_case_study_.pdf

⁸⁰⁰ See section 3 'English law' in Chapter Six.

⁸⁰¹ Introductory Text of the Electronic Communications Act 2000.

EU Directive on electronic commerce⁸⁰² into domestic law through the adoption of the Electronic Commerce (EC Directive) Regulations 2002. More specifically, ‘these Regulations implement Articles 3, 5, 6, 7(1), 10 to 14, 18(2) and 20 of the EU Directive’.⁸⁰³ The EU Directive on electronic commerce aims to ‘allow information society services providers to benefit from the principles of free movement of services and freedom of establishment by boosting consumer confidence and giving information society services providers legal certainty’.⁸⁰⁴ Moreover, the UK incorporated the EU Directive on electronic signature⁸⁰⁵ through the adoption of the Electronic Signatures Regulations 2002. The EU Directive 1999/93 ‘lays down the principle that paper documents and digital documents should have equal value’.⁸⁰⁶ It establishes the *principle of functional equivalence* as follows:

Member States shall ensure that an electronic signature is not denied legal effectiveness and admissibility as evidence in legal proceedings solely on the grounds that it is:

- in electronic form, or
- not based upon a qualified certificate, or
- not based upon a qualified certificate issued by an accredited certification-service-provider, or
- not created by a secure signature-creation device.⁸⁰⁷

As a main approach of the thesis, English law will be examined in the next chapters to answer the main questions of the thesis. Chapters Four will examine whether the electronic bill of lading can perform the first function of the paper bill of lading as a receipt for the goods under English law. Chapter Five will be dealing with whether the electronic bill of lading can perform the second function of the paper bill of lading as evidencing or containing the contract of carriage under English law. Chapter Six will examine whether the electronic bill of lading can perform the third function of the paper bill of lading as a document of title. Moreover, English law will be tackled in Chapter Seven that deals with the conflict of laws in relation to electronic bills of lading.

⁸⁰² Directive 2000/31/EC of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market (Directive on electronic commerce) [2000] OJ L178/1.

⁸⁰³ Explanatory Notes to the Regulations.

⁸⁰⁴ Maria Anassutzi, ‘E-Commerce Directive 00/31’ (2002) 13(9) *International Company and Commercial Law Review* 337-342.

⁸⁰⁵ Directive 1999/93/EC of 13 December 1999 on a Community framework for electronic signatures [2000] OJ L013/12.

⁸⁰⁶ Anne Penneau, ‘Evidence and Technological Change’ (2011) 3 *International Business Law Journal* 255-266.

⁸⁰⁷ art 5(2) of EU Directive on a Community framework for electronic signatures. See Penneau (n 807).

5 Other national laws

This section touches the position of some national laws in relation to the recognition of electronic bills of lading:

5.1 United States

The Federal Uniform Bills of Lading Act of 1916 (Pomerene Act) governs bills of lading in the United States.⁸⁰⁸ This Act provides ‘for the rights and duties of shippers and carriers arising from bills of lading issued for the transportation of goods in interstate commerce’.⁸⁰⁹ The US Uniform Commercial Code (UCC) also provides for bills of lading.⁸¹⁰ The UCC provides that a bill of lading is a ‘document of title’.⁸¹¹

‘Document of title’ includes bill of lading, dock warrant, dock receipt, warehouse receipt or order for the delivery of goods, and also any other document which in the regular course of business or financing is treated as adequately evidencing that the person in possession of it is entitled to receive, hold, and dispose of the document and the goods it covers. To be a document of title, a document must purport to be issued by or addressed to a bailee and purport to cover goods in the bailee’s possession which are either identified or are fungible portions of an identified mass.⁸¹²

As regards the electronic bills of lading, the US law position appears different from that of English law. The UCC provides for the control of an electronic document.⁸¹³ It identifies the person who has a control of over an electronic document stating that ‘[a] person has control of an electronic document of title if a system employed for evidencing the transfer of interests in the electronic document reliably establishes that person as the person to which the electronic document was issued or transferred’.⁸¹⁴ Then, it provides for the criteria of the required system as follows:

⁸⁰⁸ Goldby (n 26) 173.

⁸⁰⁹ Henry Hull, ‘The Federal Uniform Bills of Lading Act’ (2017) 3(5) The Virginia Law Register 329-340.

⁸¹⁰ Goldby (n 26) 173.

⁸¹¹ John R Keough and William M Cooney, ‘The Legal Status of Electronic Bills of Lading: A report for the International Chamber of Commerce (ICC)’, Appendix 2: United States Federal Law and New York Law, <https://cdn.iccwbo.org/content/uploads/sites/3/2018/10/the-legal-status-of-e-bills-of-lading-oct2018.pdf>

⁸¹² s 1-201(b)(16) of UCC.

⁸¹³ Keough and Cooney (n 811).

⁸¹⁴ art 7-106 (a) of UCC.

A system satisfies subsection (a), and a person is deemed to have control of an electronic document of title, if the document is created, stored, and assigned in such a manner that:

- (1) a single authoritative copy of the document exists which is unique, identifiable, and, except as otherwise provided in paragraphs (4), (5), and (6), unalterable;
- (2) the authoritative copy identifies the person asserting control as:
 - (A) the person to which the document was issued; or
 - (B) if the authoritative copy indicates that the document has been transferred, the person to which the document was most recently transferred;
- (3) the authoritative copy is communicated to and maintained by the person asserting control or its designated custodian;
- (4) copies or amendments that add or change an identified assignee of the authoritative copy can be made only with the consent of the person asserting control;
- (5) each copy of the authoritative copy and any copy of a copy is readily identifiable as a copy that is not the authoritative copy; and
- (6) any amendment of the authoritative copy is readily identifiable as authorized or unauthorized.⁸¹⁵

Moreover, The UCC provides for ‘how an electronic document of title such as an electronic bill of lading may be negotiated’.⁸¹⁶

(b) The following rules apply to a negotiable electronic document of title:

- (1) If the document's original terms run to the order of a named person or to bearer, the document is negotiated by delivery of the document to another person. Indorsement by the named person is not required to negotiate the document.
- (2) If the document's original terms run to the order of a named person and the named person has control of the document, the effect is the same as if the document had been negotiated.
- (3) A document is duly negotiated if it is negotiated in the manner stated in this subsection to a holder that purchases it in good faith, without notice of any defense against or claim to it on the part of any person, and for value, unless it is established that the negotiation is not in the regular course of business or financing or involves taking delivery of the document in settlement or payment of a monetary obligation.⁸¹⁷

Furthermore, the definition of ‘document of title’ in section 1-201(b)(16) of the UCC, according to Goldby, ‘leaves leeway for practice to develop in this regard’.⁸¹⁸ This is so because the definition states that ‘... and also any other document which in the regular course of

⁸¹⁵ art 7-106 (b).

⁸¹⁶ Keough and Cooney (n 811).

⁸¹⁷ art 7-501(b) of UCC.

⁸¹⁸ Goldby (n 26) 174.

business or financing is treated as adequately evidencing that the person in possession of it is entitled to receive, hold, and dispose of the document and the goods it covers ...'.⁸¹⁹ This may mean that this definition allows the use of electronic bills of lading as documents of title. It may equalize between the 'control of an electronic document' and 'the possession and indorsement of a paper bill of lading',⁸²⁰ in accordance with article 7-106 of UCC, mentioned earlier: 'A person has control of an electronic document of title if a system employed for evidencing the transfer of interests in the electronic document reliably establishes that person as the person to which the electronic document was issued or transferred.' Section 1-201(b)(31) of UCC defines the term 'Record' as 'information that is inscribed on a tangible medium or that is stored in an electronic or other medium and is retrievable in perceivable form'. The term 'Sign' is also defined under the UCC:

'Sign' means, with present intent to authenticate or adopt a record:

(A) to execute or adopt a tangible symbol; or

(B) to attach to or logically associate with the record an electronic sound, symbol, or process.⁸²¹

The UCC definitions of 'Record' and 'Sign' (and perhaps also the definition of 'document of title', discussed earlier) may recognize electronic bills of lading as legal equivalents to paper or tangible bills of lading.⁸²² The UCC definition of 'Holder' in section 1-201(b)(21) may reflect the equivalence between the control of an electronic document and possession of a paper bill of lading through the words 'person in possession':

'Holder' means: (A) the person in possession of a negotiable instrument that is payable either to bearer or to an identified person that is the person in possession; or (B) the person in possession of a document of title if the goods are deliverable either to bearer or to the order of the person in possession.

This definition of 'Holder', according to Keough and Cooney, 'expressly provides for the recognition of electronic bills of lading'.⁸²³ Moreover, Section 7001(a) of the Electronic Signatures in Global and National Commerce Act (E-Sign) 2000 seems to adopt the *principle*

⁸¹⁹ s 1-201(b)(16) of UCC. See the discussion in Goldby (n 26) 174.

⁸²⁰ Goldby (n 26) 174.

⁸²¹ s 7-102(a)(11) of UCC.

⁸²² Keough and Cooney (n 811).

⁸²³ *ibid.*

of functional equivalence. It may equalize between the legal effect, validity, or enforceability of electronic signatures, contracts and other records and their paper counterparts, as follows:

In general, notwithstanding any statute, regulation, or other rule of law (other than this subchapter and subchapter II), with respect to any transaction in or affecting interstate or foreign commerce:

- (1) a signature, contract, or other record relating to such transaction may not be denied legal effect, validity, or enforceability solely because it is in electronic form; and
- (2) a contract relating to such transaction may not be denied legal effect, validity, or enforceability solely because an electronic signature or electronic record was used in its formation.

The Uniform Electronic Transactions Act (UETA),⁸²⁴ may provide for the legal validity of electronic signatures similarly to E-Sign.⁸²⁵ It differs from E-Sign in that it ‘defines transferable record as a generic term which includes the electronic equivalents for various documents and instruments such as bills of lading, warehouse receipts and promissory notes’.⁸²⁶ E-Sign ‘defines transferable record as an electronic equivalent exclusively for promissory notes related to a loans secured by real property’.⁸²⁷ According to Safranko, UETA ‘established the concept of control as a functional equivalence for the possession thus enabling the transferability of rights in an electronic environment’.⁸²⁸ This means that UETA, like the UCC, adopts the *principle of functional equivalence* in the possession or control of electronic documents or records and paper documents. UETA adopts the *principle of functional equivalence* in its definition of ‘transferable records’.⁸²⁹

- (a) In this section, ‘transferable record’ means an electronic record that:

⁸²⁴ The UETA was approved and recommended by the National Conference of Commissioners on Uniform State Laws in 1999. The National Conference of Commissioners on Uniform State Laws (NCCUSL), is ‘a non-profit unincorporated association comprised of state commissioners on uniform laws from each State, the District of Columbia, the Commonwealth of Puerto Rico, and the U.S. Virgin Islands’. Steven Plitt, Daniel Maldonado and John Wittwer, ‘Federal Reserve Preemption and Underinsured Coverage Offering in the Digital Age: E-SIGN and UETA Have Not Had a Significant Impact on State Offering Or Rejection Requirements’ (2015) 104(3) Kentucky Law Journal 375-408. The UETA has been adopted in 49 jurisdictions in the United States. Henry Gabriel, ‘Uniform Commercial Code Article Two Revisions: The View of the Trenches’ (2018) 23(2) Barry Law Review 4.

⁸²⁵ Keough and Cooney (n 811).

⁸²⁶ Zvonimir Safranko, ‘The Notion of Electronic Transferable Records’ (2016) 3(2) InterEULawEast: Journal for International and European Law, Economics and Market Integrations 1-32.

⁸²⁷ *ibid.*

⁸²⁸ *ibid.*

⁸²⁹ *ibid.*

- (1) would be a note under [Article 3 of the of the Uniform Commercial Code] or a document under [Article 7 of the of the Uniform Commercial Code] if the electronic record were in writing; and
- (2) the issuer of the electronic record expressly has agreed is a transferable record.⁸³⁰

All of these statutory provisions may shed a light on the difference between US and English laws in relation to the recognition of electronic documents, including electronic bills of adding. These provisions may show how the US law adapts new developments in trade and transportation though the English law precedes the US law.⁸³¹ ‘[U]ntil the late 19th century, American commercial law was primarily based on English common law and the law of merchants’.⁸³²

5.2 Australia

Australian law recognizes electronic bills of lading.⁸³³ Laryea says that ‘Australian law gives full legal effect to electronic bills of lading (EBLs)’.⁸³⁴ Australia's Sea-Carriage Documents Act provides for electronic bills of lading.⁸³⁵ This Act expressly includes electronic and computerized sea-carriage documents: in section 4(1) and (2):

- 4.(1) This Act applies, with necessary changes, to a sea-carriage document in the form of a data message in the same way as it applies to a written sea-carriage document.
- (2) This Act applies, with necessary changes, to the communication of a sea-carriage document by means of a data message in the same way as it applies to the communication of a sea-carriage document by other means.⁸³⁶

This provision may be deemed to espouse the *principle of functional equivalence*, because it affords the same legal validity to ‘a sea-carriage document in the form of a data message’ and ‘a written sea-carriage document’. Similarly, it gives the same legal value to ‘the communication of a sea-carriage document by means of a data message’ and ‘the communication of a sea-carriage document by other means’. Following this equalization of

⁸³⁰ s 16(a) of UETA.

⁸³¹ Gabriel (n 824).

⁸³² *ibid.*

⁸³³ Emmanuel T Laryea, ‘Bolero electronic trade system – an Australian perspective’ (2001) 16(1) *Journal of International Banking Law* 4-11.

⁸³⁴ *ibid.*

⁸³⁵ *ibid.*

⁸³⁶ s 4(1) and (2) of Sea-Carriage Documents. See the discussion in Laryea (n 833).

paper sea-carriage documents and data messages or communications, paper bills of lading can be dematerialized and go electronic according to this Act because a sea-carriage document means, inter alia, a paper bill of lading. The Act expressly provides for this meaning in the definition of ‘Sea-Carriage Document’ which states that the “sea-carriage document” means a bill of lading, a sea waybill or a ship’s delivery order’.⁸³⁷ Section 3 of the Act also defines a ‘Data Message’ as ‘information generated, stored or communicated by electronic, optical or analogous means, including electronic data interchange, electronic mail, telegram, telex and telecopy’. Laryea notes that ‘Australian law thus affords EBLs the same legal effect as paper bills of lading’.⁸³⁸ Laryea adds that ‘[t]here are no specifications as to what constitutes an EBL, as the Acts leave the procedures and methods for their creation, transmission and transfer to the agreement of the parties involved’,⁸³⁹ in accordance to section 4(3) of the Act:

- (3) This Act applies, with necessary changes—
- (a) to a sea-carriage document in the form of a data message; or
 - (b) to the communication of a sea-carriage document by means of a data message;
- in accordance with procedures agreed between the parties to the contract of carriage.

In light of these provisions that recognize electronic bills of lading, it is not necessary to rely on ‘the principles of novation and attornment to transfer title under a BBL’.⁸⁴⁰ This position reflects the difference between Australian and English laws. It shows how the Australian law adapts new developments in trade and transportation while the English law lacks a clear case law or statutory provision on electronic bills of lading and depends on the concepts of novation and attornment for the transfer of such documents, as hinted out previously.⁸⁴¹

5.3 India

India enacted the ‘Information Technology Act’ in 2000, perhaps in response to the UNCITRAL Model Law on Electronic Commerce of 1996.⁸⁴² The Act aims to facilitate electronic commerce, stating in its preamble:

⁸³⁷ s 3.

⁸³⁸ Laryea (n 833).

⁸³⁹ *ibid.*

⁸⁴⁰ *ibid.*

⁸⁴¹ Goldby (n 799). See section 4 ‘English law approach: a general view on the position of English law in relation to the use of electronic bills of lading’ in Chapter Three, and section 3 ‘English law’ in Chapter Six.

⁸⁴² Mustafa Motiwala, ‘The Legal Status of Electronic Bills of Lading; A Report for the International Chamber of Commerce (ICC): Appendix 8: India’, <https://cdn.iccwbo.org/content/uploads/sites/3/2018/10/the-legal-status-of-e-bills-of-lading-oct2018.pdf>

An Act to provide legal recognition for transactions carried out by means of electronic data interchange and other means of electronic communication, commonly referred to as 'electronic commerce', which involve the use of alternatives to paper-based methods of communication and storage of information, to facilitate electronic filing of documents with the Government agencies and further to amend the Indian Penal Code, the Indian Evidence Act, 1872, the Bankers' Books Evidence Act, 1891 and the Reserve Bank of India Act, 1934 and for matters connected therewith or incidental thereto.

The Act provides a 'legal framework so that legal sanctity is accorded to all electronic records and other activities carried out by electronic means'.⁸⁴³ Section 2(t) of the Act defines the term 'electronic records' as 'data, record or data generated, image or sound stored, received or sent in an electronic form or micro film or computer generated micro fiche'. The electronic bill of lading 'appears fall within this definition'.⁸⁴⁴ Motiwala argues that with the enactment of this Act, electronic bills of lading might be 'admissible in any legal proceedings without further proof or production of an original in paper format, provided the requirements as laid down under Sec 65 B of the Evidence are complied with'.⁸⁴⁵ However, there is no 'precedent which has categorically clarified that the electronic Bill of lading and any other related document will be admissible in any legal proceedings'.⁸⁴⁶ The Indian Evidence Act of 1872 is relevant in this regard. 'Amendments were made', to this Act, 'before and after 1947'.⁸⁴⁷ Those amendments might be described as 'minor'.⁸⁴⁸ Heydon notes that '[i]n this century there have been three major groups of amendments. The Information Technology Act 2000 (India) permitted the reception of electronic records'.⁸⁴⁹ Under this Act, 'the contents of the electronic records are admissible as evidence subject to it being proved as per the provisions of the Evidence Act',⁸⁵⁰ in accordance to Section 65A of Indian Evidence Act, as amended, which states that '[t]he contents of electronic records may be proved in accordance with the provisions of section 65B (w.e.f. 17-10-2000)'. Section 65B(1) provides:

Notwithstanding anything contained in this Act, any information contained in an electronic record which is printed on a paper, stored, recorded or copied in optical or magnetic media produced by a computer (hereinafter referred to as the computer output) shall be deemed to

⁸⁴³ *ibid.*

⁸⁴⁴ *ibid.*

⁸⁴⁵ *ibid.*

⁸⁴⁶ *ibid.*

⁸⁴⁷ JD Heydon, 'The Origins of the Indian Evidence Act' (2010) 10(1) Oxford University Commonwealth Law Journal 1-76.

⁸⁴⁸ *ibid.*

⁸⁴⁹ *ibid.*

⁸⁵⁰ Motiwala (n 842).

be also a document, if the conditions mentioned in this section are satisfied in relation to the information and computer in question and shall be admissible in any proceedings, without further proof or production of the original, as evidence or any contents of the original or of any fact stated therein of which direct evidence would be admissible ...

5.4 Singapore

In Singapore, the Electronic Transactions Act was enacted in 1998. With the enactment of this Act, Singapore ‘has become one of the first commonwealth countries to have legislation regulating electronic commerce’.⁸⁵¹ The Act is intended ‘to facilitate the use of electronic systems in business’.⁸⁵² The Act adopts the *principle of functional equivalence* in that the ‘information shall not be denied legal effect, validity or enforceability solely on the ground that it is in the form of an electronic record’.⁸⁵³ The Act also adopts this principle in relation to writing in that ‘that where a rule of law requires information to be written or in writing, an electronic record would suffice’.⁸⁵⁴ Similarly, the Act adopts the *principle of functional equivalence* in terms electronic signature in that ‘where a rule of law requires a signature, an electronic signature suffices’.⁸⁵⁵ By enacting the Electronic Transactions Act, ‘Singapore was the first country in the world to implement the UNCITRAL Model Law on Electronic Commerce’.⁸⁵⁶

6 Conclusion

This chapter has reflected on how electronic bills of lading resulted from the emergence of scientific new technology, and the increasing use of electronic communication means and Internet. The use of electronic bills of lading reduces time, costs and efforts, and increases the accuracy, quality and quantity of international transactions. Electronic bills of lading have evolved over the last five decades. The first type of electronic bills of lading appeared in the early 1970s with DFR. However, the concept of electronic bills of lading seemed to be more crystalized in the 1990s, specially with the CMI Uniform Rules for Electronic Bills of Lading

⁸⁵¹ Ravi Chandran, ‘Singapore’s Electronic Transactions Act 1998’ (1999) *Journal of Business Law* 80-83.

⁸⁵² Laryea (n 833).

⁸⁵³ s 6 of Electronic Transactions Act 1998. See the discussion in Chandran (n 851).

⁸⁵⁴ s 7. See the discussion in Chandran (n 851).

⁸⁵⁵ s 8. See the discussion in Chandran (n 851).

⁸⁵⁶ Sue Wei Tan and Justin Tan, ‘The Legal Status of Electronic Bills of Lading; A Report for the International Chamber of Commerce (ICC): Appendix 5: Singapore’, <https://cdn.iccwbo.org/content/uploads/sites/3/2018/10/the-legal-status-of-e-bills-of-lading-oct2018.pdf>

1990, Bolero and KTNET. Endeavours to use and recognize electronic bills of lading continued and the international community adopted relevant international conventions and model laws. In practice, contract forms were devised for specialized systems – KTNET, Bolero, essDOCS, E-Title, edoxOnline and Wave – and most of them were approved by the International Group of P&I Clubs. Other technologies, such as single window and blockchain technology, have developed more recently, further encouraging the use and recognition of electronic bills of lading.

The English law has been slow in terms of the dematerialization of paper bills of lading. The Secretary of State is authorized by COGSA 1992 to issue regulations that may allow, inter alia, the use of electronic bills of lading, but no such regulations have been issued. Nevertheless, an Electronic Communications Act 2000 was enacted, together with the Electronic Commerce (EC Directive) Regulations 2000 and the Electronic Signatures Regulations 2002. The enactment of these legislative instruments may support the recognition of the electronic bill of lading, especially as a receipt for the goods and evidencing or containing the contract of carriage. Yet, the challenge is the negotiability feature of the electronic bill of lading as a document of title. Some other national laws have a clearer position in terms of the recognition of electronic bills of lading, particularly US and Australian laws.

APPENDIX 1

ESS-Databridge Bill of Lading Sample

Bill of Lading

ESS Negotiable eB/L To Be Used with Charterparties

1 Consignor Shipper Co. Ltd		2 Date of Issue 16 Jan 2013		3 Unique Bill Identifier 7788	
		4		5	
6 Consignee Trader Co. Ltd or to its or their assigns or order		7 Parcel Reference T/C 001		8 Shipment Identifier SC/103	
		9		10 SCAC	
11		12			
13 Vessel Name/Voyage Number "Maria G"		14 Flag UNITED KINGDOM		15 Master George G	
16		17 Port of Loading Sullom Voe		18	
20		21 Port of Discharge Coryton		22	
GRADE AND QUANTITY AS FURNISHED BY CONSIGNOR					
24 Grade: Brent Blend					
Clean On Board Freight Pre-Paid					
25 Quantity		26 Gross		27 Net	
Barrels @ 60°F		100,412.000		100,000,000	
Cubic Metres @ 15°C		15,961.100		12,951.600	
Tonnes		13,031.300		15,890.700	
<p>Shipped at the Port of Loading in apparent good order and condition on board the Vessel and to be delivered (subject to the liberties, conditions, exceptions and limitations hereinafter contained) in the like order and condition to the Port of Discharge or as near there to as she may safely get, and there discharge always afloat to the Consignee or to his or their Assigns or Order. FOR CONDITIONS OF CARRIAGE, SEE PART II. Clauses 1 to 8 inclusive of Part II of this Bill of Lading are incorporated herein and form part of this Bill of Lading.</p> <p>IN WITNESS whereof the Master or Agent of the Vessel has signed the number of Bills of Lading indicated below all of this tenor and date, any one of which being accomplished, the others to stand void.</p>					
Freight and other conditions of carriage as per Charterparty dated: 02 January 2013		38 Place and Date Sullom Voe, 16 Jan 2013			
Number of Original B/Ls: 1 (ONE)		39 Signature Electronically signed by George G For and on behalf of Carrier Co. Ltd			

© Electronic Shipping Solutions Limited (2013)

Figure 3 Electronic bill of lading (Face page of the electronic bill of lading ⁸⁵⁷)

⁸⁵⁷ Goldby (n 26) 385.

PART II - CONDITIONS OF CARRIAGE

1. CLAUSE PARAMOUNT. This Bill of Lading shall:

- (a) have effect subject to any national law making the International Convention for the Unification of Certain Rules of Law relating to Bills of Lading, signed in Brussels 25 August 1924 (The Hague Rules), or the Hague Rules as amended by the Protocol, signed in Brussels on 23 February 1968 (the Hague-Visby Rules) or the United States Carriage of Goods by Sea Act, 1936 (U.S. COGSA, 46 U.S.C. Appendix 1300-1315) compulsorily applicable to this Bill of Lading. If any term of this Bill of Lading is repugnant to this legislation to any extent, such terms shall be void to that extent but no further.
- (b) take effect, save where the Hague or Hague-Visby Rules apply by reason of (a) above, subject to any national law in force at the port of shipment or place of issue of the Bill of Lading making the United Nations Convention on the Carriage of Goods by Sea 1978 (the Hamburg Rules) compulsorily applicable to this Bill of Lading, in which case this Bill of Lading shall have effect subject to the Hamburg Rules which shall nullify any stipulation derogating therefrom to the detriment of the Consignor or the Consignee;
- (c) where the Hague, Hague-Visby or Hamburg Rules are not compulsorily applicable to this Bill of Lading, the Carrier shall be entitled to the benefits of all privileges, rights and immunities contained in Articles I to VIII of the Hague Rules, save that the limitation sum for the purposes of Article IV Rule 5 of the Hague Rules shall be £100 sterling.

2. LIBERTY

The Vessel has liberty to proceed to or to call at or off any port or ports or transshipment areas in any order in and out of or beyond the customary route for any purpose or purposes whatsoever (including, but without prejudice to the generality of the foregoing, loading other cargo at any other port or ports for discharge at the port specified in this Bill of Lading or at any other port or ports or transshipping cargo (including cargo covered by this Bill of Lading) to or from any other vessels in port or at sea by any means including, without limitation to the generality of the foregoing, by ship-to-ship transfer, submarine pipeline, land pipeline, and intermediate storage or any one or more of them) or bunkering or changing crew), to sail without pilots, to make trial trips with or without notice, or to adjust compasses, to tow and to be towed and to assist vessels or aircraft in distress or to deviate for the purposes of saving life or property or for the purpose of embarking or disembarking persons, spares or supplies or to deviate for any other reasonable purpose and any use of the aforesaid liberties shall be deemed to be part of the contract voyage; this Clause shall not be considered as restricted by any provision of this Bill of Lading, whether express or implied or construed by reference to whether any use of the said liberties would or would not frustrate the object of this Bill of Lading or of the contract evidenced thereby.

3. DISCLAIMER

The weights and/or quantities and grades stated herein are the Consignor's weights and/or quantities and grades, and no acknowledgement is made as to weight, quantity or quality.

4. WAR RISKS, ICE, QUARANTINE, STRIKES ETC.

- (a) The Carrier shall have the liberty to comply with any orders, directions or recommendations as to departure, arrival, routes, ports or places of call, stoppages, destinations, zones, waters, delivery or any orders, directions or recommendations given by the Government of the Nation under whose flag the Vessel sails or any department thereof or any other Government or Local Authority, including any de facto Government or Local Authority, or by any person or body acting or purporting to act as or with the authority of any such Government or Authority, or by any Committee or person having, under the terms of the War Risks Insurance on the Vessel, the right to give any such orders, directions or recommendations. Anything done or not done in compliance with any order, direction or recommendation shall not be deemed to be a deviation from, but is expressly agreed to be part of the agreed voyage.
- (b) If, by reason of or in compliance with any such order, direction or recommendation, the Vessel does not proceed to the port or place of discharge designated in or under this Bill of Lading, the Carrier shall be at liberty, but shall not be bound, to discharge the cargo at any other port or place, which it or the Master may in its or his sole discretion decide.
- (c) If, owing to any quarantine, war, hostilities, warlike operations, civil war, civil commotion, revolution, strikes, riots, blockade, interdict (whether of ship or cargo) or the operation of international law or the apprehension of any of the aforesaid causes, the Port of Discharge be, or if the Master or the Carrier in its or his sole discretion consider the same to be, inaccessible or unsafe or inadvisable to reach each or enter or to be prohibited, or if there is danger of the Vessel being frozen in or being unable to proceed thence on the voyage, then the Master shall be entitled to nominate alternative Ports of Discharge and accept instructions from them to proceed to an alternative safe port to discharge, which is not within the aforesaid categories and where there are the necessary facilities for the discharge and reception of oil in bulk. If no such orders for an alternative port of discharge are received by the Master from the Charterers within 48 hours of the said notification or within such time as is reasonable in the circumstances, the Master or the Carrier may request the Consignees of the cargo or their agents for the nomination of an alternative safe port of discharge. In the event of the Master or the Carrier in his or its sole discretion, not accepting any such alternative nomination made by the Consignees of the cargo or in the event of no such nomination being received within 48 hours of a request having been made by the Master or the Carrier, the Carrier shall be at liberty, but shall not be bound, to discharge the cargo or any part thereof at any alternative port or place which it or the Master may in its or his sole discretion decide.
- (d) In any of the aforesaid events, discharge at such alternative port or place shall constitute due performance of the contract contained in this Bill of Lading so far as the cargo so discharged is concerned.

5. GENERAL AVERAGE AND NEW JASON CLAUSE

General Average shall be adjusted in London according to the York-Antwerp Rules 1974 and English law and practice, but if, by agreement, the adjustment is made in accordance with the law and practice of the United States of America, the following clause shall apply:

"In the event of accident, danger, damage or disaster before or after the commencement of the voyage, resulting from any cause whatsoever, whether due to negligence or not, for which or for the consequence of which the Carrier is not responsible by statute, contract or otherwise, the Consignors, Consignees or owners of the cargo shall contribute with the Carrier in General Average to the payment of any sacrifices, losses or expenses of a General Average nature that may be made or incurred, and shall pay salvage and special charges incurred in respect of the cargo. If a salvaging vessel is owned or operated by the Carrier, salvage shall be paid for as fully as if the salvaging vessel or vessels belonged to strangers. Such deposit as the Carrier or his agents may deem sufficient to cover the estimated contribution of the cargo, and any expenses and special charges thereon, shall, if required, be paid by the Consignors, the Consignees or the owners of the cargo to the Carrier prior to delivery."

6. BOTH TO BLAME COLLISION CLAUSE

If the liability for any collision in which the Vessel is involved while performing this Bill of Lading falls to be determined in accordance with the laws of the United States of America, the following clause shall apply:

"If the Vessel comes into collision with another vessel as a result of the negligence of the other vessel and any act, neglect or fault of the Master, mariner, pilot or the servants of the Carrier in the navigation or in the management of the Vessel, the owner of the goods carried hereunder will indemnify the Carrier against all loss or liability to the other or non-carrying ship or her owners insofar as such loss or liability represent loss of, or damage to, or any claim whatsoever of the owners of the said goods, paid or payable by the other or non-carrying ship or her owners to the owners of the said goods as part of their claim against the Vessel or the Carrier. The foregoing provisions shall also apply where the owners, operators or those in charge of any vessel or vessels or objects other than, or in addition to, the colliding vessels or objects are at fault in respect of a collision or contact."

7. EXEMPTIONS AND IMMUNITIES OF ALL SERVANTS AND AGENTS OF THE CARRIER

It is hereby expressly agreed that no servant or agent of the Carrier (including the Master, officers, and crew of the Vessel), all terminal operators, warehousemen, stevedores, watchmen, husbanding agents, managing agents, general agents, ship's agents, and all other agents, subcontractors and independent contractors whatsoever as well as any officers, directors, agents or employees of any of the foregoing) shall in any circumstance whatsoever be under any liability whatsoever to the Consignor, the Consignee or the owner of the goods or to any holder of this Bill of Lading for any loss, damage or delay of whatsoever kind arising or resulting directly or indirectly from any act, neglect or default on his part while acting in the course of or in connection with his employment and, but without prejudice to the generality of the foregoing provisions of this Clause, every exemption, limitation, condition and liberty herein contained and every right, exemption from liability, defence and immunity of whatsoever nature applicable to the Carrier or to which the Carrier is entitled hereunder shall also be available to and shall extend to protect every such servant, agent or contractor of the Carrier acting as aforesaid and for the purposes of the foregoing provisions of this Clause, the Carrier is or shall be deemed to be acting as agent or trustee on behalf of and for the benefit of all such servants, agents and contractors to the fullest extent permitted by the law applicable to Himalaya Clauses and all such persons shall to this extent be or be deemed to be parties to the contract in or evidenced by this Bill of Lading.

8. LAW AND JURISDICTION

This Bill of Lading shall be construed and the relations between the parties determined in accordance with the laws of England notwithstanding any other terms set out or incorporated herein. The High Court of England shall have exclusive jurisdiction over any dispute which may arise out of this Bill of Lading.

Figure 4 Electronic bill of lading (Reverse page of the electronic bill of lading ⁸⁵⁸)

Chapter Four: Can the Electronic Bill of Lading Function as a Receipt for the Goods?

1 Introduction

The receipt function of bills of lading, as mentioned previously in Chapter Two, is to state, 'the condition and quantity of the goods when they are transferred into the custody of the carrier'.⁸⁵⁹ In other words, according to Low, in this function a bill of lading evidences, by virtue of a statement in the bill, 'the quantity, condition and quality of the goods when put on board the ship'.⁸⁶⁰ This chapter is the first test to examine whether electronic bills of lading can perform the first function of paper bills of lading as receipts for the goods under relevant international convention, model laws and contract forms.

Based on the international approach of the research, this chapter starts by testing the application of the receipt function of electronic bills of lading under the Rotterdam Rules. It also studies the application of the receipt function under the CMI Rules. It does not address MLETR because MLETR deals with the transfer issue of the third function as document of title. Similarly, it does not address the UNCITRAL Model Law on Electronic Commerce of 1996 in relation to electronic bills of lading because the UNCITRAL Model Law deals with electronic commerce in general; it is not drafted specifically for electronic bills of lading, as are the CMI Rules. The position of the Incoterms is similar. Although the Incoterms adopted electronic documents, as discussed in Chapter Three, they do not provide for the functions of electronic bills of lading as they concern international sale contracts, not electronic bills of lading.

Later, the chapter examines the application of the receipt function to be performed by electronic bills of lading under the contract forms of certain providers. It first examines the application of the receipt function under Bolero. Next, it examines the receipt function under essDOCS. It does not examine the application of the receipt function under BIMCO Electronic Bills of Lading Clause because that clause depends on the providers approved by the International Group of P&I Clubs.

Based on the English law approach of the research, this chapter examines the position of English law in relation to the receipt function to be performed by electronic bills of lading

⁸⁵⁹ Baughen (n 191) 6.

⁸⁶⁰ Low (n 271).

under the present case law and statutes. In other words, it examines whether electronic bills of lading can perform the receipt function of bills of lading under English law. The chapter ends with a conclusion summing up the results of the discussion of the chapter.

2 International approach

This section examines the application of the receipt function by electronic bills of lading under the Rotterdam Rules, CMI Rules, Bolero and essDOCS.

2.1 Rotterdam Rules

The Rotterdam Rules, as mentioned in the methodology discussion, 'are the first international convention for the carriage of goods by sea to make specific provision for electronic commerce'.⁸⁶¹ Therefore, the Rotterdam Rules provide for the electronic functions of bills of lading, including the receipt function. Under the Rotterdam Rules, 'there is no specific reference to the bill of lading; the term used is "transport document"'.⁸⁶² The Rules define transport document 'a document issued under a contract of carriage by the carrier that: (a) Evidences the carrier's or a performing party's receipt of goods under a contract of carriage; and (b) Evidences or contains a contract of carriage'.⁸⁶³ Article 1(14) recognizes the first two functions of paper bills of lading, or 'transport record' as the Rotterdam Rules calls it. The definition in article 1(14) deals with the paper transport document. The Rotterdam Rules recognize the 'electronic transport record' as an electronic equivalent of the 'paper transport document', serving as a receipt of goods and as evidencing or containing the contract of carriage:

'Electronic transport record' means information in one or more messages issued by electronic communication under a contract of carriage by a carrier, including information logically associated with the electronic transport record by attachments or otherwise linked to the electronic transport record contemporaneously with or subsequent to its issue by the carrier, so as to become part of the electronic transport record, that:

(a) Evidences the carrier's or a performing party's receipt of goods under a contract of carriage; and

⁸⁶¹ Thomas (n 20) 283.

⁸⁶² Bal (n 604) 188. See also subsection 2.13 'Convention on Contracts for Carriage of Goods Wholly or Partly by Sea (the Rotterdam Rules)' in Chapter Three.

⁸⁶³ art 1(14) of Rotterdam Rules.

(b) Evidences or contains a contract of carriage.⁸⁶⁴

The electronic transport record, as mentioned in Chapter Three, according to Gaskell ‘... is merely a collection of data, associated electronically, which does not need to have a particular form, but for it to be used in practice it must be visible in some recognizable way’.⁸⁶⁵ Moreover, the Rotterdam Rules differentiate between ‘negotiable electronic transport record’ and ‘non-negotiable electronic transport record’. The Rotterdam Rules define ‘negotiable electronic transport record:

‘Negotiable electronic transport record’ means an electronic transport record:

- (a) That indicates, by wording such as ‘to order’, or ‘negotiable’, or other appropriate wording recognized as having the same effect by the law applicable to the record, that the goods have been consigned to the order of the shipper or to the order of the consignee, and is not explicitly stated as being ‘non-negotiable’ or ‘not negotiable’; and
- (b) The use of which meets the requirements of article 9, paragraph 1.⁸⁶⁶

The negotiability feature of the third function of electronic bills of lading will be examined in details in Chapter Six. The Rotterdam Rules define ‘non-negotiable electronic transport record’ ‘an electronic transport record that is not a negotiable electronic transport record’.⁸⁶⁷ Article 8 of Rotterdam Rules, under the title of ‘use and effect of electronic transport records’, according to Sturley et al., ‘establishes the legal basis for the equalisation method’.⁸⁶⁸ Sturley et al. add that ‘[a]ll of the particulars that might otherwise be in a paper transport document may instead be recorded in an "electronic transport record," provided that the shipper and the carrier agree to its issuance and subsequence’.⁸⁶⁹

Subject to the requirements set out in this Convention:

- (a) Anything that is to be in or on a transport document under this Convention may be recorded in an electronic transport record, provided the issuance and subsequent use of an electronic transport record is with the consent of the carrier and the shipper; and
- (b) The issuance, exclusive control, or transfer of an electronic transport record has the same effect as the issuance, possession, or transfer of a transport document.⁸⁷⁰

⁸⁶⁴ art 1(8).

⁸⁶⁵ Gaskell (n 608).

⁸⁶⁶ art 1(19) of Rotterdam Rules.

⁸⁶⁷ art 1(20).

⁸⁶⁸ Sturley, Fujita and Ziel (n 80) 49.

⁸⁶⁹ *ibid.*

⁸⁷⁰ art 8 of Rotterdam Rules.

As regard the consent of the parties to the electronic transport records under Rotterdam Rules, Bal argues that:

Article 8 of the Rules emphasises the necessity for consent when the parties use an electronic transport record. The drafters of the Rules have tried to avoid imposition of electronic transport records on a party who will need a paper document for legal reasons, such as, where one of the parties to the carriage contract is from a state which is not a party to the new convention and whose law does not recognise the effect of electronic communications.⁸⁷¹

In the case of negotiable electronic transport records, the Rotterdam Rules provide for the requirements to give negotiable transport records the same legal effect as paper bills of lading:

1. The use of a negotiable electronic transport record shall be subject to procedures that provide for:

(a) The method for the issuance and the transfer of that record to an intended holder; (b) An assurance that the negotiable electronic transport record retains its integrity; (c) The manner in which the holder is able to demonstrate that it is the holder; and (d) The manner of providing confirmation that delivery to the holder has been effected, or that, pursuant to articles 10, paragraph 2, or 47, subparagraphs 1(a)(ii) and (c), the electronic transport record has ceased to have any effect or validity.

2. The procedures in paragraph 1 of this article shall be referred to in the contract particulars and be readily ascertainable.⁸⁷²

The ‘contract particulars’ are defined under the Rotterdam rules to include ‘any information relating to the contract of carriage or to the goods (including terms, notations, signatures and endorsements) that is in a transport document or an electronic transport record’.⁸⁷³ It seems safe to say that the particulars included in paper bills of lading under the receipt function are the same as those particulars included in electronic transport records (electronic bills of lading). It seems also possible to reach that the particulars denoting the information on the contract of carriage serve the second function of electronic transport records (electronic bills of lading) to evidencing or containing the contract of carriage, while the particulars denoting the information on goods serve the first function of electronic transport records as a receipt for the goods. In the

⁸⁷¹ Bal (n 604) 188.

⁸⁷² art 9 Rotterdam Rules.

⁸⁷³ art 1(23) of Rotterdam Rules.

case of paper bills of lading, the carrier, under the Hague-Visby and Hamburg Rules, is obliged upon receiving the goods to issue a paper bill of lading and provide the shipper with the particulars of goods to be included in the paper bill. Under the Rotterdam Rules, the carrier, at the ‘shipper’s option’, is obliged to issue to the shipper or the documentary shipper a non-negotiable transport document or a non-negotiable electronic transport record or a negotiable transport document or a negotiable electronic transport record in accordance to article 35. It seems that the Rotterdam Rules’ focus on the ‘shipper’s consent’ or option, especially when compared to previous conventions. The issuing of a transport document, under the Rotterdam Rules, as under the Hague-Visby and Hamburg Rules, ‘is mandatory upon delivery of the goods for carriage’.⁸⁷⁴

Unless the shipper and the carrier have agreed not to use a transport document or an electronic transport record, or it is the custom, usage or practice of the trade not to use one, upon delivery of the goods for carriage to the carrier or performing party, the shipper or, if the shipper consents, the documentary shipper, is entitled to obtain from the carrier, at the shipper’s option:

(a) A non-negotiable transport document or, subject to article 8, subparagraph (a), a non-negotiable electronic transport record; or

(b) An appropriate negotiable transport document or, subject to article 8, subparagraph (a), a negotiable electronic transport record, unless the shipper and the carrier have agreed not to use a negotiable transport document or negotiable electronic transport record, or it is the custom, usage or practice of the trade not to use one.⁸⁷⁵

Article 36 of Rotterdam Rules provides for the particulars to be included in an electronic transport record, especially those particulars that serve the receipt function of an electronic transport document. It ‘lists the contract particulars which must be included in the transport document or electronic transport record referred to in article 35’.⁸⁷⁶ It seems safe to say that Article 36 provides for all particulars, whether those covering the goods and serving as receipt for the goods or those covering the carriage and serving as evidencing or containing the contract of carriage. There is a specific information that must be supplied by the shipper under the Rotterdam Rules: ‘[a] description of the goods as appropriate for the transport’,⁸⁷⁷ ‘[T]he leading marks necessary for identification of the goods’,⁸⁷⁸ ‘[T]he number of packages or

⁸⁷⁴ Bal (n 604) 189.

⁸⁷⁵ art 35 of Rotterdam Rules.

⁸⁷⁶ Bal (n 604) 189.

⁸⁷⁷ art 36(1)(a) of Rotterdam Rules.

⁸⁷⁸ art 36(1)(b).

pieces, or the quantity of goods⁸⁷⁹ and ‘[T]he weight of the goods, if furnished by the shipper’.⁸⁸⁰ The Rotterdam Rule require that the particulars to be inserted in the ‘transport document’ or ‘electronic transport record’ must include: ‘[a] statement of the apparent order and condition of the goods at the time the carrier or a performing party receives them for carriage’,⁸⁸¹ ‘[t]he name and address of the carrier’,⁸⁸² ‘[t]he date on which the carrier or a performing party received the goods, or on which the goods were loaded on board the ship, or on which the transport document or electronic transport record was issued’⁸⁸³ and ‘[i]f the transport document is negotiable, the number of originals of the negotiable transport document, when more than one original is issued’.⁸⁸⁴

The Rotterdam Rules also that these ‘particulars’ must ‘further include’: ‘[t]he name and address of the consignee, if named by the shipper’,⁸⁸⁵ ‘[t]he name of a ship, if specified in the contract of carriage’,⁸⁸⁶ ‘[t]he place of receipt and, if known to the carrier, the place of delivery’⁸⁸⁷ and ‘[t]he port of loading and the port of discharge, if specified in the contract of carriage’.⁸⁸⁸ The Rotterdam Rule provide that the above-mentioned ‘phrase "apparent order and condition of the goods"', referred to in article 36(2)(a), ‘refers to the order and condition of the goods based on’: ‘[a] reasonable external inspection of the goods as packaged at the time the shipper delivers them to the carrier or a performing party’⁸⁸⁹ and ‘[a]ny additional inspection that the carrier or a performing party actually performs before issuing the transport document or electronic transport record’.⁸⁹⁰

Article 41 of Rotterdam Rules proves for the ‘evidentiary effect of the contract particulars’. It provides for the ‘prima facie evidence of the carrier’s receipt of the goods’,⁸⁹¹ as do the Hague-Visby Rules and Hamburg Rules. The ‘carrier’s proof of the contrary’ is ‘not be admissible’, if ‘[a] negotiable transport document or a negotiable electronic transport record that is

⁸⁷⁹ art 36(1)(c).

⁸⁸⁰ art 36(1)(d).

⁸⁸¹ art 36(2)(a).

⁸⁸² art 36(2)(b).

⁸⁸³ art 36(2)(c).

⁸⁸⁴ art 36(2)(d).

⁸⁸⁵ art 36(3)(a).

⁸⁸⁶ art 36(3)(b).

⁸⁸⁷ art 36(3)(c).

⁸⁸⁸ art 36(3)(d).

⁸⁸⁹ art 36(4)(a).

⁸⁹⁰ art 36(4)(b).

⁸⁹¹ art 41(a).

transferred to a third party acting in good faith'.⁸⁹² It is also not 'not be admissible' if '[a] non-negotiable transport document that indicates that it must be surrendered in order to obtain delivery of the goods and is transferred to the consignee acting in good faith'.⁸⁹³

Moreover, the 'carrier's proof of the contrary' is not admissible 'against a consignee' who acts in good faith in respect of the 'contract particulars included in a non-negotiable transport document or a non-negotiable electronic transport record'.⁸⁹⁴ This provision is applicable in the case of '[t]he contract particulars are furnished by the carrier',⁸⁹⁵ '[t]he number, type and identifying numbers of the containers, but not the identifying numbers of the container seals'⁸⁹⁶ and '[t]he contract particulars referred to in article 36, paragraph 2'.⁸⁹⁷

However, as Bal explains if 'the contract particulars contain a qualifying clause that complies with the requirements of Article 40', 'the transport document or electronic transport record does not constitute *prima facie* or conclusive evidence to the extent that the description of the goods is qualified by the clause'.⁸⁹⁸ Therefore, according to Bal, 'the provisions of chapter 8 of the Rotterdam Rules preserve the receipt function of a paper bill of lading in a negotiable transport document or electronic transport record'.⁸⁹⁹

2.2 CMI Rules

Rule 4 of CMI Rules, with the title 'Form and Content of the Receipt Message' provides for the receipt function of electronic bills of lading. When the carrier receives the goods from the shipper, it must send a 'notice of the receipt of the goods to the shipper by a message at the electronic address specified by the shipper'.⁹⁰⁰ The 'receipt message' must include specific information: 'the name of the shipper'⁹⁰¹ 'the description of the goods', with any representations and reservations, in the same tenor as would be required if a paper bill of lading were issued',⁹⁰² 'the date and place of the receipt of the goods',⁹⁰³ 'a reference to the carrier's

⁸⁹² art 41(b)(i).

⁸⁹³ art 41(b)(ii).

⁸⁹⁴ art 41(c).

⁸⁹⁵ art 41(c)(i).

⁸⁹⁶ art 41(c)(ii).

⁸⁹⁷ art 41(c)(iii).

⁸⁹⁸ Bal (n 604) 189.

⁸⁹⁹ *ibid.*

⁹⁰⁰ r 4(a) of CMI Rules

⁹⁰¹ r 4(b)(i).

⁹⁰² r 4(b)(ii).

⁹⁰³ r 4(b)(ii).

terms and conditions of carriage⁹⁰⁴ and ‘the Private Key to be used in subsequent Transmissions’.⁹⁰⁵ In return, ‘[t]he shipper must confirm this receipt message to the carrier, upon which Confirmation the shipper shall be the Holder’.⁹⁰⁶ Rule 4(d) of CMI Rules provide for the *principle of functional equivalence* in relation to the above-mentioned information. It states that ‘[t]he information contained in (ii), (iii) and (iv) of paragraph (b) above including the date and place of shipment if updated in accordance with paragraph (c) of this Rule, shall have the same force and effect as if the receipt message were contained in a paper bill of lading’. Rule 11 confirms the *principle of functional equivalence* in relation to writing in that the electronic data are equivalent to written data:

The carrier and the shipper and all subsequent parties utilizing these procedures agree that any national or local law, custom or practice requiring the Contract of Carriage to be evidenced in writing and signed, is satisfied by the transmitted and confirmed electronic data residing on computer data storage media displayable in human language on a video screen or as printed out by a computer. In agreeing to adopt these Rules, the parties shall be taken to have agreed not to raise the defence that this contract is not in writing.

These provisions for the receipt function of electronic bills of lading under CMI Rules seems similar to those provisions under the Hague-Visby Rules and Hamburg Rules. Under the Hague-Visby Rules, ‘the carrier or the Master or agent of the carrier’, after it receives the goods, is obliged to issue a paper bill of lading to the shipper on the latter’s demand.⁹⁰⁷ The paper bill of lading must include information or a description of the goods, such as the ‘leading marks’, the ‘number of packages or pieces’, ‘quantity’, ‘weight’, and ‘apparent order and condition of the goods’.⁹⁰⁸

Under Hamburg Rules, the carrier must issue a paper bill of lading ‘on the shipper’s demand’ when taking the goods in its charge.⁹⁰⁹ As do the Hague-Visby Rules, the Hamburg Rules require specific information referred to as ‘particulars’ to be included in the bill of lading,⁹¹⁰ but article 15(1) of Hamburg Rules requires more detailed particulars than those required under the Hague-Visby Rules. Similarly, according to Rule 4 of CMI Rules, the carrier is also obliged

⁹⁰⁴ r 4(b)(iv).

⁹⁰⁵ r 4(b)(v).

⁹⁰⁶ r 4(b).

⁹⁰⁷ art 3(3) of Hague-Visby Rules.

⁹⁰⁸ art 3(3) (a), (b) and (c).

⁹⁰⁹ art 14(1) of Hamburg Rules.

⁹¹⁰ art 15(1).

upon receiving the goods to issue ‘a notice of the receipt’ and to provide the shipper with the particulars of the goods to be included in an electronic bill of lading, as discussed earlier. The notice of the receipt is an electronic bill of lading because it includes the particulars of the goods and terms and conditions of the carriage contract, as provided in Rule 4(b).

What is different to provisions in previous international instruments is the term ‘Private Key’. Rule 2(f) of CMI Rules defines the ‘Private Key’ 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 Transmission’. The CMI Rules also provide for the terms ‘Confirmation’ and ‘Holder’.⁹¹¹ The CMI Rules requires the shipper to confirm the ‘receipt message to the carrier’ and by virtue of this ‘Confirmation’, the shipper becomes a ‘Holder’.⁹¹² The term ‘confirmation’ is defined as ‘a Transmission which advises that the content of a Transmission appears to be complete and correct, without prejudice to any subsequent consideration or action that the content may warrant’.⁹¹³ The term ‘holder’ is defined as ‘the party who is entitled to the rights described in article 7(a) by virtue of its possession of a valid Private Key’.⁹¹⁴ The Private Key, Confirmation and Holder all play a significant role in the transfer of electronic bills of lading, as will be examined in Chapter Six.

2.3 Bolero

Under the Bolero system, there are two ways to issue a Bolero electronic bill of lading.⁹¹⁵ The first way is to prepare a paper bill of lading and scan and upload it onto the Bolero system.⁹¹⁶ In this method, the storing and sending of a Bolero bill of lading is electronic, but the drafting and writing the bill is still the same as for a paper bill of lading. However, it seems that the ‘issuance’ of a Bolero electronic bill of lading using this method is nonetheless electronic because a Bolero electronic bill of lading is issued and sent to the shipper electronically, not physically as in the paper bill of lading. Moreover, the carrier and the shipper use their computers to send and receive the paper bill of lading via EDI and Internet.

⁹¹¹ r 2(e) and (g) of CMI Rules respectively.

⁹¹² r 4 (b).

⁹¹³ r 2(e).

⁹¹⁴ r 2(g).

⁹¹⁵ Interviews (n 15).

⁹¹⁶ *ibid.*

The second way to issue a Bolero electronic bill of lading is based on the structure data in the Bolero system and is completely electronic.⁹¹⁷ It differs from the first way in that the writing and forming the bill are all electronic, and do not use any paper form to issue the bill. An electronic format bill is available on the Bolero system. The carrier uses their computer and Internet connection to electronically provide the information to be included in the bill. A Bolero electronic bill of lading contains the details of the cargo, which is, effectively, a confirmation from the carrier that they have either shipped on board or received the goods described in the Bolero bill of lading.⁹¹⁸

Contents of BBL Text and Identification: Each Carrier agrees that any Message sent by him as a Bolero Bill of Lading other than a Message intended to operate as a Chartered Bill of Lading shall, within the BBL Text:

(a) include an acknowledgement by the Carrier of the receipt of goods shipped on board a vessel or received for shipment by that Carrier.⁹¹⁹

The ‘Chartered Bill of Lading’ referred to in this Rule is defined as follows:

Chartered Bill of Lading: An acknowledgement by a Carrier of the receipt of goods for carriage on board its ship in respect of which there is a charterparty, other than a bareboat or demise charter, concurrently in force in respect of the use of the ship either for the same voyage (voyage charter) or for a period of time (time charter) within which the said carriage is to take place.⁹²⁰

The term ‘Message’ mentioned in Rule 3 has a significant role as it acknowledges the receipt of the goods by the carrier. It means [a]ny communication, notice or other information sent through the Bolero System as described in the Operating Procedures’.⁹²¹ The Bolero Rulebook defines the Operating Procedures as ‘[t]he document by that title appended to the Rulebook’.⁹²² Moreover, the term ‘BBL Text’, mentioned in Rule 3.1.(1/a), is defined as ‘[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

⁹¹⁷ *ibid.*

⁹¹⁸ *ibid.*

⁹¹⁹ r 3.1(1)(a) of Bolero Rulebook.

⁹²⁰ r 1.1(20).

⁹²¹ r 1.1(37).

⁹²² r 1.1(38).

goods by a Carrier for carriage by sea'.⁹²³ The term 'Document' referred to in this provision means A contract, bill, or other unit of substantive, often textual, information sent as a subdivided part of a Message. Synonyms: Attachment, attached Document'.⁹²⁴

Based on the interview with Bolero,⁹²⁵ it seems clear that the carrier uses Bolero messages to describe the goods. In other words, the particulars of the goods included in a Bolero bill of lading are in a form of electronic messages, specifically those using the second way of creating a Bolero bill of lading. The Bolero Rulebook provides for the *principle of functional equivalence* in respect of Bolero electronic particulars that must have the same legal effect as those in a paper bill of lading.⁹²⁶

Statements Relating to Goods Received. Without prejudice to the generality of section 2.2.2, any statement a Carrier makes as to the leading marks, number, quantity, weight, or apparent order and condition of the goods in the BBL Text will be binding on the Carrier to the same extent and in the same circumstances as if the statement had been contained in a paper bill of lading.⁹²⁷

The Bolero Rulebook defines the term 'Carrier' as '[a] User which contracts with another User to carry goods by any means of transport, regardless of whether the Carrier is the owner or operator of the means of transport used. Synonym: Originator'.⁹²⁸ The term User means '[a] person who is Enrolled as a User of the Bolero System'.⁹²⁹ The term 'Enrolled' is defined within the definition of the term 'Enrol' in Rule 1.1(29) of Bolero Rulebook, which provides that 'Enrol' means '[t]o become a User of the Bolero System through the BAL Service Contract and Operational Service Contract. 'Enrolled' means to have become and to remain a User in accordance with those contracts'.⁹³⁰ This definition of the carrier is different from those under other international conventions, namely the Hague-Visby Rules, Hamburg Rules and Rotterdam Rules, is that the carrier in the Bolero definition (User) does not refer to any person who enters the contract of carriage with a shipper. Article 1(a) of Hague-Visby Rules defines the term carrier include 'the owner or the charterer who enters into a contract of carriage with

⁹²³ r 1.1(6).

⁹²⁴ r 1.1(26).

⁹²⁵ Interviews (n 15).

⁹²⁶ r 3.1(3) of Bolero Rulebook.

⁹²⁷ *ibid.*

⁹²⁸ r 1.1(17).

⁹²⁹ r 1.1(58).

⁹³⁰ r 1.1.(29).

a shipper'. Article 1(1) of Hamburg Rules defines the term carrier to include 'any person by whom or in whose name a contract of carriage of goods by sea has been concluded with a shipper'. In article 1(1) of Rotterdam Rules, the carrier is defined to mean 'a person that enters into a contract of carriage with a shipper'. The Carrier in Bolero Rulebook may refer to any Carrier or User who contracts with another user to carry goods. Moreover, another difference under the Bolero system is that the contract of carriage of goods may be carried out by any means of transport, not only by sea as is the case for paper bills of lading under the Hague-Visby Rules and Hamburg Rules. Article 1(1) of Hague-Visby Rules defines the contract of carriage as:

The 'Contract of Carriage' applies only to contracts of carriage covered by a bill of lading or any similar document of title, in so far as such document relates to the carriage of goods by sea, including any bill of lading or any similar document as aforesaid issued under or pursuant to a charter party from the moment at which such bill of lading or similar document of title regulates the relations between a carrier and a holder of the same.

Article 1(6) of Hamburg Rules defines the contract of carriage as:

The Contract of Carriage by Sea means any contract whereby the carrier undertakes against payment of freight to carry goods by sea from one port to another; however, a contract which involves carriage by sea and also carriage by some other means is deemed to be a contract of carriage by sea for the purposes of this Convention only in so far as it relates to the carriage by sea.

In this context, the contract of carriage of goods under the Bolero system may be carried out by sea, land, air or multimodal transportation. This agrees with the definition of the contract of carriage in Rule 2(a) of CMI Rules which states that the 'Contract of Carriage means any agreement to carry goods wholly or partly by sea'. Similarly, multimodal carriage is allowed under the Rotterdam Rules, where article 1(a) defines the contract of carriage as 'a contract in which a carrier, against the payment of freight, undertakes to carry goods from one place to another. The contract shall provide for carriage by sea and may provide for carriage by other modes of transport in addition to the sea carriage'.

The carrier, under the Bolero Rulebook, can be the owner or operator of the means of transport, unlike like the carrier in the case of paper bills of lading where it is deemed to be the owner or the charterer in accordance with article 1(a) of Hague-Visby Rules. As regards

the term ‘Shipper’ under Bolero Rulebook defines, it means ‘[a] User which is the original contracting party with whom a Carrier enters into the contract for the carriage of goods’.⁹³¹ This definition provides that the Carrier enters into the contract of carriage with the shipper, not with a user as in the definition of ‘Carrier’ discussed earlier. The Bolero Rulebook definition of the term ‘Shipper’ differs slightly, in terms of details, from the definition of a ‘Shipper’ in the case of paper bills of lading under the Hamburg Rules, but it looks similar in content. Article 1(3) of Hamburg Rules defines the term ‘Shipper’ as:

The Shipper means any person by whom or in whose- name or on whose behalf a contract of carriage of goods by sea has been concluded with a carrier, or any person by whom or in whose name or on whose behalf the goods are actually delivered to the carrier in relation to the contract of carriage by sea.

However, Bolero definition appears to be in agreement with the Rotterdam Rules definition, except for Bolero Rulebook reference to the terms ‘User’ and ‘original contracting party’. Article 1(8) of Rotterdam Rules defines the term ‘Shipper’ to mean ‘a person that enters into a contract of carriage with a carrier’. The Bolero Rulebook provides the legal basis for the use of Bolero electronic bills of lading by Bolero system users based on agreement. Moreover, the Shipper, User or Holder of is entitled to convert the Bolero electronic bill of lading into a paper bill of lading.⁹³²

2.4 essDOCS

As in the Bolero system, under the essDOCS system there are two ways to issue the electronic bills of lading.⁹³³ The first way is by data entry in a Word or Excel document on the essDOCS platform.⁹³⁴ This method differs from the first one under the Bolero system in that it uses a Word or Excel document, which, compared to the Bolero first way, is computer based. The second way of issuing an essDOCS bill of lading is based on the data available on the essDOCS system.⁹³⁵ This way is completely electronic and dependent on the essDOCS platform, which means that the users of the essDOCS use the essDOCS online platform to create essDOCS bills of lading.⁹³⁶ This seems similar to the second way of creating Bolero electronic bills of lading.

⁹³¹ r 1.1.(48).

⁹³² Interviews (n 15).

⁹³³ *ibid.*

⁹³⁴ *ibid.*

⁹³⁵ *ibid.*

⁹³⁶ *ibid.*

The receipt function of essDOCS bill of lading may be achieved by inserting the descriptions of and information about the goods in the essDOCS bill of lading via Word or Excel formats or electronically to the essDOCS platform. Moreover, the Databridge Services and Users Agreement (DSUA) has a specific provision that an electronic bill of lading will act as a receipt, essentially like a paper bill of lading.⁹³⁷ Thus, the essDOCS bill of lading contains the details of the cargo as a confirmation from the carrier that they have either shipped on board or received the goods described in the essDOCS bill of lading. The DSUA establishes the legal basis for the use of essDOCS bills of lading by users or parties to the contract of carriage, as discussed previously.⁹³⁸ Moreover, like the Bolero bill of lading, the essDOCS bill of lading ‘can also be converted into a paper BL at any stage of the trade’.⁹³⁹

2.5 English law

As discussed in the general position of English law in relation to the use of electronic bills of lading in Chapter Three, the traditional view to the paper bill of lading,⁹⁴⁰ and ‘the fundamental obstacle is the fact that the essence of a paper bill of lading is that it is a signed document’.⁹⁴¹ However, Goldby argues that ‘English courts have never shown any reluctance to recognize evidence in electronic forms’,⁹⁴² as in *Marlton v Tectronix UK Holdings*,⁹⁴³ and *Hill v Regem*.⁹⁴⁴ Moreover, under the relevant UK statutes, in terms of what a document means, section 13 of Civil Evidence Act 1995 states that the term “document” means anything in which information of any description is recorded, and “copy”, in relation to a document, means anything onto which information recorded in the document has been copied, by whatever means and whether directly or indirectly’. This position may conflict with the definition of writing in Schedule 1 of Interpretation Act 1978, which states that term “Writing” includes typing, printing, lithography, photography and other modes of representing or reproducing words in a visible form, and expressions referring to writing are construed accordingly’.

⁹³⁷ *ibid.*

⁹³⁸ See subsection 2.11 ‘essDOCS’ in Chapter Three.

⁹³⁹ Tan, Starr and Wu (n 31).

⁹⁴⁰ Goldby (n 461).

⁹⁴¹ Baughen (n 191) 25.

⁹⁴² *ibid.*

⁹⁴³ [2003] EWHC 383 (Ch). See the discussion in Goldby (n 461).

⁹⁴⁴ [1945] 2 KB 329, 333. *ibid.*

For some writers, as mentioned in Chapter Three, this definition, according to Baughen, that this definition of wiring ‘... includes "other modes of representing or reproducing words in a visible form" – this would not cover an electronic message, which is not, in itself, visible’.⁹⁴⁵ However, this view may not agree with the position under the case law, as in relevant cases referred to by Goldy earlier. Moreover, other writers do not agree with Baughen’s opinion and take the view that the Interpretation Act’s definition of writing may include ‘computer storage’ saying that ‘this would appear to include computer storage. Words stored in a computer may be reproduced on screen or printed on paper. In any case, it is unlikely that a judge would take a restrictive view of this, although the preceding words are somewhat narrow’.⁹⁴⁶ Moreover, it seems safe to argue that the Act’s definition may cover electronic contracts, but not electronic bills of lading because a bill of lading is not itself the contract, but evidencing or containing the contract of carriage, as will be seen in the next chapter. Furthermore, this discussion deals with whether electronic bills of lading can perform the receipt function and does not address the transferability to be performed by electronic bills of lading.

As far as signature is concerned, section 7 of Electronic Communication Act 2000 provides that an electronic signature is ‘admissible in evidence in relation to any question as to the authenticity of the communication or data or as to the integrity of the communication or data’. The electronic signature in this provision means the ‘[e]lectronic signatures and related certificates’ in the ‘legal proceedings’ in respect of ‘an electronic signature incorporated into or logically associated with a particular electronic communication or particular electronic data’⁹⁴⁷ and ‘the certification by any person of such a signature’.⁹⁴⁸ The Act also provides that ‘... an electronic signature is so much of anything in electronic form as (a) is incorporated into or otherwise logically associated with any electronic communication or electronic data; and [F1(b)]purports to be used by the individual creating it to sign.’⁹⁴⁹ The Act further provides that:

For the purposes of this section an electronic signature incorporated into or associated with a particular electronic communication or particular electronic data is certified by any person

⁹⁴⁵ Baughen (n 191) 25

⁹⁴⁶ Samson Masalu and Peter Paschal, ‘Electronic Contract: When Is a Contract Actually Concluded or Not?’ (2016) 5(2) *International Journal of Humanities and Social Science Invention* 57-64.

⁹⁴⁷ s 7(1)(a) of Electronic Communication Act 2000.

⁹⁴⁸ s 7(1)(b).

⁹⁴⁹ s 7(2). ‘F 1 s. 7(2)(b) substituted (22.7.2016) by The Electronic Identification and Trust Services for Electronic Transactions Regulations 2016 (s. 1.2016), reg. 1, Sch. 3 para. 1(2)’ according to: legislation.gov.uk, ‘Electronic Communication Act 2000’ <<https://www.legislation.gov.uk/ukpga/2000/7/part/1/>> accessed 10 December 2020

if that person (whether before or after the making of the communication) has made a statement confirming that—

(a) the signature,

(b) a means of producing, communicating or verifying the signature, or

(c) a procedure applied to the signature,

is (either alone or in combination with other factors) a valid means of [F2 signing].⁹⁵⁰

Beale and Griffiths discuss that ‘[a] number of cases have approved different forms of signature by stamping, by printing, typewriting and in other forms not applied in any "personalised" way’.⁹⁵¹ Beale and Griffiths refer to certain cases where the English courts admitted these types of signatures.⁹⁵² As regards the signature by stamping, Beale and Griffiths refer to the cases of *Ex p. Dryden*,⁹⁵³ *Goodman v. J. Eban Ltd*,⁹⁵⁴ and *British Estate Investment Soc. Ltd v. Jackson (HM Inspector of Taxes)*.⁹⁵⁵ In regard to the signature by printing, Beale and Griffiths refer to the case of *Brydges (Town Clerk of Cheltenham) v. Dix*.⁹⁵⁶ As far as the signature by typewriting is concerned, Beale and Griffiths refer to the case of *Newborne v. Sensolid (Great Britain) Ltd*.⁹⁵⁷ In these cases, ‘the courts have focused on whether the method of signature used fulfilled the function of a signature rather than whether the form of signature used was one that was commonly recognized’.⁹⁵⁸ Beale and Griffiths argue that ‘[t]he principal function of a signature is to demonstrate that the "signatory" had an authentication intention’.⁹⁵⁹

3 Conclusion

This chapter reaches that the Rotterdam Rules provide a legal framework that helps electronic bills of lading (electronic transport records) to perform the receipt function. However, the Rules are not in force yet. Similarly, the chapter finds that the CMI Uniform Rules for Electronic Bills of Lading provide for the receipt function of electronic bills of lading. The CMI Rules are a significant step towards the evolution of electronic bills of lading. In practice, a Bolero bill

⁹⁵⁰ s 7(3). ‘F 2 Word in s. 7(3) substituted (22.7.2016) by The Electronic Identification and Trust Services for Electronic Transactions Regulations 2016 (s. 1.2016), reg. 1, Sch. 3 para. 1(3)’. *ibid.*

⁹⁵¹ Hugh Beale and Lowri Griffiths, ‘Electronic Commerce: Formal Requirements in Commercial Transactions’ (2002) 4 *Lloyd’s Maritime and Commercial Law Quarterly* 467-484.

⁹⁵² *ibid.*

⁹⁵³ [1893] 14 N.S.W.R. 77.

⁹⁵⁴ [1954] 1 Q.B. 550.

⁹⁵⁵ [1956] T.R. 397.

⁹⁵⁶ [1891] 7 T.L.R. 215.

⁹⁵⁷ [1954] 1 Q.B. 45.

⁹⁵⁸ Beale and Griffiths (n 951).

⁹⁵⁹ *ibid.*

of lading can be a functional equivalent to a paper bill of lading in the performance of the receipt function. The Bolero Rulebook presents the legal basis for the use of Bolero electronic bills of lading by users or parties based on agreement. An essDOCS bill of lading also can perform the receipt function of the paper bill of lading. The essDOCS DSUA also presents the legal basis for the use of essDOCS bills of lading by users based on agreement. Under English law, the electronic bills of lading may perform the receipt function as equivalents to paper bills of lading because the English courts accept the electronic evidence. Moreover, there is no clear provision for contesting the evidentiary value of electronic means under relevant UK statutes. It is, therefore, possible to conclude that electronic bills of lading can perform the receipt function as equivalents to paper bills of lading under the international and English laws.

Chapter Five: Can the Electronic Bill of Lading Function as Evidencing or Containing the Contract of Carriage of Goods by Sea?

1 Introduction

Chapter Five works as the second test to examine whether an electronic bill of lading can perform the second function of the paper bill of lading as evidencing or containing the contract of carriage under relevant international convention, model laws and contract forms. Based on the international approach of the thesis, Chapter Five starts by testing how electronic transport records could be deemed to evidence or contain the contract of carriage under the Rotterdam Rules. The chapter then moves on to examine how electronic bills of lading could be used to evidence or contain the contract of carriage under the CMI Rules. Later, it studies how the contract forms, Bolero Rulebook and essDOCS DSUA provide for the second function performed by Bolero and essDOCS bills of lading. As regards the English law approach of the thesis, Chapter Five examines the position of English law in relation to the applicability of the second function performed by electronic bills of lading under the present case law and statutes. At the end of the discussion, the chapter presents the conclusion to the question of whether electronic bills of lading can function as evidencing or containing the contract of carriage under the international and English laws.

2 International approach

This approach involves the study of the position of relevant international convention, model laws and contract forms in relation to electronic bills of lading as evidencing or containing the contract of carriage.

2.1 Rotterdam Rules

The Rotterdam Rules define the ‘contract of carriage’ as ‘a contract in which a carrier, against the payment of freight, undertakes to carry goods from one place to another. The contract shall provide for carriage by sea and may provide for carriage by other modes of transport in addition to the sea carriage’.⁹⁶⁰

Diamond discusses that this definition ‘employs the notion of different "modes of transport", a concept familiar from the UN Convention on Multimodal Transport and its predecessors’.⁹⁶¹

⁹⁶⁰ art 1(1) of Rotterdam Rules.

⁹⁶¹ Diamond (n 606).

Diamond notes '[a] feature of the definition which distinguishes it from the definition of "international multimodal transport" in the Multimodal Convention is that one of the modes must be carriage by sea'.⁹⁶² Article 1(1) of United Nations Convention on International Multimodal Transport of Goods of 1980 requires at least two different modes of transport that may include sea transport:

International multimodal transport means the carriage of goods by at least two different modes of transport on the basis of a multimodal transport contract from a place in a country at which the goods are taken in charge by the multimodal transport operator to a place designated for delivery situated in a different country. The operations of pick-up and delivery of goods carried out in the performance of a unimodal transport contract, as defined in such contract, shall not be considered as international multimodal transport.

The Rotterdam Rules' definition of the contract of carriage in article 1(1) is also different from the definition under the Hague-Visby Rules in article 1(b) because, according to Goldby, the latter provides 'only a partial definition of the term "contract of carriage" linking it with the bill of lading',⁹⁶³ as discussed previously.⁹⁶⁴ The Rotterdam Rules' definition of the contract of carriage may seem closer to that definition under the Hamburg Rules,⁹⁶⁵ rather than that under the Hague-Visby Rules.⁹⁶⁶ Yet, 'the Rotterdam Rules are wider in scope and can also govern the part of the transport that is not sea carriage'.⁹⁶⁷ One may deduce from this argument that the Rotterdam Rules try to bridge the gaps in the current legal framework that includes the Hague-Visby Rules and the Hamburg Rules. The legal framework formed by these conventions or Rules, the Hague-Visby Rules and the Hamburg Rules, is expressly referred to in the preamble of the Rotterdam Rules:

Recognizing the significant contribution of the International Convention for the Unification of Certain Rules of Law relating to Bills of Lading, signed in Brussels on 25 August 1924, and its Protocols, and of the United Nations Convention on the Carriage of Goods by Sea, signed in Hamburg on 31 March 1978, to the harmonization of the law governing the carriage of goods by sea.

⁹⁶² *ibid.*

⁹⁶³ Goldby (n 48) 316.

⁹⁶⁴ See subsection 5.2.1 'Hague-Visby Rules' in Chapter Two.

⁹⁶⁵ See subsection 5.2.2 'Hamburg Rules' in Chapter Two.

⁹⁶⁶ Goldby (n 48) 316.

⁹⁶⁷ *ibid.*

The deduction that the Rotterdam Rules try to bridge the gaps in the current legal framework is confirmed because the Rotterdam Rules seek to adapt the new transport practices, such as door-to-door transportation, and new technologies currently in use in international transport, such as containerization and electronic transport documents, as set out in Resolution No. 63/122 adopted by the General Assembly of the United Nations on the Convention on Contracts for the International Carriage of Goods Wholly or Partly by Sea:

Concerned that the current legal regime governing the international carriage of goods by sea lacks uniformity and fails to adequately take into account modern transport practices, including containerization, door-to-door transport contracts and the use of electronic transport documents.

The Rotterdam Rules also recognize the need for a new international instrument to adapt the different modes of transport, as noted in the preamble of the Rotterdam Rules in that '[n]oting that shippers and carriers do not have the benefit of a binding universal regime to support the operation of contracts of maritime carriage involving other modes of transport'.

Article 1(18) of Rotterdam Rules provides that electronic transport records function as receipts for the goods and as evidencing or containing the contract of carriage, as the Rotterdam Rules do for the paper transport document in article 1(14). Article 1(18) provides for the two functions within the definition of the electronic transport record:

'Electronic transport record' means information in one or more messages issued by electronic communication under a contract of carriage by a carrier, including information logically associated with the electronic transport record by attachments or otherwise linked to the electronic transport record contemporaneously with or subsequent to its issue by the carrier, so as to become part of the electronic transport record, that:

- (a) Evidences the carrier's or a performing party's receipt of goods under a contract of carriage; and
- (b) Evidences or contains a contract of carriage.

The definition uses the term 'information', but the Rotterdam Rules do not define it. However, the Rotterdam Rules call the information relating to a contract of carriage or to the goods as 'contract particulars' that include 'any information relating to the contract of carriage or to the goods (including terms, notations, signatures and endorsements) that is in a transport document

or an electronic transport record'.⁹⁶⁸ Therefore, it might be safe to reach that the terms 'information' and 'contract particulars' have the same meaning under the Rotterdam Rules. Since the information or contract particulars are processed electronically, they are referred to as 'data' according to Gaskell who refers to an electronic transport record as '... merely a collection of data, associated electronically ...'.⁹⁶⁹ The Rotterdam Rules define the term 'electronic communication', by which the information (or contract particulars) or messages are issued, to mean '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'.⁹⁷⁰ It seems safe to argue that the accessibility requirement required under this definition is intended to maintain a functional equivalence between information processed electronically and that in writing.

The notices, confirmation, consent, agreement, declaration and other communications referred to in articles 19, paragraph 2; 23, paragraphs 1 to 4; 36, subparagraphs 1(b), (c) and (d); 40, subparagraph 4(b); 44; 48, paragraph 3; 51, subparagraph 1(b); 59, paragraph 1; 63; 66; 67, paragraph 2; 75, paragraph 4; and 80, paragraphs 2 and 5, shall be in writing. Electronic communications may be used for these purposes, provided that the use of such means is with the consent of the person by which it is communicated and of the person to which it is communicated.

The electronic information can be used in an electronic transport record but 'with the consent of the carrier and the shipper':

Subject to the requirements set out in this Convention:

- (a) Anything that is to be in or on a transport document under this Convention may be recorded in an electronic transport record, provided the issuance and subsequent use of an electronic transport record is with the consent of the carrier and the shipper; and
- (b) The issuance, exclusive control, or transfer of an electronic transport record has the same effect as the issuance, possession, or transfer of a transport document.⁹⁷¹

A transport document or electronic transport record is issued upon delivery of the goods for carriage in accordance with article 35 of Rotterdam Rules.⁹⁷² Article 36 provides for

⁹⁶⁸ art 1(23) of Rotterdam Rules.

⁹⁶⁹ Gaskell (n 608).

⁹⁷⁰ art 1(17) of Rotterdam Rules.

⁹⁷¹ art 8 of Rotterdam Rules.

⁹⁷² See subsection 2.1 'Rotterdam Rules' in Chapter Four.

particulars, whether those covering the goods and serving as receipt for the goods or those covering the carriage and serving as evidencing or containing the contract of carriage, as discussed in Chapter Four.⁹⁷³

2.2 CMI Rules

In Rule 2(a) CMI Rules define the ‘contract of carriage’ in a similar way to the Rotterdam Rules and Hamburg Rules ‘any agreement to carry goods wholly or partly by sea’. In general, this definition covers in its scope of application other modes of transportation, in addition to sea transport, as do the Rotterdam Rules. Rule 4(a) of the CMI Rules obliges the carrier upon receiving the goods to send the shipper ‘a message at the electronic address specified by the shipper’. This message is electronic since it is sent at the electronic address of the shipper. Rule 4(b) refers to this message as ‘receipt message’ that must include specific information.⁹⁷⁴ Although the CMI Rules do not define the ‘receipt message’, it seems safe to deduce that this receipt message is an electronic bill of lading because it includes the particulars of the goods and the terms and conditions of the contract of carriage according to Rule 4(b). The wording of Rule 4(b) is: ‘[t]his receipt message shall include ...’. It leads that this receipt message performs the first function of the electronic bill of lading as a receipt for the goods and the second function as evidencing or containing the contract of carriage. This deduction is also based on the *principle of functional equivalence*, which is referred to in Rule 4(d) providing that the information included in receipt message have the same legal force and effect as if included in ‘a paper bill of lading’. It states that ‘[t]he information contained in (ii), (iii) and (iv) of paragraph (b) above including the date and place of shipment if updated in accordance with paragraph (c) of this Rule, shall have the same force and effect as if the receipt message were contained in a paper bill of lading’. Rule 11 also provides for the *principle of functional equivalence*:

The carrier and the shipper and all subsequent parties utilizing these procedures agree that any national or local law, custom or practice requiring the Contract of Carriage to be evidenced in writing and signed, is satisfied by the transmitted and confirmed electronic data residing on computer data storage media displayable in human language on a video screen or as printed out by a computer. In agreeing to adopt these Rules, the parties shall be taken to have agreed not to raise the defence that this contract is not in writing.

⁹⁷³ *ibid.*

⁹⁷⁴ See subsection 2.2 ‘CMI Rules’ in Chapter Four.

Moreover, Rule 4(b)(ii) provides for the *principle of functional equivalence* and that the ‘message’ is equal to the bill of lading in that ‘the description of the goods, with any representations and reservations, in the same tenor as would be required if a paper bill of lading were issued’. Rule 5 sets down the terms and conditions of a contract of carriage, which can be included in the message, which is the electronic bill of lading itself. Rule 5(a) provides for the terms and conditions to be part of the contract of carriage stating that ‘[i]t is agreed and understood that whenever the carrier makes a reference to its terms and conditions of carriage, these terms and conditions shall form part of the Contract of Carriage’. Rule 5(b) requires that those terms and conditions be available to the parties to the contract of carriage stating that ‘[s]uch terms and conditions must be readily available to the parties to the Contract of Carriage’.

The availability of terms and conditions of the contract of carriage may refer to the electronic storage of data or messages as needed by the parties to the contract of carriage. Rule 2(i) defines the term ‘electronic storage’ to mean ‘any temporary, intermediate or permanent storage of electronic data including the primary and the back-up storage of such data’. The use of the term ‘data’ instead of the word ‘information’ or ‘particulars’, as used in the relevant international conventions or rules, can be observed. It seems safe to argue that the use of the term ‘data’ may reflect the nature of electronic communications in general or, specifically, the use of the EDI, where the term ‘data’ is usually used in comparison with the use of the term ‘information’ or ‘particulars’ in paper communications. However, the CMI Rules do not define the term ‘data’, but instead define other relevant terms, such as ‘EDI’, ‘transmissions’, ‘private key’ and ‘electronic monitoring system’. Rule 5(c) of CMI Rules provides that in the case of conflict or inconsistency between the terms and conditions of the carriage contract and the CMI Rules, the latter will prevail.

2.3 Bolero

The carrier attaches its terms and conditions of the contract of carriage to a Bolero bill of lading in one of two ways: the first way is via a paper document, as used in a paper bill of lading, which is scanned and uploaded into the Bolero system; and the second way is to insert these terms and conditions electronically via the Bolero platform, as referred to in the previous

chapters.⁹⁷⁵ The carrier's terms and conditions are part of the contract.⁹⁷⁶ And Bolero bills of lading include the same terms of a contract of carriage as do paper bills of lading,⁹⁷⁷ as expressly set out in the Bolero Rulebook in Rule 3.1(1) that the message sent by the carrier as a Bolero bill of lading contains or evidences the terms of the contract of carriage:

Contents of BBL Text and Identification. Each Carrier agrees that any Message sent by him as a Bolero Bill of Lading other than a Message intended to operate as a Chartered Bill of Lading shall, within the BBL Text:

- (a) include an acknowledgement by the Carrier of the receipt of goods shipped on board a vessel or received for shipment by that Carrier; and
- (b) contain or evidence the terms of the contract of carriage.

Rule 3.1(1) differentiates between the message that the carrier sends as a Bolero bill of lading and that sent by the carrier as a chartered bill of lading. The first will contain or evidence the contract of carriage, as stated in Rule 3.1(1)(b), while the chartered bill of lading will not. It seems safe to say that the chartered bill of lading performs only the first function of the bill of lading as a receipt for the goods. It is an acknowledgement by the carrier of the receipt of goods shipped on board a vessel or received for shipment by that carrier, as stated in Rule 3.1(2) of the Bolero Rulebook:

Chartered Bills of Lading. Where a Carrier creates a Bolero Bill of Lading intended to operate as a Chartered Bill of Lading and Designates the Head Charterer as Shipper and Holder, the BBL Text need not contain or evidence the terms of the contract of carriage between the Carrier and Head Charterer. The BBL Text shall, however, include an acknowledgement by the Carrier of the receipt of goods shipped on board a vessel or received for shipment by that Carrier.

The same point is made in Rule 1.1(20) of the Bolero Rulebook:

Chartered Bill of Lading: An acknowledgement by a Carrier of the receipt of goods for carriage on board its ship in respect of which there is a charterparty, other than a bareboat or demise charter, concurrently in force in respect of the use of the ship either for the same voyage (voyage charter) or for a period of time (time charter) within which the said carriage is to take place.

⁹⁷⁵ Interviews (n 15).

⁹⁷⁶ *ibid.*

⁹⁷⁷ *ibid.*

The terms ‘Message’, ‘BBL Text’ and the ‘Title Registry’ seem to play a basic role in the issuance and transfer of Bolero bill of lading. To differentiate between the terms ‘Message’ and ‘BBL Text’, Rule 1.1(37) of the Bolero Rulebook defines the term ‘Message’ to include [a]ny communication, notice or other information sent through the Bolero System as described in the Operating Procedures’. As regards the term ‘BBL Text’, Rule 1.1(6) states:

BBL Text: 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.

The ‘Title Registry’ plays a crucial role in the performance of the third function of bills of lading as a document of title in the Bolero system, as made clear in the definition of the term ‘Title Registry’ in Rule 1.1(53):

Title Registry: 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 record of the status of current Bolero Bills of Lading; and
- (c) an audit trail of dealings with such Bolero Bills of Lading.

For its role in the transfer of Bolero bill of lading, the Title Registry will be examined in more details in the next chapter that deals with the document of title function.

2.4 essDOCS

The ‘Transport Document’ issued via the essDOCS system contains or evidences the contract of carriage, as expressly stated in the definition of ‘Transport Document’ in the DSUA which states that the “Transport Document” means a document issued by or on behalf of a Carrier which contains or evidences a Contract of Carriage and which constitutes a receipt for goods loaded or received for shipment pursuant to that Contract of Carriage’.⁹⁷⁸ As regards the ‘Electronic Record’, the DSUA defines it as ‘an electronic Transport Document issued via the ESS Databridge. An Electronic Record is a type of eDoc and can be Negotiable or Non-

⁹⁷⁸ See the discussion in Russell Harling, ‘eB/Is – the Legal Perspective Legal Mechanisms of the ESS Databridge Services and Users Agreement (2011)’ London Shipping Law Centre – Maritime Business Forum, PART C.

Negotiable'.⁹⁷⁹ The Electronic Record may refer to an electronic bill of lading or an essDOCS bill of lading. This may accord with the Rotterdam Rules that use the term 'transport document' (and 'electronic transport record', 'negotiable' and 'non-negotiable') instead of the term 'bill of lading'. The Electronic Record and its negotiable and non-negotiable features will be examined in more details in the next chapter when dealing with electronic bills of lading as documents of title in the essDOCS system. Rule 8.3.1(a) of DSUA refers to the second function performed by the essDOCS bill of lading through the wording 'contained in or evidenced by' within the provision for the novation of the contract of carriage by virtue of transferring the essDOCS bill of lading:

The new Holder shall acquire by way of novation all rights of suit on the terms of the Contract of Carriage contained in or evidenced by the Electronic Record or, in the case of an Electronic Record Issued to a Head Charterer as Shipper, on the terms of the Contract of Carriage which would have been contained in or evidenced by the said electronic Record had the Shipper not been a Head Charterer.⁹⁸⁰

Rule 8.3.1(b) of DSUA also refers to the second function performed by the essDOCS bill of lading in the same wording 'contained in or evidenced by':

In the case of a Negotiable Electronic Record, all rights under the Contract of Carriage contained in or evidenced by the Electronic Record derived (i) from a User being the Shipper under that Contract of Carriage; and (ii) from the previous operation of this T&C 8.3.1, shall be extinguished.⁹⁸¹

Similarly, Rule 8.3.1(c) of DSUA states:

For the avoidance of doubt, in the case of a Non-Negotiable Electronic Record, subject to the terms of the contract contained in or evidenced by such electronic Record, the rights of the Shipper derived from being a party to the Electronic Record shall not be extinguished by Transfer.⁹⁸²

DSUA also refers to the evidentiary function when it deals with the rights under an Electronic Record, specifically in Rules 8.5.1(b) that 'makes a claim under the Contract of Carriage

⁹⁷⁹ *ibid.*

⁹⁸⁰ *ibid.*

⁹⁸¹ *ibid.*

⁹⁸² *ibid.*

contained in or evidenced by the Electronic Record against the Carrier in respect of any of those goods'.⁹⁸³ Likewise, Rules 8.5.1(c) refers to the second function through the same wording 'contained in or evidenced by':

is a person who, at a time before becoming the Holder of that Electronic Record, took or demanded delivery from the Carrier of any of those goods, the new Holder shall thereupon be deemed to consent to become, and by novation shall become, subject to the same liabilities under the Contract of Carriage contained in or evidenced by the Electronic Record as if such new Holder had been an original party to that Contract of Carriage.⁹⁸⁴

Moreover, Rule 8.5.3 of DSUA use the wording 'contained in or evidenced by':

The acquisition of liabilities under a Contract of Carriage contained in or evidenced by an Electronic Record pursuant to this T&C 8.5 shall be without prejudice to the liabilities under that Contract of Carriage of any User who was an original party to such Contract of Carriage.⁹⁸⁵

In the essDOCS system, as in the case of the receipt function, the parties to a contract of carriage insert their information about the terms of the contract of carriage to be evidenced or contained in the essDOCS bill of lading in one of two ways.⁹⁸⁶ The first is by data entry via a Word or Excel document on the essDOCS platform, while the second way is completely electronic, based on the data available on the essDOCS system.⁹⁸⁷

2.5 English law

The position of English law in relation to the second function performed by paper bills of lading seems clearer than that in the case of electronic bills of lading. The case law has recognized the second function performed by paper bills of lading as evidencing or containing the contract of carriage in a number of cases, for example, *The Zoe*,⁹⁸⁸ *Crooks*,⁹⁸⁹ *Pyrene Co. Ltd*⁹⁹⁰, *The Ardennes*,⁹⁹¹ and *Leduc*.⁹⁹² Moreover, the statutory law also has recognized the second function

⁹⁸³ *ibid.*

⁹⁸⁴ *ibid.*

⁹⁸⁵ *ibid.*

⁹⁸⁶ Interviews (n 15).

⁹⁸⁷ *ibid.*

⁹⁸⁸ *The Zoe* (n 284). Set subsection 5.2.3 'English law' in Chapter Two.

⁹⁸⁹ *Crooks* (n 286). *ibid.*

⁹⁹⁰ *Pyrene Co. Ltd* (n 289). *ibid.*

⁹⁹¹ *The Ardennes* (n 292). *ibid.*

⁹⁹² *Leduc* (n 297). *ibid.*

of paper bills of lading in subsection 2(1) of COGSA 1992 that ‘the contract of carriage between the transferee of a bill of lading and the carrier will almost always be governed by the bill of lading’s terms’.⁹⁹³ Yet, one may notice a lack of an express statutory provision in terms of using electronic bills of lading, especially as documents of title,⁹⁹⁴. The Secretary of State has not yet issued the regulations under subsection 1(5) of COGSA 1992, that may extend the application of COGSA 1992 ‘to cases where "a telecommunication system or any other information technology" is used for effecting transactions involving bills of lading’,⁹⁹⁵ as discussed previously.⁹⁹⁶

However, further to the cases discussed in Chapter Four on the receipt function in respect of English courts’ acceptance of ‘evidence in electronic forms’ in *Marlton*⁹⁹⁷ and *Hill*,⁹⁹⁸ UK statutes and judges, according to Faber, ‘do recognize other means conveying information than written documents’,⁹⁹⁹ as in *Derby & Co. v Weldon*,¹⁰⁰⁰ where Vinelott J. held ‘that the database of a computer’s on-line system or which is recorded in the backup files is a document for the purposes of the High Court rules governing discovery of documents’.¹⁰⁰¹ Faber argues:

It seems that the need for a VDU¹⁰⁰² or printer to render an electronic message legible would not, of itself, prevent the message from being held to be a document, as in *Grant v Southwestern & County Properties Ltd.*¹⁰⁰³ Walton, J. held that "the mere interposition of necessity of an instrument for deciphering the information cannot make any difference in principle".¹⁰⁰⁴

Walton, J., according to Faber, ‘was considering whether a tape recording could be a document’.¹⁰⁰⁵ Beale and Griffiths also argue that ‘[t]here appears to be consensus that information stored in an electronic form (whatever that form) is a "document" and would

⁹⁹³ Goldby (n 48) 318.

⁹⁹⁴ Faber (n 450).

⁹⁹⁵ Aikens, Lord and Bools (n 40) 44-50. See also Baughen (n 191) 25.

⁹⁹⁶ See section 4 ‘English law approach: a general view on the position of English law in relation to the use of electronic bills of lading’ in Chapter Three.

⁹⁹⁷ *Marlton* (n 943). See section 2.5 ‘English law’ in Chapter Four. Goldby (n 461).

⁹⁹⁸ *Hill* (n 944). *ibid.*

⁹⁹⁹ Faber (n 450).

¹⁰⁰⁰ [1991] 1 WLR 653.

¹⁰⁰¹ *ibid.* See the discussion in Faber (n 450).

¹⁰⁰² VDU is an abbreviation for visual display unit: a piece of equipment with a screen on which information from a computer is displayed, Cambridge Dictionary <<https://dictionary.cambridge.org/dictionary/english/vdu>> accessed 8 June 2019.

¹⁰⁰³ [1975] Ch 185.

¹⁰⁰⁴ Faber (n 450).

¹⁰⁰⁵ *ibid.*

(except where the context otherwise dictates) satisfy a statutory requirement for a document',¹⁰⁰⁶ as in *Victor Chandler International v Customs and Excise Commissioners*,¹⁰⁰⁷ where the Court of Appeal 'held that a computer system and an electronic database were documents for the purposes of the Betting and Gaming Act 1981'.¹⁰⁰⁸

As regards UK statutes, it may be possible to find that section 13 of Civil Evidence Act 1995 seems to reflect a sort of wide scoping in the definition of the term 'document' since it states that "'document" means anything in which information of any description is recorded, and "copy", in relation to a document, means anything onto which information recorded in the document has been copied, by whatever means and whether directly or indirectly'. Gaskell comments on the mechanism used in the issue of essDOCS bills of lading as '[o]ne of the key features that electronic documentation allows is the ability for documents to be reviewed, so that amendments can be made or mistakes corrected'.¹⁰⁰⁹ Moreover, Section 7 of Electronic Communication Act 2000 states that an electronic signature is 'admissible in evidence in relation to any question as to the authenticity of the communication or data or as to the integrity of the communication or data'.¹⁰¹⁰ Furthermore, as mentioned previously, English courts admitted different types of signatures, as in *Ex p. Dryden*,¹⁰¹¹ *Goodman*,¹⁰¹² *British Estate Investment Soc. Ltd*,¹⁰¹³ *Brydges*,¹⁰¹⁴ and *Newborne*.¹⁰¹⁵

3 Conclusion

This chapter reaches that the Rotterdam Rules provide a legal framework that may help electronic bills of lading (electronic transport records) to evidence or contain the contract of carriage. It also reaches that the CMI Rules provide for the second function of electronic bills of lading as evidencing or containing the contract of carriage. It shows how electronic bills of lading perform the receipt function in practice, under the contract forms of Bolero, essDCOS. Bolero bill of lading can evidence or contain the contract of carriage as functional equivalents

¹⁰⁰⁶ See Beale and Griffiths (n 951).

¹⁰⁰⁷ [2000] 1 WLR 1296.

¹⁰⁰⁸ *ibid.* See the discussion in Beale and Griffiths (n 951).

¹⁰⁰⁹ Gaskell (n 608).

¹⁰¹⁰ See the discussion in Aikens, Lord and Bools (n 41) 36.

¹⁰¹¹ *Ex p. Dryden* (n 953).

¹⁰¹² *Goodman* (n 954).

¹⁰¹³ *British Estate Investment Soc. Ltd* (n 955).

¹⁰¹⁴ *Brydges* (n 956).

¹⁰¹⁵ *Newborne* (n 957). Section 2.5 'English law' in Chapter Four. See the discussion in Beale and Griffiths (n 951).

to paper bills of lading, given the legal framework of Rulebook. Similarly, essDCOS bills of lading can also evidence or contain the contract of carriage given its legal framework of DSUA. As regards the English law, the thesis finds that electronic bills of lading may perform the second function of paper bills of lading to evidence or contain the contract of carriage. This finding is based on two grounds: first, the decisions of cases where electronic evidence was accepted by English courts and second, the absence of a clear provision questioning the validity of that electronic evidence under relevant UK statutes.

Chapter Six: Can the Electronic Bill of Lading Function as a Document of Title?

1 Introduction

This chapter studies the challenging question of the thesis. It examines whether an electronic bill of lading can function as a document of title. In other words, it discusses whether an electronic bill of lading can be transferred as a functional equivalent to the paper bill of lading. The challenge stems from the fact that electronic bills of lading have no concrete or physical existence as do the paper bills of lading. This chapter deals with solutions to cope with the transferability question of electronic bills of lading as provided under the relevant international convention, model laws, contract forms and English law. Following the international approach of the thesis, this chapter starts with the discussion of the Rotterdam Rules in relation to electronic bills of lading (negotiable electronic transport records), as documents of title. It discusses the position of MLETR in relation to the electronic bill of lading's function as a document of title. It tackles MLETR in this chapter because MLETR specifically deals with the transferability issue of electronic transport records. It also examines how the CMI Rules provide for this issue. Moreover, it discusses the solutions to the issue provided by the contract forms of Bolero Rulebook and essDOCS DSUA. Following the English law approach of the thesis, this chapter examines the transferability issue electronic bills of lading under present English law. Later, it concludes with an answer to the major question of the thesis, that is whether electronic bills of lading function as documents of title.

2 International approach

This approach involves the study of relevant international convention, model laws and contract forms.

2.1 Rotterdam Rules

Gaskell argues that '[o]ne of the drivers for the Rotterdam Rules was the work of UNCITRAL, dating back to 1984, in drafting the Model Law on Electronic Commerce 1996 (as amended in 1998)', (MLEC).¹⁰¹⁶ The *principle of functional equivalence* adopted in MLEC 'has been generally carried through to the Rotterdam Rules'.¹⁰¹⁷ Thomas argues that '[f]rom the outset, there was consensus that the instrument' (the Rotterdam Rules):

¹⁰¹⁶ Gaskell (n 608).

¹⁰¹⁷ *ibid.*

- must facilitate and be compatible with e-commerce;
- be simple;
- be medium and technology neutral; and
- have regard to:
 - CMI Rules on Electronic Bs/L, 1990;
 - UNCITRAL Model Law on Electronic Commerce, 1996;
 - UNCITRAL Model Law on Electronic Signatures, 2001.¹⁰¹⁸

Bal comments that ‘the Rotterdam Rules codifies the contractual relations between the parties to a contract of carriage regardless of the type of document issued or even if no document has been issued’.¹⁰¹⁹ As regards electronic bills of lading as documents of title, one may need first to discuss the existence of the *principle of functional equivalence* under the Rotterdam Rules because this principle equalizes the legal validity and enforceability of electronic and paper documents. Article 8 of Rotterdam Rules provides for the *principle of functional equivalence*,¹⁰²⁰ as follows:

Subject to the requirements set out in this Convention:

- (a) Anything that is to be in or on a transport document under this Convention may be recorded in an electronic transport record, provided the issuance and subsequent use of an electronic transport record is with the consent of the carrier and the shipper; and
- (b) The issuance, exclusive control, or transfer of an electronic transport record has the same effect as the issuance, possession, or transfer of a transport document.

Sturley et al. note that the ‘condition’ stated in article 8(a) ‘repeats the same requirement announced in article 3 for the use of electronic communication generally. Both parties involved must be willing and able to use electronic techniques in their business relations’.¹⁰²¹ Article 8(b) adopts the *principle of functional equivalence* or ‘the general principle of the functional equalisation between the use of traditional paper transport documents and the use of the new electronic transport records’.¹⁰²² Sturley et al. refer to the ‘phrase’ “exclusive control ... of an electronic transport record” as the ‘essential aspect’ of article 8(b) or such equalisation.¹⁰²³ Sturley et al. argue that ‘[a]though it - the exclusive control - is left undefined, it equalises it

¹⁰¹⁸ Thomas (n 20) Chapter 14.

¹⁰¹⁹ Bal (n 604) 188.

¹⁰²⁰ Sturley, Fujita and Ziel (n 80) 49 and Thomas (n 20) Chapter 14.

¹⁰²¹ Sturley, Fujita and Ziel (n 80) 54.

¹⁰²² *ibid.*

¹⁰²³ *ibid.*

with "possession of ... a transport document".¹⁰²⁴ In Diamond's view, article 8 provides for 'two broad principles':¹⁰²⁵

The first, contained in paragraph (a), is that the issue and subsequent use of an electronic transport record must have the consent of the shipper. Normally the consent of the shipper will not be express but will be inferred from its use without protest of an electronic transport system set up by the carrier. Should the shipper subsequently wish to withdraw its consent, it may be able to download the record itself and use it as transport document or it may require the carrier to replace the electronic record with a paper one. The carrier would be in breach if it failed to comply.

The second principle, contained in paragraph (b), is that of the "functional equivalence" of electronic and paper documents. The concept was a feature of the Model Law.¹⁰²⁶

The *principle of functional equivalence* may be also found in article 3, which 'establishes the equalisation of written and electronic communication for legal purposes'.¹⁰²⁷

The notices, confirmation, consent, agreement, declaration and other communications referred to in articles 19, paragraph 2; 23, paragraphs 1 to 4; 36, subparagraphs 1(b), (c) and (d); 40, subparagraph 4(b); 44; 48, paragraph 3; 51, subparagraph 1(b); 59, paragraph 1; 63; 66; 67, paragraph 2; 75, paragraph 4; and 80, paragraphs 2 and 5, shall be in writing. Electronic communications may be used for these purposes, provided that the use of such means is with the consent of the person by which it is communicated and of the person to which it is communicated.¹⁰²⁸

Article 1(17) 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'. It seems possible to infer that the Rotterdam Rules, in article 1(17), require another condition to use electronic alternatives, besides the consent of the parties involved, which is the access to information 'generated, sent, received or stored' by electronic communication. This condition or requirement may intend to maintain the *principle of functional equivalence* between the information 'generated, sent, received or stored' electronically and information in writing. The *principle of functional equivalence* can be observed in article 1(23) which equalizes the legal

¹⁰²⁴ *ibid.*

¹⁰²⁵ Diamond (n 606).

¹⁰²⁶ *ibid.*

¹⁰²⁷ Sturley, Fujita and Ziel (n 80) 52.

¹⁰²⁸ art 3 of Rotterdam Rules.

value of the contract particulars in both a transport document and an electronic transport record since it states that the "Contract particulars' means any information relating to the contract of carriage or to the goods (including terms, notations, signatures and endorsements) that is in a transport document or an electronic transport record.' The definition of 'electronic transport record' provided in the Rotterdam Rules also adopts the *principle of functional equivalence* in terms of the first two functions performed by the electronic transport record:

'Electronic transport record' means information in one or more messages issued by electronic communication under a contract of carriage by a carrier, including information logically associated with the electronic transport record by attachments or otherwise linked to the electronic transport record contemporaneously with or subsequent to its issue by the carrier, so as to become part of the electronic transport record, that:

- (a) Evidences the carrier's or a performing party's receipt of goods under a contract of carriage; and
- (b) Evidences or contains a contract of carriage.¹⁰²⁹

The Rotterdam Rules may adopt the *principle of functional equivalence* in relation to the document of title function in the definition of the 'holder', under article 1(10). The definition seems to recognize the possession of a document of title, whether a paper or electronic document since it equalizes a holder or person who possesses a negotiable transport document and a person to which a negotiable electronic transport record has been issued or transferred:

'Holder' means:

- (a) A person that is in possession of a negotiable transport document; and (i) if the document is an order document, is identified in it as the shipper or the consignee, or is the person to which the document is duly endorsed; or (ii) if the document is a blank endorsed order document or bearer document, is the bearer thereof; or
- (b) 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 *principle of functional equivalence* can also be observed in the definition of 'consignee' under article 1(11), which equalizes the possession of a transport document and an electronic transport record to deliver the goods since it states that the "Consignee" means a person entitled to delivery of the goods under a contract of carriage or a transport document or electronic transport record'. Similarly, article 1(9) may provide for the *principle of functional*

¹⁰²⁹ art 1(18) of Rotterdam Rules. See the discussion in Gaskell (n 608).

equivalence in the definition of the ‘documentary shipper’, because it states that the “Documentary shipper” means a person, other than the shipper, that accepts to be named as “shipper” in the transport document or electronic transport record’. Article 1(22) also adopts *the principle of functional equivalence* as it confirms the legal effect of the ‘transfer of a negotiable electronic transport record’ as ‘the transfer of exclusive control over the record’. Moreover, it can be observed that article 10 expressly adopts *the principle of functional equivalence* in the sense that the negotiable transport document and negotiable electronic transport record have the same effect or validity if the carrier and the holder agree to replace a transport document with a negotiable electronic transport record as follows:

1. If a negotiable transport document has been issued and the carrier and the holder agree to replace that document by a negotiable electronic transport record:

(a) The holder shall surrender the negotiable transport document, or all of them if more than one has been issued, to the carrier;

(b) The carrier shall issue to the holder a negotiable electronic transport record that includes a statement that it replaces the negotiable transport document; and

(c) The negotiable transport document ceases thereafter to have any effect or validity.

2. If a negotiable electronic transport record has been issued and the carrier and the holder agree to replace that electronic transport record by a negotiable transport document:

(a) The carrier shall issue to the holder, in place of the electronic transport record, a negotiable transport document that includes a statement that it replaces the negotiable electronic transport record; and

(b) The electronic transport record ceases thereafter to have any effect or validity.

The principle of functional equivalence may be found in article 35 which seems to equalize the issuance of a transport document and electronic transport records in terms of legal effect or validity. A transport document, under the Rotterdam Rules as under the Hague-Visby and Hamburg Rules, is issued upon delivery of the goods in accordance to article 35:

Unless the shipper and the carrier have agreed not to use a transport document or an electronic transport record, or it is the custom, usage or practice of the trade not to use one, upon delivery of the goods for carriage to the carrier or performing party, the shipper or, if the shipper consents, the documentary shipper, is entitled to obtain from the carrier, at the shipper’s option:

(a) A non-negotiable transport document or, subject to article 8, subparagraph (a), a non-negotiable electronic transport record; or

(b) An appropriate negotiable transport document or, subject to article 8, subparagraph (a), a negotiable electronic transport record, unless the shipper and the carrier have agreed not to use

a negotiable transport document or negotiable electronic transport record, or it is the custom, usage or practice of the trade not to use one.

Similarly, article 36 provides for the contract particulars ‘... which must be included in the transport document or electronic transport record referred to in article 35’,¹⁰³⁰ as discussed previously.¹⁰³¹ Equally important, the Rotterdam Rules may adopt the *principle of functional equivalence*, not only in terms of paper and electronic documents, but also between traditional and electronic signatures. Article 38 may provide for the legal effect or value of the electronic signature:

1. A transport document shall be signed by the carrier or a person acting on its behalf.
2. An electronic transport record shall include the electronic signature of the carrier or a person acting on its behalf. Such electronic signature shall identify the signatory in relation to the electronic transport record and indicate the carrier’s authorization of the electronic transport record.

Given these provisions on the *principle of functional equivalence*, it seems safe to reach that paper documents or transport documents, negotiable and non-negotiable, and electronic alternatives that involve negotiable and non-negotiable electronic transport records, have the same legal effect under the Rotterdam Rules. Sturley et al. conclude:

The equalisation method continues through the entire Convention, (the Rotterdam Rules). Each provision that refers to a "transport document" substantially equalises the equivalent electronic transport record. In most provisions, an express mention of the electronic transport record achieves the equalisation.¹⁰³²

As regards the document of title of electronic bills of lading or electronic transport records under the Rotterdam Rules, Goldby argues that ‘the term "document of title" is also absent, and the term "negotiable" being used instead to indicate a document’s ability to transfer rights’.¹⁰³³ Goldby does not see this absence as ‘problematic as it might seem’, and justifies that position in two ways:

¹⁰³⁰ Bal (n 604) 189.

¹⁰³¹ See subsection 2.1 ‘Rotterdam Rules’ in Chapter Four.

¹⁰³² Sturley, Fujita and Ziel (n 80) 50.

¹⁰³³ Goldby (n 26) 189.

First of all, the bill of lading's ability to transfer ownership as such is of no direct relevance to the parties to the contract of carriage whose relationship this Convention seeks to regulate. Secondly, the terminology used in Article 47 and the word 'transfer' used in Article 51, with regard to the rights that one may acquire and pass on simply by being holder of a negotiable transport document or electronic transport record, lay down perfectly clear rules with regard to constructive or symbolic possession, and there is no need to use the term 'document of title' in order to achieve this.¹⁰³⁴

Goldby explains that 'the term "negotiable" may be problematic, because it is understood differently in different jurisdictions, and the term "transferable" would probably be more accurate to describe the document-of-title function that bills of lading perform under the English law'.¹⁰³⁵ Yet, Goldby claims that the term 'negotiable' should not cause a difficulty to domestic courts because the term is defined under the Rotterdam Rules themselves and 'it is common practice for a straight bill of lading to be described as "non-negotiable" and a transferable bill of lading to be described as "negotiable", even in English cases'.¹⁰³⁶ Although the term 'negotiable' is used instead of the term 'document of title', the Rotterdam Rules do not define the term 'negotiability'.¹⁰³⁷ Gaskell argues that '[t]he definition in art 1(19) concentrates on identifying from appearance whether a document or record is negotiable or not'.¹⁰³⁸

"Negotiable electronic transport record" means an electronic transport record:

- (a) That indicates, by wording such as "to order", or "negotiable", or other appropriate wording recognized as having the same effect by the law applicable to the record, that the goods have been consigned to the order of the shipper or to the order of the consignee, and is not explicitly stated as being "non-negotiable" or "not negotiable"; and
- (b) The use of which meets the requirements of article 9, paragraph 1.¹⁰³⁹

Gaskell comments that 'the words such as "to order" or "negotiable" can tell us that a negotiable function is intended', and wonders 'but what *are* the functions of negotiability?'.¹⁰⁴⁰ However, Gaskell submits that 'it is clear that there is no settled international meaning to the expression, so that it may always have been difficult to meet requirements of "true" negotiability for any

¹⁰³⁴ *ibid.*

¹⁰³⁵ *ibid.*

¹⁰³⁶ *ibid.*

¹⁰³⁷ Gaskell (n 608).

¹⁰³⁸ *ibid.*

¹⁰³⁹ art 1(19) of Rotterdam Rules. See the discussion in Gaskell (n 608).

¹⁰⁴⁰ *ibid.*

particular state'.¹⁰⁴¹ Gaskell concludes that the Rotterdam Rules 'retained the use of the expression "negotiability" for largely pragmatic reasons, even though "transferable" might have been more neutral'.¹⁰⁴² It seems that Gaskell and Goldby agree on the use of the term 'transferable' instead of 'negotiable' to indicate the third function of the electronic transport record (the electronic bill of lading) as a document of title. Article 1(15) of Rotterdam Rules defines the negotiable electronic transport record:

'Negotiable transport document' means a transport document that indicates, by wording such as 'to order' or 'negotiable' or other appropriate wording recognized as having the same effect by the law applicable to the document, that the goods have been consigned to the order of the shipper, to the order of the consignee, or to bearer, and is not explicitly stated as being 'nonnegotiable' or 'not negotiable'.

This definition 'is important, since it will govern what records are included within the ambit of the Convention - the Rotterdam Rules - and what records are not'.¹⁰⁴³ Articles 1(21), 1(22) and 8(b) of Rotterdam Rules 'require that the transfer of a negotiable electronic transport record is effected by the transfer of "exclusive control" over the record'.¹⁰⁴⁴ Articles 47 and 51 deal with the 'constructive or symbolic possession'.¹⁰⁴⁵ The Rotterdam Rules provides that '[t]he 'issuance' of a negotiable electronic transport record means the issuance of the record in accordance with procedures that ensure that the record is subject to exclusive control from its creation until it ceases to have any effect or validity'.¹⁰⁴⁶ Article 1(22) expressly provides that '[t]he "transfer" of a negotiable electronic transport record means the transfer of exclusive control over the record'. Article 8(b), as mentioned earlier, adopts the *principle of functional equivalence* in terms of the exclusive control over an electronic transport record.¹⁰⁴⁷ Goldby argues that '[t]he notion of "exclusive control" ensures that an electronic record and process can replace a paper document of title at law only where an electronic equivalent of "holdership" is achieved'.¹⁰⁴⁸ Sturley et al. note that 'article 9 further elaborates the principle - the *principle of functional equivalence* - of Article 8 by providing that the use of a negotiable electronic transport record must be subject to specified procedures that are referenced in the contract

¹⁰⁴¹ *ibid.*

¹⁰⁴² *ibid.*

¹⁰⁴³ Diamond (n 606).

¹⁰⁴⁴ *ibid.*

¹⁰⁴⁵ Goldby (n 26) 191 and Bal (n 604) 189.

¹⁰⁴⁶ art 1(21) of Rotterdam Rules.

¹⁰⁴⁷ Sturley, Fujita and Ziel (n 80) 54.

¹⁰⁴⁸ Goldby (n 26) 192-193.

particulars'.¹⁰⁴⁹ Sturley et al explain that '[t]hose procedures must include functional requirements to ensure that the negotiable electronic transport record is able to replicate the functions of a paper negotiable transport document'.¹⁰⁵⁰ Goldby argues that 'Article 9 further emphasizes the role of the parties in setting up a system that allows electronic recording and communication of data constituting the transport record'.¹⁰⁵¹ Article 9 'lays down the minimum requirements for procedures for the use of negotiable electronic transport records and leaves the rest to the parties'.¹⁰⁵² The Rotterdam Rules provide for those 'procedures for use of negotiable electronic transport records' as follows:

1. The use of a negotiable electronic transport record shall be subject to procedures that provide for:
 - a) The method for the issuance and the transfer of that record to an intended holder;
 - b) An assurance that the negotiable electronic transport record retains its integrity;
 - c) The manner in which the holder is able to demonstrate that it is the holder; and
 - d) The manner of providing confirmation that delivery to the holder has been effected, or that, pursuant to articles 10, paragraph 2, or 47, subparagraphs 1(a)(ii) and (c), the electronic transport record has ceased to have any effect or validity.
2. The procedures in paragraph 1 of this article shall be referred to in the contract particulars and be readily ascertainable.¹⁰⁵³

Goldby notes that 'Article 9(2)(a) and (c) must be read in conjunction with the definitions of certain terms found in Article 1 - namely the terms of "issuance", "transfer", and "holder"'.¹⁰⁵⁴ Sturley et al. describe the procedures required in article 9(1)(c) as 'the most difficult one of the three matters' and explain:

One crucial function of a paper negotiable document is that it legitimates its holder as the person entitled to the rights incorporated in the document. In other words, a party may learn from the document itself whether the person that presents the document is its holder. An equivalent for this function of the paper document must be found when negotiable electronic transport records are used. The agreed upon procedures must enable the person

¹⁰⁴⁹ Sturley, Fujita and Ziel (n 80) 49.

¹⁰⁵⁰ *ibid.*

¹⁰⁵¹ Goldby (n 26) 192.

¹⁰⁵² *ibid.*

¹⁰⁵³ art 9 of Rotterdam Rules.

¹⁰⁵⁴ Goldby (n 26) 192.

entitled to the rights embodied in the record to prove that they have the exclusive control over the record.¹⁰⁵⁵

Diamond argues that ‘[w]hat is important is, not so much that a holder can "control" the record, as that, at any one time, there is only one holder ...’.¹⁰⁵⁶ Diamond says that ‘[w]hat is important is a guarantee of singularity.’¹⁰⁵⁷ It seems that all of these arguments meet on an aim to achieve an electronic functional equivalent to the physical holdership of a transport document for the sake of secure transactions. It may be safe to say that the two concepts of ‘singularity of the holdership’ of a negotiable electronic transport record and ‘exclusive control’ over that record seem to complete each other. It means, for example, a holder of a negotiable electronic transport record cannot claim delivery of the goods from a carrier or transfer the record if there is another person who claims holdership of the same record. In other words, the rights to claim delivery or transfer a negotiable electronic transport record need to be exclusive to one holder at only one time to secure enjoying these rights as those rights incurred from the holdership of a negotiable transport document. It is possible to submit that the significant existence of these two concepts stems from the need to cope with the electronic nature of a negotiable electronic transport record that differs from the physical nature of a negotiable transport record. It may be safe to say that possessing a physically-existed negotiable transport record seems easier to possessing an electronically-existed negotiable transport record. Therefore, the concepts of exclusive control and singularity seem to be a key solution to replicate the physical possession. It may also be possible to reach that these concepts secure the application of the *principle of functional equivalence* in terms of the possession of a negotiable transport record and possession of an electronic negotiable transport record. These two concepts are already in practice and used by Bolero and essDOCS.¹⁰⁵⁸

Article 47 deals with the ‘delivery when a negotiable transport document or negotiable electronic transport record is issued’. Article 47 (1)(a) provides that the holder, whether of a negotiable transport document or negotiable electronic transport record, ‘is entitled to claim delivery of the goods from the carrier after they have arrived at the place of destination’. It also focuses on the requirement to identify the holder of a negotiable transport document or negotiable electronic transport record, in accordance to article 1(10)(a)(i) in terms of a

¹⁰⁵⁵ Sturley, Fujita and Ziel (n 80) 55.

¹⁰⁵⁶ Diamond (n 606).

¹⁰⁵⁷ *ibid.*

¹⁰⁵⁸ Interviews (n 15).

negotiable transport document and in accordance to article 9(1) in terms of a negotiable electronic transport record. Moreover, as regards the original of a negotiable electronic transport record, article 47 (1)(c) provides for the *principle of functional equivalence* to enable delivery of the goods under a negotiable electronic transport record as in the case of original under of a negotiable transport document. The ‘negotiable electronic transport record has been used, such electronic transport record ceases to have any effect or validity upon delivery to the holder in accordance with the procedures required by article 9, paragraph 1’.

The above-mentioned provisions, according to Diamond, agrees with ‘the current legal position under English and under most other systems of laws’.¹⁰⁵⁹ Diamond explains that ‘a carrier is obliged to deliver the goods to the holder of the bill of lading on surrender of an original bill and, it seems, obtains protection against claims for wrongful delivery if, and only if, it does this’.¹⁰⁶⁰ Goldby argues that ‘the method of identifying the holder, where a negotiable electronic transport record is being used, is left for the parties to determine in their contract and allows for future technological developments’.¹⁰⁶¹ Article 74(2) provides for ‘certain rules that apply’,¹⁰⁶² ‘if the negotiable transport document or the negotiable electronic transport record expressly states that the goods may be delivered without the surrender of the transport document or the electronic transport record’.¹⁰⁶³ The ‘controlling party’ is defined in article 1(13) as ‘the person that pursuant to article 51 is entitled to exercise the right of control. Bal is of the view that this definition somehow ‘allows any person to be a controlling party, regardless of whether it is a party to the contract of carriage’.¹⁰⁶⁴ Article 1(22) defines that “transfer” of a negotiable electronic transport record’ as ‘the transfer of exclusive control over the record’. Chapter 10 of Rotterdam Rules deals with the ‘rights of the controlling party’. As its title indicates, article 50 deals with the ‘exercise and extent of right of control’. The controlling party is the only person to exercise the right of control under the Rotterdam Rules, but limited to:

- (a) The right to give or modify instructions in respect of the goods that do not constitute a variation of the contract of carriage;
- (b) The right to obtain delivery of the goods at a scheduled port of call or, in respect of inland carriage, any place en route; and

¹⁰⁵⁹ Diamond (n 606).

¹⁰⁶⁰ *ibid.*

¹⁰⁶¹ Goldby (n 26) 199.

¹⁰⁶² *ibid.*

¹⁰⁶³ art 74(2) of Rotterdam Rules.

¹⁰⁶⁴ Bal (n 604) 198.

- (c) The right to replace the consignee by any other person including the controlling party.¹⁰⁶⁵
2. The right of control exists during the entire period of responsibility of the carrier, as provided in article 12, and ceases when that period expires.¹⁰⁶⁶

Article 51 deals with the identification of the controlling party and transfer of the right of control. Bal says that ‘Article 51 enumerates in detail the identity of the controlling party in different situations and the transfer of the right of control’.¹⁰⁶⁷ It can be observed that article 51(1)(a) identifies the ‘controlling party’ as the shipper, ‘unless the shipper, when the contract of carriage is concluded, designates the consignee, the documentary shipper or another person as the controlling party’. Article 51(1)(b) expressly provides for the right of the controlling party to transfer this right of control to another person. However, it may be observed that the identification and transfer of right of control deal with the negotiable transport document. Bal says that ‘paragraph 1- Bal means Article 51(2) - is applicable when a non-negotiable transport document is issued by the carrier or where no document is issued’.¹⁰⁶⁸ Article 51(2) goes on to deal with identification and transfer of right of control in the case of issuing a non-negotiable transport document. Therefore, article 51(2)(1) also states that ‘the shipper is the controlling party and may transfer the right of control to the consignee named in the transport document by transferring the document to that person without endorsement’.¹⁰⁶⁹ Article 51(2), as Bal explains, ‘applies to a non-negotiable transport document made out to a named person and indicates that it should be surrendered to obtain delivery of the goods’.¹⁰⁷⁰ What more concerns this discussion is article 51(4) because, according to Gaskell, it ‘applies specifically to negotiable electronic transport records, while a non-negotiable electronic transport record would seem to fall within art 51(1)’.¹⁰⁷¹ Article 51(4)(a) may identify the holder as the ‘controlling party’ when a negotiable electronic transport records is issued. Article 51(4)(b) may provide for the right of the holder to transfer its right of control to another person in accordance with the procedures required in article 9(1). Then, article 51(4)(c) provides that the holder demonstrates that it is the holder in accordance with the procedures referred to in article 9(1). In relation to article 51(4), Goldby comments:

¹⁰⁶⁵ *ibid.*

¹⁰⁶⁶ art 50(1) of Rotterdam Rules.

¹⁰⁶⁷ Bal (n 604) 198.

¹⁰⁶⁸ *ibid.*

¹⁰⁶⁹ *ibid.*

¹⁰⁷⁰ *ibid.*

¹⁰⁷¹ Gaskell (n 608).

It is submitted that, by virtue of these provisions - Goldby refers Article 51(4) - an electronic transport record that satisfied the exclusive control requirement (that is, a 'negotiable electronic transport record' for the purpose of this Convention) - Goldby refers to the Rotterdam Rules - and which is governed by the Convention as applicable law would, upon its transfer in accordance with Article 9 procedures, transfer symbolic or constructive possession of the goods to its new holder.¹⁰⁷²

The procedure to transfer a negotiable electronic transport record is dealt with in article 57. It comes under the title of 'When a negotiable transport document or negotiable electronic transport record is issued'. Article 57(1) provides for the way the holder may transfer its rights incorporated in a negotiable transport document by transferring it to another person. It provides that these ways may include the transfer 'in blank, if an order document,¹⁰⁷³ or '[W]ithout endorsement, if: (i) a bearer document or a blank endorsed document; or (ii) a document made out to the order of a named person and the transfer is between the first holder and the named person'.¹⁰⁷⁴ Article 57(2) deals with the transfer of a negotiable electronic transport record. It provides that the holder a negotiable electronic transport record 'may transfer the rights incorporated in it, whether it be made out to order or to the order of a named person, by transferring the electronic transport record in accordance with the procedures referred to in article 9, paragraph 1'.

2.2 MLETR

As in the other previously discussed UNCITRAL model laws on electronic commerce in Chapter Three, MLETR is based on 'the *principles of non-discrimination against the use of electronic means, functional equivalence and technology neutrality*'.¹⁰⁷⁵ The *principle of non-discrimination against the use of electronic means* is provided for in article 7(1) of MLETR, which deals with the legal recognition of an electronic transferable record stating that '[A]n electronic transferable record shall not be denied legal effect, validity or enforceability on the sole ground that it is in electronic form'. The 'electronic transferable record' is defined in Article 2 as 'an electronic record that complies with the requirements of article 10'. Article 10

¹⁰⁷² Goldby (n 26) 201.

¹⁰⁷³ art 57(1)(a) of Rotterdam Rules.

¹⁰⁷⁴ art 57(1)(b).

¹⁰⁷⁵ UNCITRAL (781).

provides for the *principle of functional equivalence*.¹⁰⁷⁶ It also provides that ‘[T]he reliability of the method referred to in Article 10 should be assessed according to the general reliability standard contained in article 12’.¹⁰⁷⁷ Article 10 deals with how an electronic record be equal to a transferable document or instrument in the legal value and enforceability. The electronic record must ‘contains the information that would be required to be contained in a transferable document or instrument’.¹⁰⁷⁸ MLETR also requires that the method used in the issuance and transfer of electronic record must be ‘a reliable method’.¹⁰⁷⁹ The method must ‘identify that electronic record as the electronic transferable record’,¹⁰⁸⁰ ‘render that electronic record capable of being subject to control from its creation until it ceases to have any effect or validity’¹⁰⁸¹ ‘and retain the integrity of that electronic record’.¹⁰⁸² MLETR also establishes a ‘criterion for assessing integrity’ in terms of the information contained in an electronic transport record.¹⁰⁸³ This information must ‘remained complete and unaltered apart from any change which arises in the normal course of communication, storage and display’.¹⁰⁸⁴

The ‘electronic record’ is defined as the ‘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’.¹⁰⁸⁵ This definition echoes the definition of ‘data message’ in the UNCITRAL Model Law on Electronic Commerce and in United Nations Convention on the Use of Electronic Communications in International Contracts.¹⁰⁸⁶ It explains that the ‘[e]lectronic records may, but do not need to, include a set of composite information. It highlights the fact that information may be associated with the electronic transferable record at the time of issuance or at any time before or after (e.g. information related to endorsement).’¹⁰⁸⁷ The Explanatory Note to MLETR also explains that the definition of the ‘electronic record’:

¹⁰⁷⁶ Explanatory Note to the UNCITRAL (n 781).

¹⁰⁷⁷ *ibid.*

¹⁰⁷⁸ art 10(1)(a) of MLETR.

¹⁰⁷⁹ art 10(1)(b).

¹⁰⁸⁰ art 10(1)(b)(i).

¹⁰⁸¹ art 10(1)(b)(ii).

¹⁰⁸² art 10(1)(b)(iii).

¹⁰⁸³ art 10(2).

¹⁰⁸⁴ *ibid.*

¹⁰⁸⁵ art 2 of MLETR.

¹⁰⁸⁶ Explanatory Note to the UNCITRAL (n 781).

¹⁰⁸⁷ *ibid.*

allows for the possibility that in certain electronic transferable records management systems data elements may, taken together, provide the information constituting the electronic transferable record, but with no discrete record constituting in itself the electronic transferable record.¹⁰⁸⁸

The word ‘logically’ used in the definition, it ‘refers to computer software and not to human logic’.¹⁰⁸⁹ The ‘transferable document or instrument’ is defined in article 2:

‘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.

This definition, ‘focuses on the key functions of transferability and of providing a title to performance. It does not aim to affect the principle that substantive law should determine the rights of the possessor.’¹⁰⁹⁰ The *principle of functional equivalence* is established in MLETR in terms of ‘writing’ and ‘signature’. Article 8 may functionally equalize the legal validity of writing and the information contained in an electronic transferable record if this information is accessible. It ‘establishes the requirements for the functional equivalence of the written form with respect to information contained in or related to electronic transferable records’.¹⁰⁹¹ As for signature, article 9 also may functionally equalize the legal validity of traditional signature and electronic equivalent based on a reliable method to identify the signatory and its intention. Moreover, article 11 may provide for the conditions of equalization between the possession and transfer of a transferable document or instrument and an electronic transferable record:

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.

¹⁰⁸⁸ *ibid.*

¹⁰⁸⁹ *ibid.*

¹⁰⁹⁰ *ibid.*

¹⁰⁹¹ *ibid.*

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.

Article 12 of MLETR requires that the method referred to in articles 9, 10, 11, 13, 16, 17 and 18 to be ‘as reliable as appropriate for the fulfilment of the function for which the method is being used, in the light of all relevant circumstances’. Article 12 provides for those circumstances. It, according to the Explanatory Note to MLETR, ‘provides a consistent and technology neutral general standard on the assessment of reliability that applies whenever a provision of the Model Law requires the use of a "reliable method" for the fulfilment of its functions’.¹⁰⁹² It ‘aims to increase legal certainty by indicating elements that may be relevant in assessing reliability’.¹⁰⁹³ The circumstances for such a reliable method may include:

- (i) Any operational rules relevant to the assessment of reliability;
- (ii) The assurance of data integrity;
- (iii) The ability to prevent unauthorized access to and use of the system;
- (iv) The security of hardware and software;
- (v) The regularity and extent of audit by an independent body;
- (vi) The existence of a declaration by a supervisory body, an accreditation body or a voluntary scheme regarding the reliability of the method;
- (vii) Any applicable industry standard ...¹⁰⁹⁴

As for the *principle of technological neutrality*, it ‘entails adopting a system-neutral approach, enabling the use of various models whether based on registry, token, distributed ledger or other technology’.¹⁰⁹⁵ Mooney views this principle as ‘central to the MLETR, and ‘evidenced by the reliable method standard’, as in articles 9, 10, 11, 13, 16, 17 and 18 of MLETR.¹⁰⁹⁶ Articles 9, 10 and 11 were addressed earlier. Article 13 deals with the indication of time and place in electronic transferable records stating that ‘[w]here the law requires or permits the indication of time or place with respect to a transferable document or instrument, that requirement is met if a reliable method is used to indicate that time or place with respect to an electronic transferable record’. Article 16 permits amendments in an electronic transferable record:

¹⁰⁹² *ibid.*

¹⁰⁹³ *ibid.*

¹⁰⁹⁴ art 12 of MLETR.

¹⁰⁹⁵ Explanatory Note to the UNCITRAL (n 781).

¹⁰⁹⁶ Mooney (n 779).

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.

Article 17 provides for the right to replace or change a transferable document or instrument with an electronic transferable record. Yet, this right is conditional based on the method to be used in the replacement process as provided in article 17(1) which states that ‘[A]n electronic transferable record may replace a transferable document or instrument if a reliable method for the change of medium is used’. Article 17(2) also requires that the electronic transferable record must include ‘a statement indicating a change of medium’. If the replacement takes place in accordance with article 17(1) and (2), the transferable document or instrument will ‘be made inoperative and ceases to have any effect or validity’.¹⁰⁹⁷ Moreover, such a change of medium do ‘not affect the rights and obligations of the parties’.¹⁰⁹⁸

Article 18 provides for the right to replace an electronic transferable record with a transferable document or instrument. As in the above-mentioned replacement, the change of an electronic transferable record with a transferable document or instrument is also conditional based on the method to be used in the replacement process as provided in article 18(1) which states that ‘[A] transferable document or instrument may replace an electronic transferable record if a reliable method for the change of medium is used’. Article 18(2) also requires that the transferable document or instrument must include ‘a statement indicating a change of medium’. As in the case of previous replacement, if the change of an electronic transferable record with a transferable document or instrument takes place in accordance with article 18(1) and (2), the electronic transferable record will ‘be made inoperative and ceases to have any effect or validity’.¹⁰⁹⁹ Moreover, such a change of medium do ‘not affect the rights and obligations of the parties’.¹¹⁰⁰ This right of replacement ‘is more frequent than the reverse case due to the fact that a party whose involvement was not envisaged at the time of the creation of the electronic transferable record does not wish, or is not in a position, to use electronic means’.¹¹⁰¹

¹⁰⁹⁷ art 17(3) of MLETR.

¹⁰⁹⁸ art 17(4).

¹⁰⁹⁹ art 18(3).

¹¹⁰⁰ art 18(4).

¹¹⁰¹ Explanatory Note to the UNCITRAL (n 781).

2.3 CMI Rules

Following the same analysis technique of the previous discussion, there is a need to first discover the *principle of functional equivalence* as a foundation for any provision for the document of title function under the CMI Rules. Rule 4(d) of CMI Rules may equalize between specific information contained in an electronic bill of lading, which means a ‘receipt message’ according to the CMI Rules, and that information contained in a paper bill of lading. It provides that ‘[t]he information contained in (ii), (iii) and (iv) of paragraph (b) above including the date and place of shipment if updated in accordance with paragraph (c) of this Rule, shall have the same force and effect as if the receipt message were contained in a paper bill of lading’. Thomas comments on the wording of ‘shall have the same force and effect as if the receipt message were contained in a paper bill of lading’ provided in rule 4(d) as ‘an early reference to the so-called *principle of equivalence* – by which electronic documents are deemed to have the same effect in law as their paper counterparts’.¹¹⁰² The sub-paragraphs – (ii), (iii) and (iv) – referred to in rule 4(d) are:

- ii. the description of the goods, with any representations and reservations, in the same tenor as would be required if a paper bill of lading were issued;
- iii. the date and place of the receipt of the goods;
- iv. a reference to the carrier's terms and conditions of carriage.

Rule 11 of CMI Rules provides for the *principle of functional equivalence* since may equalize between the electronic information or ‘data’ and ‘writing’ in legal effect:

The carrier and the shipper and all subsequent parties utilizing these procedures agree that any national or local law, custom or practice requiring the Contract of Carriage to be evidenced in writing and signed, is satisfied by the transmitted and confirmed electronic data residing on computer data storage media displayable in human language on a video screen or as printed out by a computer. In agreeing to adopt these Rules, the parties shall be taken to have agreed not to raise the defence that this contract is not in writing.

In reference to ‘transmitted data’, rule 1(d) defines the term ‘transmission’ as ‘one or more messages electronically sent together as one unit of dispatch which includes heading and terminating data’. Rule 1(i) defines the term ‘electronic storage’ as ‘any temporary, intermediate or permanent storage of electronic data including the primary and the back-up storage of such data’.

¹¹⁰² Thomas (n 20) chapter 14.

As regards the electronic function of bills of lading as a document of title, '[t]he system - the CMI Rules system - works by the carrier sending an electronic document to a specified address given by the shipper upon receiving the goods from the shipper'.¹¹⁰³ It seems safe to say that the 'electronic document' referred to in McGowan's quotation means the 'receipt message' which is the electronic bill of lading itself since it must include the following information:

- (i) the name of the shipper;
- (ii) the description of the goods, with any representations and reservations, in the same tenor as would be required if a paper bill of lading were issued;
- (iii) the date and place of the receipt of the goods;
- (iv) a reference to the carrier's terms and conditions of carriage; and
- (v) the Private Key to be used in subsequent Transmissions.¹¹⁰⁴

This information contained in the receipt message is the same information as in a paper bill of lading as for the description of the goods.¹¹⁰⁵ In other words, Todd says:

Because of the requirements of Article 4, the electronic message performs evidential functions similar to the traditional bill of lading, stating the name of the shipper, the description of the goods, representations and reservations as with a paper bill of lading, the date and place of receipt and/or shipment of the goods, and a reference to the terms of the carriage contract.¹¹⁰⁶

The receipt message is 'equivalent to a paper bill of lading'.¹¹⁰⁷ The 'private key', which is a significant element in the transfer process of an electronic bill of lading or a receipt message under the CMI Rules, is defined in rule 4(b)(v) '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 Transmission'. It is referred to as a 'code' required by the CMI Rules, specifically by rule 4(b)(v) referred to earlier, 'to determine the rightful holder of the electronic bill of lading'.¹¹⁰⁸ It is issued by the carrier, 'upon receiving the goods from the shipper, shall give notice of the receipt of the goods to the shipper by a message at the

¹¹⁰³ McGowan (n 286).

¹¹⁰⁴ r 4(b) of CMI Rules.

¹¹⁰⁵ *ibid.*

¹¹⁰⁶ Todd (n 24).

¹¹⁰⁷ Richard Brett Kelly, 'The CMI Charts a Course on the Sea of Electronic Data Interchange: Rules for Electronic Bills of Lading' (1992) 16(2) *Tulane Maritime Law Journal* 349-376 and *Low* (n 271).

¹¹⁰⁸ Goldby (n 26) 178.

electronic address specified by the shipper'.¹¹⁰⁹ It enables the electronic bill of lading or receipt message 'to be controlled exclusively by only one person'.¹¹¹⁰ It 'is known only by the shipper and the carrier'.¹¹¹¹ It is safe to say that the word shipper here includes the new holder of the electronic bill of lading because in the case of transfer of the 'Right of Control and Transfer', rule 7(b)(v) states that 'the carrier shall cancel the current Private Key and issue a new Private Key to the new Holder'. Both the carrier and the shipper or holder are obliged to ensure the security of the private key according to rule 8(a) which states that '[t]he Private Key is unique to each successive Holder. It is not transferable by the Holder. The carrier and the Holder shall each maintain the security of the Private Key'. Since the private key identifies the holder, it must be 'separate and distinct'.¹¹¹² The 'private key is generated to be used in subsequent transmissions and is sent by the carrier to the shipper'.¹¹¹³ Kelly explains that '[o]nce the shipper comes into possession of the Private Key he becomes a valid "holder" of the rights to the goods',¹¹¹⁴ according to the definition of 'Holder' in rule 2(g) which states that the "[h]older" means the party who is entitled to the rights described in Article 7(a) by virtue of its possession of a valid Private Key'. More specifically, once the shipper confirms receipt of the information required in rule 4(b), that is, the receipt message which includes the private key, it becomes the holder, as stated in rule 4(b). The confirmation referred to in rule 4(b) means that the receipt message is "complete and correct" according to the definition of 'Confirmation' in rule 1(e) which states that the term "Confirmation" means a Transmission which advises that the content of a Transmission appears to be complete and correct, without prejudice to any subsequent consideration or action that the content may warrant'. The term 'Transmission' is defined in rule 1(d) as 'one or more messages electronically sent together as one unit of dispatch which includes heading and terminating data'. After the confirmation, the receipt message, upon the holder's demand, must 'be updated with the date and place of shipment as soon as the goods have been loaded on board'.¹¹¹⁵ Having identified the holder, there is a need to know what are the rights a holder enjoys under the CMI Rules. The 'right of control and transfer' is set out in rule 7(a):

¹¹⁰⁹ r 4(b) of CMI Rules.

¹¹¹⁰ Goldby (n 26) 178.

¹¹¹¹ Todd (n 24) and Goldby (n 26) 178.

¹¹¹² r 8(c) of CMI Rules.

¹¹¹³ McGowan (n 286).

¹¹¹⁴ Kelly (n 1107).

¹¹¹⁵ art of CMI Rules.

The Holder is the only party who may, as against the carrier:

- (1) claim delivery of the goods;
- (2) nominate the consignee or substitute a nominated consignee for any other party, including itself;
- (3) transfer the Right of Control and Transfer to another party;
- (4) 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.

The rights in rule 7(a) are exclusive to the holder.¹¹¹⁶ As discussed earlier previously in this chapter,¹¹¹⁷ the reason for the exclusivity of the right of control and transfer to one holder only is to maintain security in the transactions carried out under the CMI Rules. The first exclusive right of ‘claim delivery’, set out in rule 7(a)(1), seems relevant to the third exclusive right ‘transfer the right of control and transfer’ referred to in rule 7(a)(3) because the first holder (the shipper) can claim delivery of the goods if they are the only holder or before they transfer this holdership to a new holder, and the new holder (other than the shipper) also can claim delivery of the goods if they are also the only holder or after they receive the holdership from the previous holder. Therefore, the right of ‘the transfer of the right of control and transfer to another party’ needs to be examined before examining the right of ‘claim delivery of the goods’. The process of the right of ‘transfer of the right of the right of control and transfer to another party’, is stated in rule 7(b):

A transfer of the Right of Control and Transfer shall be effected: (i) by notification of the current Holder to the carrier of its intention to transfer its Right of Control and Transfer to a proposed new Holder, and (ii) confirmation by the carrier of such notification message, whereupon (iii) the carrier shall transmit the information as referred to in article 4 (except for the Private Key) to the proposed new Holder, whereafter (iv) the proposed new Holder shall advise the carrier of its acceptance of the Right of Control and Transfer, whereupon (v) the carrier shall cancel the current Private Key and issue a new Private Key to the new Holder.

The carrier must confirm the receipt of the ‘notification message’ from the holder, as provided in rule 7(b)(ii). After that the carrier must transmit the information required by rule 4 to the proposed new holder. This information includes the shipper's name, a description of the goods,

¹¹¹⁶ Goldby (n 26) 178.

¹¹¹⁷ See subsection 2.1 ‘Rotterdam Rules’ in Chapter Six.

the date and place the goods were received by the carrier, and a reference to the contract of carriage. This information does not include the private key, as provided in rule 7(b)(iii). This is because the carrier must cancel the current private key and issue a new one to the new holder, as provided for in rule 7(b)(v). But before the carrier cancels the current private key and issues a new one, the proposed new holder must make clear to the carrier that it accepts the right of control and transfer, as provided in rule 7(b)(iv). This requirement of acceptance is useful because the new holder, according to Todd, ‘gets the opportunity to inspect the electronic documentation before accepting it, and if he does not accept he does not obtain any right of control and transfer over the goods, those rights remaining in the seller just as is the case if a paper bill of lading is rejected’.¹¹¹⁸ In the absence of acceptance, the current private key retains ‘its validity’, according to rule 7(c):

If the proposed new Holder advises the carrier that it does not accept the Right of Control and Transfer or fails to advise the carrier of such acceptance within a reasonable time, the proposed transfer of the Right of Control and Transfer shall not take place. The carrier shall notify the current Holder accordingly and the current Private Key shall retain its validity.

After the acceptance, the carrier will cancel the current private key and issue a new one to the new holder.¹¹¹⁹ The transfer of the ‘Right of Control and Transfer’ has ‘the same effect as the transfer of such rights under a paper bill of lading’.¹¹²⁰ Therefore, there might be many transactions and a chain of holders to the electronic bill of lading. As regards the right of delivery, rule 9 sets the procedures to be followed in the delivery of the goods to the holder. The carrier must send a notification about the place and date of delivery to the holder and based on such notification, the holder nominates a consignee and instructs the carrier regarding the delivery of the goods with verification by the private key.¹¹²¹ In the case where the holder does not nominate a consignee, ‘the Holder will be deemed to be the consignee’.¹¹²² After that, the carrier delivers the goods to the consignee which is required to produce a ‘proper identification’ to take delivery of the goods.¹¹²³ This delivery cancels the private key.¹¹²⁴ Rule 9(c) provides that the carrier is not liable for ‘misdelivery’ of the goods, ‘if it can prove that it

¹¹¹⁸ Todd (n 24).

¹¹¹⁹ art 7(b)(v) of CMI Rules.

¹¹²⁰ art 7(d).

¹¹²¹ art 9(a).

¹¹²² *ibid.*

¹¹²³ art 9(b).

¹¹²⁴ *ibid.*

exercised reasonable care to ascertain that the party who claimed to be the consignee was in fact that party'. The criteria of 'proper identification' referred to in rule 9(b) and 'reasonable care' referred to in rule 9(c) are criticized.¹¹²⁵ As regards the criterion of 'proper identification', the CMI Rules do not define this criterion.¹¹²⁶ McGowan says that '... it can only be assumed that perhaps the more regular or traditional forms of identification such as a passport, may be sufficient'.¹¹²⁷ With regard to the criterion of 'reasonable care', the CMI Rules also do not define this criterion.¹¹²⁸

The holder under the CMI Rules is entitled to 'to demand from the carrier a paper bill of lading' in accordance to rule 10(a):

The Holder has the option at any time prior to delivery of the goods to demand from the carrier a paper bill of lading. Such document shall be made available at a location to be determined by the Holder, provided that no carrier shall be obliged to make such document available at a place where it has no facilities and in such instance the carrier shall only be obliged to make the document available at the facility nearest to the location determined by the Holder. The carrier shall not be responsible for delays in delivering the goods resulting from the Holder exercising the above option.

Rule 10(b) provides for such a right or option to the carrier to 'issue to the Holder a paper bill of lading'. However, rule 10(b) obliges the carrier's exercise of this option must not 'result in undue delay or disrupts the delivery of the goods'. Rule 10(c) provides for the information included in a paper bill of lading demanded or issued according to rule 10(a) or (b). It also provides that the new paper bill of lading may be issued to the order of holder or to bearer:

A bill of lading issued under Rules 10(a) or (b) shall include: (i) the information set out in the receipt message referred to in Rule 4 (except for the Private Key); and (ii) a statement to the effect that the bill of lading has been issued upon termination of the procedures for EDI under the CMI Rules for Electronic Bills of Lading. The aforementioned bill of lading shall be issued at the option of the Holder either to the order of the Holder (whose name for this purpose shall then be inserted in the bill of lading) or to bearer.

¹¹²⁵ McGowan (n 286).

¹¹²⁶ *ibid*

¹¹²⁷ *ibid*

¹¹²⁸ *ibid*

The CMI Rules provide for the cancellation of the private key and termination of the EDI procedures in accordance to rule 10(d):

The issuance of a paper bill of lading under Rule 10(a) or (b) shall cancel the Private Key and terminate the procedures for EDI under these Rules. Termination of these procedures by the Holder or the carrier will not relieve any of the parties to the Contract of Carriage of their rights, obligations or liabilities while performing under the present Rules nor of their rights, obligations or liabilities under the Contract of Carriage.

The issuance of a ‘print-out of the receipt message’ is allowed according to rule 10(e). The holder can demand this print-out ‘referred to in rule 4 (except for the Private Key) marked as “non-negotiable copy” at any time’.¹¹²⁹ Such print-out does ‘not cancel the Private Key nor terminate the procedures for EDI’.¹¹³⁰ The print-out, according to Goldby, ‘can be retained for one’s records’, and ‘[t]his does not constitute a switch to paper’.¹¹³¹

2.4 Bolero

This discussion starts by exploring the *principle of functional equivalence*, as in the previous discussions of Rotterdam Rules, MLETR and CMI Rules. Rule 2.2.2 on the ‘Validity and Enforceability’, and rule 2.2.3 on the ‘Messages as Evidence Messages’, adopt the *principle of functional equivalence*. As for the equalization between written messages and Bolero messages in relation to legal validity, rule 2.2.2(1) states that ‘... [a]ny applicable requirement of law, contract, custom or practice that any transaction, document or communication shall be made or evidenced in writing, signed or sealed shall be satisfied by a Signed Message’. Rule 1.1(37) defines the ‘message’ as [a]ny communication, notice or other information sent through the Bolero System as described in the Operating Procedures’. Rule 1.1(37) defines ‘operating procedures’ as ‘[t]he document by that title appended to the Rulebook’. As for the signature used in Bolero system, Rule 2.2.2(2) equalizes the Bolero signature and the manual one in relation to legal validity states that ‘... [t]he contents of a Message Signed by a User, or a portion drawn from a Signed Message, are binding upon that User to the same extent, and shall have the same effect at law, as if the Message or portion thereof had existed in a manually signed form’.

¹¹²⁹ r 10(e) of CMI Rules.

¹¹³⁰ *ibid.*

¹¹³¹ Goldby (n 26) 179.

Bolero users are obliged not to ‘contest the validity of any transaction, statement or communication made by means of a Signed Message, or a portion drawn from a Signed Message, on the grounds that it was made in electronic form instead of by paper and/or signed or sealed’.¹¹³² Moreover, Bolero users are also obliged to agree ‘that a Signed Message or a portion drawn from a Signed Message will be admissible before any court or tribunal as evidence of the Message or portion thereof’.¹¹³³ Furthermore, Bolero Rulebook requires Bolero users to accept the Bolero message copy as a primary evidence in case where a written record of a message is required.¹¹³⁴

Rule 2.2.3(3) provides for prevailing the copy authenticated by Bolero stating that ‘Each User agrees that if there is a discrepancy between the record of any User and the copy authenticated by Bolero International, such authenticated copy shall prevail’. Bolero Rulebook equalizes the validity of a carrier’s statement on the goods included in Bolero bill of lading and that included in a paper bill of lading in accordance to rule 3.1(3):

Statements Relating to Goods Received. Without prejudice to the generality of section 2.2.2, any statement a Carrier makes as to the leading marks, number, quantity, weight, or apparent order and condition of the goods in the BBL Text will be binding on the Carrier to the same extent and in the same circumstances as if the statement had been contained in a paper bill of lading.¹¹³⁵

Bolero Rulebook also equalizes the electronic incorporation of the carrier’s standard terms and conditions and any other way, including writing, in relation to legal validity in accordance to rule 3.2(1)(b):

Standard Terms and Conditions. In order to incorporate its standard terms and conditions, otherwise than by setting the said terms and conditions out in full in the BBL Text, a Carrier shall:

- (a) Express in the BBL Text that external terms and conditions be incorporated into the BBL Text; and
- (b) Indicate where such terms and conditions can be found and read, electronically or otherwise.

¹¹³² r 2.2.2(3) of Bolero Rulebook.

¹¹³³ r 2.2.3(1).

¹¹³⁴ r 2.2.3(2).

¹¹³⁵ r 3.1(3).

Rule 3.2(2) requires Bolero users to accept the incorporation provided in rule 3.2(1) stating that '[e]ach User agrees that such incorporation shall be effective to make such terms and conditions binding upon the parties to the contract of carriage'. Similarly, in the case of a charterparty, Bolero users are required to accept the incorporated provisions of the charterparty in the Bolero bill of lading in accordance to rule 3.2(3):

Incorporation of Charterparty Terms. Without prejudice to the generality of section 2.2.2, each User agrees that words contained in the BBL Text incorporating the provisions of any charterparty shall have the same effect as if such wording had appeared as part of the written terms of a paper bill of lading issued by the Carrier.

Although Bolero Rulebook equalizes the Bolero bill of lading and the paper bill in the legal validity, rule 3.7(3) prefers the electronic record of the Bolero bill of lading to the paper bill in case of discrepancies between them. Bolero Rulebook also adopts the *principle of functional equivalence* for other transport documents used under the Bolero system, in addition to the Bolero bill of lading, in rule 3.9(1–6).¹¹³⁶ Likewise, Bolero Rulebook adopts the *principle of functional equivalence* for the sale contract in rule 3.10(1–6).¹¹³⁷ Moreover, it provides for the

¹¹³⁶ r 3.9 of Bolero Rulebook states:

- (1) Creation of Transport Documents. Where, instead of creating a Bolero Bill of Lading, a Carrier by a Message creates a Transport Document, such Message will take effect, for the purposes of the operation of any international convention or national law, as if it were a Transport Document which had been issued by the Carrier in paper form.
- (2) Rights and Liabilities of User Identified. Any User identified in a Transport Document will obtain the same rights and liabilities under the contract of carriage, by reason of having been so identified, as it would have done under a paper version of such a Transport Document.
- (3) Rights and Liabilities of Named User. Where a User is named by a party entitled to do so under a contract of carriage made with a Carrier as the person to whom delivery of the goods is to be made, that User shall acquire the same rights and liabilities as it would have done if the relevant Transport Document had been issued in paper form.
- (4) Duration. In no circumstances shall any rights or liabilities created by the operation of this Rule be any greater or continue for any longer period of time, than would have been the case if the relevant Transport Document had been issued in paper form.
- (5) Paper copies of Transport Documents. Once a Carrier has created a Transport Document any subsequent paper copy of such document shall clearly state that it is a copy only. In the event of any discrepancy between the paper copy and the electronic record, the electronic record shall prevail.
- (6) Termination of Rights and Liabilities. In the event that the right to the delivery of the goods under a contract of carriage to which this Rule applies, is transferred to a party who is not a User, all rights and liabilities created by the operation of this Rule shall immediately be terminated.

¹¹³⁷ r 3.10 states:

principle of functional equivalence for the ‘documentary credits’ in rule 3.11(1–4).¹¹³⁸

Furthermore, Annex (1) to Bolero Rulebook concerns US law clauses and adopts the *principle*

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

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

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

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

(5) Switch to Paper for Contracts of Sale. Upon a request from any User entitled to demand the original contract of sale, a contracting User will print and sign in writing the Message or Messages in accordance with any and all formalities required by any applicable law to give effect to the contract.

(6) Date of Contract of Sale. A sale contract switched to paper by the procedure set out in paragraph (5) shall take effect as if the sale contract had been made and signed in writing on the date of the relevant Message or Messages.

¹¹³⁸ r 3.11 states:

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

(a) the Documentary Credit expressly indicates that presentation under the Bolero System is acceptable; and

(b) the data contained in such transmissions is presented in Documents whose description matches that of the documents required to be presented by the terms of the credit; and

(c) where the Documentary Credit requires that a particular document is issued, authenticated or signed by a particular person, the data transmission is Signed by that person or by a User who is authorised to act and take responsibility on his behalf.

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

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

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

(b) The recipient User shall be entitled or empowered to make the number of onward transmissions, or, as the case may be, to create the number of copies, of that document as

of functional equivalence as equalizes the legal validity of the shipper's declaration (or absence) on the value of goods included in the Bolero bill of lading and that included in a paper bill of lading:

Ad valorem Declarations. If the carriage covered by a Bolero Bill of Lading includes carriage to or from a port or place in the United States of America, the Carrier shall provide the Shipper of the Bolero Bill of Lading the opportunity to declare a value of the goods to be carried by him and will include any such declaration in the Bolero Bill of Lading. Any declaration or absence thereof will be binding on the first Holder and any successive Holder to the same extent as if the opportunity to declare a value had been contained in a paper bill of lading.

As regards the transferability of Bolero bill of lading as a document of title, the 'Title Registry', *inter alia*, deals with the holdership and transfer of the Bolero bill of lading.¹¹³⁹ It 'enables the electronic negotiation of the Bolero bill of lading. It 'manages the exchange of rights between the users related to the Bolero bill of lading'.¹¹⁴⁰ Rule 1.1(53) defines the Title Registry:

Title Registry: 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 record of the status of current Bolero Bills of Lading; and
- (c) an audit trail of dealings with such Bolero Bills of Lading.

Bolero Rulebook provides two relevant terms in relation to the Title Registry. The first concerns specific information to be included in a specific Bolero bill of lading, called the title registry instruction. Rule 1.1(54) defines the 'Title Registry Instruction' as '[t]he portion of a Bolero Header which directs the Title Registry to enter or change certain specified information in the Title Registry Record for a specified Bolero Bill of Lading'.

would have been necessary to complete the transaction in a paper environment, provided always that no Bolero Bill of Lading shall have more than one Holder (whether Holder-to-order, Bearer Holder, Pledgee Holder, Consignee Holder or Holder) at any one time.

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

¹¹³⁹ r 1.1(53).

¹¹⁴⁰ Low (n 271).

The other relevant term is the ‘title registry record’ referred to in rule 1.1(53)(b). Low explains that ‘[W]hen the shipper accepts the bill to become the first holder of the Bolero bill of lading, the Title Registry makes a record of that Bolero bill of lading and registers the shipper as the current holder of that Bolero bill of lading’.¹¹⁴¹ The ‘Title Registry Record’ is defined as ‘[t]he 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’.¹¹⁴² Zhao says that ‘the core document in the Bolero system is the Bolero Bill of Lading (BBL).¹¹⁴³ Bolero Rulebook defines the ‘Bolero Bill of Lading’ as ‘[a] BBL Text together with its related Title Registry Record’.¹¹⁴⁴ There might be a need now to know the meaning or definition of the term ‘holder’ under the Bolero Rulebook. There are different types of holder referred to in the Bolero Rulebook within the definition of ‘holder’ in rule 1.1(33):

Holder: A User who is or becomes Designated to the role of Holder. ‘Holdership’ is the status of being a Holder. A User may be the Holder of a Bolero Bill of Lading without occupying another Role, or Holdership may be joined to another role as in the case of a Holder to order, Bearer Holder, Pledgee Holder, or Consignee Holder.

This definition of holder uses the term ‘Designated’, which is derived from the term ‘Designate’ defined in rule 1.1(24) as ‘[t]o name or appoint a User to a role in the Title Registry. ‘Designation’ means the act of Designating or the state of having been Designated’. Therefore, the ‘Designated’ is a user who is named to a role in the Title Registry. However, there are other types of holders such as ‘Holder to order’, ‘Bearer Holder’, ‘Pledgee Holder’ or ‘Consignee Holder’, as provided under the Bolero Rulebook. The ‘Holder to order’ is defined as ‘[a] User who is or becomes simultaneously Designated both Holder and To Order Party of a Bolero Bill of Lading’.¹¹⁴⁵ Rule 1.1(7) of Bolero Rulebook defines ‘Bearer Holder’ as ‘[a] User who is or becomes Designated a Holder of a Blank Endorsed Bolero Bill of Lading’. The ‘Blank Endorsed Bolero Bill of Lading’, or the term ‘Blank Endorse’, referred to in rule 1.1(7), is defined in rule 1.1(9) as ‘[t]o render, by the process described in the Operating Procedures, a Bolero Bill of Lading capable of transfer simply by Designation of a new Bearer Holder’. As regards the ‘Pledgee Holder’, it means ‘[a] User who is or becomes Designated as both Pledgee

¹¹⁴¹ *ibid.*

¹¹⁴² r 1.1(55) of Bolero Rulebook.

¹¹⁴³ Zhao (n 503).

¹¹⁴⁴ r 1.1(11) of Bolero Rulebook.

¹¹⁴⁵ r 1.1(32).

and Holder simultaneously'.¹¹⁴⁶ With regards to the 'Consignee Holder', it means '[a] User simultaneously Designated as Consignee and Holder of a Bolero Bill of Lading'.¹¹⁴⁷

As do the CMI Rules, Bolero Rulebook uses the concept of keys or private keys. However, Bolero Rulebook uses the terms 'Private Key' and 'Public Key'. The 'Public Key' is defined as '[t]he key of a Key Pair used to create a Digital Signature'.¹¹⁴⁸ Therefore, there is a need to know what the 'Key Pair' and 'Digital Signature' are. Bolero Rulebook provides that the 'Key Pair: In a scheme of asymmetric or Public K cryptography, a Private Key and its mathematically related Public Key, which together have the property that the Public Key can Verify a Digital Signature that the Private Key creates'.¹¹⁴⁹ As regards the 'Digital Signature', it is defined as follows:

A mathematical result calculated from a unit of digital information and a Private Key, such that one having the unit of information and the corresponding Public Key can, through Verification, accurately determine (1) whether that mathematical result was created using that Private Key, and (2) whether the unit of information has been altered since that mathematical result was calculated.¹¹⁵⁰

With regard to the 'Public Key', it means '[t]he key of a Key Pair used to Verify a Digital Signature'.¹¹⁵¹ Bolero Rulebook defines the key terms in the Bolero system to avoid any possible misinterpretation or argument about those terms. It provides that 'a Bolero Bill of Lading may be transferable or non-transferable', as rule 3.3(1) provides in relation to 'Transferability'. Therefore, if the carrier wants to have a transferable Bolero bill of lading, it must designate that bill as 'To Order Party or Blank Endorse the Bill'.¹¹⁵² The 'To Order Party' means '[a] User Designated as such who is not also designated as the Holder of the Bolero Bill of Lading'.¹¹⁵³ The 'To Order Party' designation has specific consequences, or rights, that the carrier must accept, and these rights are stated in rule 3.3(3):

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

¹¹⁴⁶ r 1.1.(42).

¹¹⁴⁷ r 1.1.(22).

¹¹⁴⁸ r 1.1.(43).

¹¹⁴⁹ r 1.1.(36).

¹¹⁵⁰ r 1.1.(25).

¹¹⁵¹ r 1.1.(44).

¹¹⁵² r 3.3(2).

¹¹⁵³ r 1.1.(57).

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

The ‘Blank Endorse the Bill’ is defined earlier in rule 1.1.(9), and the blank endorsement has specific consequences, or rights, that the carrier must accept in accordance to rule 3.3.(4):

Effect of Blank Endorsement. If the Carrier gives a Title Registry Instruction that the Bolero Bill of Lading shall be Blank Endorsed, it is thereby deemed to have agreed that:

- (a) the Holder is a Bearer Holder and can Designate a new Bearer Holder, a To Order Party, a Holder-to-order, a Pledgee Holder or a Consignee; and
- (b) any subsequent Holder-to-order, Pledgee Holder or Bearer Holder can do likewise.

English law governs the Bolero Rulebook.¹¹⁵⁴ Bolero Rulebook also adopts the English courts as an applicable jurisdiction stating that as stated ‘[w]here the sole matter at issue between the parties is a claim for non-compliance with or breach of this Rulebook, all proceedings in respect of such claim shall be subject to the exclusive jurisdiction of the English courts’.¹¹⁵⁵

In return to the transferability of Bolero bill of lading may start, Low says that ‘if the shipper wants to transfer the holdership to a new holder, the shipper sends a message to the Registry requesting the transfer’.¹¹⁵⁶ The shipper is defined as ‘[a] User which is the original contracting party with whom a Carrier enters into the contract for the carriage of goods.’¹¹⁵⁷ Bolero Rulebook defines the ‘Carrier’ as ‘[a] User which contracts with another User to carry goods by any means of transport, regardless of whether the Carrier is the owner or operator of the means of transport used. Synonym: Originator’.¹¹⁵⁸ The shipper sends a message through the Core Messaging Platform to verify the authenticity through the shipper’s signature and through the Title Registry.¹¹⁵⁹ The ‘Core Messaging Platform’ is ‘[t]he messaging system of the Bolero System as described in the Operating Procedures’.¹¹⁶⁰ Clarke describes the Core Messaging Platform as ‘the server where the central registry is located, and where the status of BBL [Bolero bill of lading] is constantly updated’.¹¹⁶¹ The Core Messaging Platform, according to

¹¹⁵⁴ r 3.5(2).

¹¹⁵⁵ *ibid.*

¹¹⁵⁶ Low (n 271).

¹¹⁵⁷ r 1.1.(48) of Bolero Rulebook.

¹¹⁵⁸ r 1.1.(17).

¹¹⁵⁹ *ibid.*

¹¹⁶⁰ r 1.1.(23).

¹¹⁶¹ Clarke (n 307).

McGowan, 'is responsible for all functions between the Bolero users'.¹¹⁶² Bolero system, according to Goldby, 'allows the person with constructive possession of goods on board a ship to transfer these rights to other members of the system and updates the BTR - BTR means Bolero Title Registry - records accordingly'.¹¹⁶³ Goldsby's comment may correspond with what was indicated in the interview with Bolero, in that this is an equivalent to the transfer of physical possession of a paper bill of lading.¹¹⁶⁴

Given the option to accept or reject the transfer, as Low explains, '[i]f the new holder accepts the transfer, then the Title Registry records the new holder as the current holder of the Bolero bill of lading' and in this case, 'the original shipper will not be able to deal with that Bolero bill of lading any longer because the Title Registry shows the consignee as the current holder'.¹¹⁶⁵ This transfer process is called a 'novation of the contract' and is a solution provided by Bolero Rulebook to the transferability question of electronic bills of lading,¹¹⁶⁶ alongside with the concept of 'attornment'.¹¹⁶⁷ Low argues:

The Bolero bill of lading is able to achieve the same uniqueness as an original paper bill of lading because the Title Registry holds a record of the person who is the current 'holder' of the Bolero bill of lading and all Bolero users are willing to accept that the information on the Title Registry is correct. Thus, 'at any one time there will only be one holder and the current holder is the only person who can initiate a transfer on to a potential new holder'.¹¹⁶⁸

This argument agrees with what was found in the interview with Bolero, in that the concept of 'holder' is very important since the holder has control over an electronic bill of lading.¹¹⁶⁹ The holder can pass the holdership to somebody else who will be a new holder, and has control over the electronic bill of lading.¹¹⁷⁰ Bolero Rulebook provides that 'the transfer of constructive possession of the goods' becomes 'affective by the Designation of: (a) a new Holder-to-order, (b) a new Pledgee Holder, (c) a new Bearer Holder, or (d) a Consignee Holder'.¹¹⁷¹ Upon such designation, the carrier must hold the goods to those holders in accordance with rule 3.4.(2):

¹¹⁶² McGowan (n 286).

¹¹⁶³ Goldby (n 26) 337.

¹¹⁶⁴ Interview (n 15).

¹¹⁶⁵ Low (n 271).

¹¹⁶⁶ Baughen (n 191) 26.

¹¹⁶⁷ See the definitions of 'novation' and 'attornment' in section 3 'English law' in Chapter Six.

¹¹⁶⁸ Low (n 271).

¹¹⁶⁹ Interviews (n 15).

¹¹⁷⁰ *ibid.*

¹¹⁷¹ r 3.4(1) of Bolero Rulebook.

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

If the ‘Transferee’, which means the ‘Designated Holder-to-order or Consignee Holder’ according to rule 3.4.(5), refuses the novation of the contract of carriage, the carrier would ‘cease to hold the goods to the order of such Designated Holder-to-order or Consignee Holder and constructive possession of the goods shall remain with the immediately preceding Holder-to-order, Bearer Holder, Pledgee Holder or, if none, to the Shipper’. Likewise, if the ‘Pledgee’, which means the ‘Designated Pledgee Holder’ according to rule 3.4.(6) refuses the Bolero bill of lading, the carrier would ‘cease to hold the goods to the order of such Designated Pledgee Holder and the constructive possession of the goods will automatically revert to the immediately preceding Holder-to-order, Bearer Holder, Pledgee Holder or, if none, to the Shipper’.

Bolero Rulebook adopts the novation concept expressly in rule 3.5 under the title of ‘Novation of the Contract of Carriage’. It provides for the occurrence and effect of the new carriage contract based on the concept of novation in accordance to rule 3.5.1:

The Designation of a new Holder-to-order or a new Consignee Holder after the creation of the Bolero Bill of Lading, other than one who is also the Head Charterer, shall mean that the Carrier, the Shipper, the immediately preceding Holder-to-order, if any, and the new Holder-to-order or Consignee Holder agree to all of the following terms in this section 3.5.1:

Bolero Rulebook refers to when and how the new contract of Carriage forms and a 24-hour expiry period to refuse the designation in accordance to rule 3.5.1(1):

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

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

Rule 3.5.1 also deals with other relevant matters in relation to a novation of the contract of carriage, such as the accession to rights and liabilities and the extinguishment of the prior designee's rights and liabilities.¹¹⁷² Rule 3.5.2 provides for the new holder's right to refuse the 'Designation' within the 24-expiry period. In this case of refusal, according to rule 3.5. 2.(1) 'all rights and obligations under the contract of carriage between the previous Holder-to-order and the Carrier remain vested in the previous Holder-to-order, or if none, the Shipper, as if no attempt to novate the contract had been made'. If the 'Designated Holder-to-order or Consignee Holder', according rule 3.5. 2(2), 'accepts the novation or attempts to exercise any rights to the goods, by taking delivery or commencing proceedings against the Carrier for loss of or damage to the goods or otherwise, it shall be deemed to have accepted its Designation at the time it was made for the purposes of rule 3.5 (Novation of the Contract of Carriage)'.

As far as the delivery of the goods under Bolero is concerned, Bolero Rulebook assigns the 'Holder-to-order or Consignee Holder' as the persons who are entitled to the delivery.¹¹⁷³ As regards the surrender of the Bolero bill of lading, rule 3.6(2) provides that Bolero bill of lading must 'be surrendered either to the User identified as the Surrender Party or, if none, to the Carrier in accordance with the Operational Rules'. The 'Surrender Party' is '[A] User who is or becomes Designated as such and thereby identified as the person to whom the Bolero Bill of Lading must be presented to obtain delivery of the goods at the end of the carriage'.¹¹⁷⁴ After the delivery of the goods, more specifically when the Title Registry Record records that the Bolero bill of lading is surrendered, the bill will be terminated.¹¹⁷⁵

¹¹⁷² r 3.5.1(2) states:

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

Rule 3.5.1. (3) provides: Prior Designee's Rights and Liabilities Extinguished. The immediately preceding Holder-to-order's rights and liabilities under its contract of carriage with the Carrier shall immediately cease and be extinguished, unless:

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

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

¹¹⁷³ r 3.6(1).

¹¹⁷⁴ r 1.1(25).

¹¹⁷⁵ r 3.6(3).

Like the CMI Rules, Bolero Rulebook allows its users to switch to paper bills of lading in accordance to rule 3.7.(1):

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

However, the carrier is not allowed to switch to a paper bill of lading in accordance with the ‘Table of Powers’ provided in rule 3.8(1). Upon receipt of a demand for a paper bill of lading, the carrier must provide specific information to be included in the new paper bill of lading as follows:

Form of Paper Bill of Lading. The Carrier shall, immediately upon receipt of such a demand, issue a paper bill of lading which sets out:

- (a) all the data contained in and all of the terms and conditions contained in or evidenced by the original BBL Text;
- (b) a statement to the effect that it originated as a Bolero Bill of Lading,
- (c) the date upon which it was issued in paper form; and
- (d) a record issued by Bolero International of the chain of Users which have been parties to contracts of carriage with the Carrier, from the date of the creation of the Bolero Bill of Lading until the date on which its switch to paper demand was sent by Bolero International.¹¹⁷⁶

Moreover, Bolero Rulebook provides for other relevant matters in relation to the switch to paper bills of lading, such as the delivery of a paper bill and the end of a Bolero bill of lading.¹¹⁷⁷

¹¹⁷⁶ r 3.7.(2).

¹¹⁷⁷ r 3.7.(4) states:

Delivery of Paper Bill of Lading. The Carrier shall deliver that paper bill of lading in accordance with the instructions of the person currently entitled to hold it, being:

- (a) the current Pledgee Holder; or if none
- (b) the current Holder-to-order or Bearer Holder; or if none
- (c) the current Holder.

Rule 3.7. (4) states: End of Bolero Bill of Lading. A User that has knowledge or notice that the switch to paper has been demanded shall give no further Title Registry Instructions in relation to the Bolero Bill of Lading. The Bolero Bill of Lading shall cease to be effective as from the moment of the issue of the paper bill of lading by the Carrier.

2.5 essDOCS

To start the discussion with the *principle of functional equivalence*, essDOCS DSUA equalizes paper transport documents and electronic ones as it defines the ‘Electronic Record’ as ‘an electronic Transport Document issued via the ESS-Databridge. An Electronic Record is a type of eDoc and can be Negotiable or Non-Negotiable’.¹¹⁷⁸ DSUA also equalize manual signatures and electronic ones as it defines the ‘Electronic Signature’ as ‘data attached to or logically associated with an eDoc and executed or adopted by a User Representative or Delegate when Signing such eDoc in order to identify that User Representative or Delegate and to indicate that User Representative’s or Delegate’s authentication of the eDoc’.¹¹⁷⁹ The “Transport Document” means a document issued by or on behalf of a Carrier which contains or evidences a Contract of Carriage and which constitutes a receipt for goods loaded or received for shipment pursuant to that Contract of Carriage’.¹¹⁸⁰ DSUA, like Bolero Rulebook, ‘is a multiparty contract that binds its members into recognizing the DDG’s - DOCS Databridge Development Group (DDG) - electronic communications with the same force of law as paper documents’.¹¹⁸¹

The ‘Electronic Records may be Negotiable or Nonnegotiable; and the Negotiable variety may be "To Order" or "Bearer" Records, all of which terms are given autonomous definitions which nevertheless mirror the equivalent concepts in the "paper world”’.¹¹⁸² DSUA defines ‘Negotiable’ as:

"Negotiable" means an Electronic Record which either does not identify the Consignee or which indicates, by wording such as ‘to order’ or ‘negotiable’ or other appropriate wording recognized as having the same effect by the law governing that electronic Record, that the goods have been consigned to the order of the Shipper or Holder, and which is not explicitly marked as ‘non-negotiable’ or ‘not negotiable’.¹¹⁸³

The ‘Non-Negotiable’ is defined under DSUA as ‘an electronic Record which is either marked as "non-negotiable" or "not negotiable", or which designates a Consignee to take delivery of the goods without adding the words "to order" or words of similar effect, or which otherwise

¹¹⁷⁸ See the discussion in Harling (n 978).

¹¹⁷⁹ *ibid*

¹¹⁸⁰ *ibid*.

¹¹⁸¹ David A Bury, ‘Electronic Bills of Lading: A Never-Ending Story?’ (2016) 41(1) *Tulane Maritime Law Journal* 197-238.

¹¹⁸² Harling (n 978).

¹¹⁸³ See the discussion in Harling (n 978).

does not qualify as a Negotiable Electronic Record'. This is similar to the case of negotiable paper bills of lading where wording such as 'to order', 'negotiable' or other terms indicating the negotiability is required, as seen in Chapter Two. Likewise, in the case of non-negotiable paper bill of lading, wording such as 'non-negotiable', 'not negotiable' or 'to order', is required to indicate the non-negotiability of the paper bill. As regards the transferability of an essDOCS bill of lading as a document of title, Zhao argues that 'the ESS-Databridge replaces the physical transfer of original paper documents by limiting access to ESS original eDocs to the appropriate document owner'.¹¹⁸⁴ Zhao adds that 'only one party has access to the originals at any time and control is passed by endorsing and sending the electronic original to the next user in the chain'.¹¹⁸⁵ This argument may mean that the essDOCS users have control in the same way as they have control over paper originals. This control is observed practically in the interview with essDOCS where it is found that an original ESS bill of lading must be held by only one holder at only one time.¹¹⁸⁶ In other words, the essDOCS system ensures that only one party has control over the original essDOCS bill of lading.¹¹⁸⁷ The term 'Holder' under DSUA 'means, in relation to an eDoc, the User with the Right of Control over such eDoc from time to time'. The holder exercises four specific rights according to the definition of 'Right of Control' under DSUA as follows:

Right of Control: T&C 6.3: The Right of Control means, with respect to an eDoc, having the right to: (i) Transfer an eDoc or Document Set within the ESS-Databridge to another User who thereby becomes the new Holder of such eDoc or Document Set; (ii) request the Issuer or Signatory to amend or Convert to Paper such eDoc; (iii) in the case of an Electronic Record, Produce such Electronic Record; and (iv) give any instructions or make any demand that, in the case of an Electronic Record, the lawful holder of an equivalent paper Transport Document could give or make or, in the case of a Peripheral eDoc, that the lawful holder of an equivalent paper document could give or make. Subject to the following provisions of this T&C 6.3, the Holder of an eDoc shall have the Right of Control of that eDoc. Notwithstanding anything herein to the contrary, in the event that, by reason of mistake or otherwise, an eDoc is Transferred by a User (the 'Sender') to a User who is not intended, or not lawfully entitled, to receive it (the 'Receiving User'), such Receiving User shall not be entitled to exercise the Right of Control, but shall be subject to a duty to Return the eDoc to the Sender in accordance with the terms of T&C 6.4 (Mistaken Delivery Procedure).¹¹⁸⁸

¹¹⁸⁴ Zhao (n 503).

¹¹⁸⁵ *ibid.*

¹¹⁸⁶ Interviews (n 15).

¹¹⁸⁷ *ibid.*

¹¹⁸⁸ See the discussion in Harling (n 978).

DSUA states that the transfer of an essDOCS bill of lading must be effected when the holder passes the right of control to another holder:

Transfer of an eDoc (6.5): Transfer of an eDoc shall be effected when a User irrevocably elects to pass the Right of Control over such eDoc to another User. References to ‘Transfer’ of an eDoc shall be construed accordingly. For the avoidance of doubt, an Electronic Record may continue to be Transferred after the goods to which it relates have been discharged and/or delivered, until the Electronic Record is Produced.¹¹⁸⁹

DSUA provides that once the bill is transferred, the transferor will lose the right of control in accordance with rule 6.6:

Transfer of the Right of Control (6.6): The Transfer of an eDoc shall, subject to T&C 6.4 (Mistaken Delivery Procedure), transfer the Right of Control from the previous Holder to the new Holder, and ‘Transfer’ of the Right of Control shall be construed accordingly. Immediately upon Transfer of the eDoc to a new Holder, the Transferor loses the Right of Control.¹¹⁹⁰

The difference in the applications used by both Bolero’s Rulebook and those used in essDOCS DSUA in respect of the transferability of electronic bill of lading as a document of title may be observed. Bolero Rulebook uses the term the Title Registry, which deals with the holdership, transfer, status and audit of a Bolero bill of lading, whereas in the case of the essDOCS DSUA, this application is the ‘Electronic Record’. This electronic record seems to be the essDOCS bill of lading itself because the definition of the electronic record, referred to earlier, provides that ‘[a]n Electronic Record is a type of eDoc and can be Negotiable or Non-Negotiable.’¹¹⁹¹ This negotiability, referred to in this definition, or transferability is a unique feature under the third function of the bill of lading as a document of title, as discussed in the previous discussion. This position under the essDOCS DSUA seems similar to that under the CMI Rules where it is observed that the receipt message is the electronic bill of lading itself because it evidences the receipt of goods, contains the contract of carriage information such description of goods and the private key which concerns the transferability feature, as provided in rule 4 of CMI Rules.

¹¹⁸⁹ *ibid.*

¹¹⁹⁰ *ibid.*

¹¹⁹¹ Harling (n 978).

As regards the concepts of ‘novation’ and ‘attornment’ under the essDOCS system, Gaskell argues that that the effectiveness of an essDOCS bill of lading, like a Bolero bill, ‘relies on attornment and novation as between the parties, in particular to transfer title’.¹¹⁹² Harling notes that ‘the terms on which the various novations occur are elaborated in the DSUA using concepts and terminology drawn from COGSA 92 so as to create a precise functional equivalence’.¹¹⁹³ Harling describes these two concepts by saying that ‘[n]ovation, which is used to transfer contractual rights and liabilities’ and ‘[a]ttornment, which is used to transfer constructive possession’.¹¹⁹⁴ DSUA provides for all rights of suit that the holder will acquire upon such transfer of the right of control in accordance to rule 8.3.1. The new holder will acquire by virtue of ‘... novation all rights of suit on the terms of the Contract of Carriage contained in or evidenced by the Electronic Record ...’.¹¹⁹⁵ Like Bolero Rulebook, essDOCS DSUA reserves the right of the new holder to reject the transfer of the essDOCS bill of lading (eDoc) in accordance with rules 7.9.1 and 7.9.2 provide:

7.9.1 For the avoidance of doubt, nothing contained in this Agreement shall prejudice, enlarge or reduce the right which a new Holder of an eDoc may have, under any other contract, including but not limited to any contract of sale or letter of credit, and/or as a matter of law, to reject an eDoc.

7.9.2 In the event of the new Holder having such right to reject an eDoc, the new Holder may exercise that right by Transferring the eDoc back to the User from whom he received it.¹¹⁹⁶

As regards the acquisition of contractual liabilities, based on the concept of novation, the new holder must be subject to the same liabilities under the contract of carriage in accordance to rule 8.5.1 of DSUA:

Where T&C 8.3 (*Rights under an Electronic Record*) operates in relation to any Electronic Record and the new Holder:

(a) Produces the Electronic Record to the Carrier or the Carrier’s Delegate and/or takes and/or demands delivery from the Carrier of any of the goods to which the Electronic Record relates; or

¹¹⁹² Gaskell (n 608).

¹¹⁹³ Harling (n 978).

¹¹⁹⁴ *ibid.*

¹¹⁹⁵ r 8.3.1.(a) of DSUA.

¹¹⁹⁶ See the discussion in Harling (n 978).

(b) makes a claim under the Contract of Carriage contained in or evidenced by the Electronic Record against the Carrier in respect of any of those goods, or
(c) is a person who, at a time before becoming the Holder of that Electronic Record, took or demanded delivery from the Carrier of any of those goods,
the new Holder shall thereupon be deemed to consent to become, and by novation shall become, subject to the same liabilities under the Contract of Carriage contained in or evidenced by the Electronic Record as if such new Holder had been an original party to that Contract of Carriage.¹¹⁹⁷

Like the CMI Rules and Bolero Rulebook, essDOCS DSUA also reserves the right of the new holder to switch to paper bill of lading, as set out in rule 8.5.2. Similarly, in a case where the transferee is not a party to the essDOCS DSUA, a paper bill of lading will be issued for that transferee.¹¹⁹⁸ With regards to the concept of attornment and the transfer of constructive possession, the new holder acquires the constructive possession of the goods described in the electronic record. When an essDOCS user becomes a holder, essDOCS sends ‘notice (the "Attornment") to the new holder and a copy to the previous holder acknowledging that the carrier ‘holds’ the goods for the new holder.¹¹⁹⁹ Consequently, the new holder will ‘acquire constructive possession of the goods described in the Electronic Record’.¹²⁰⁰

As regards the delivery of the goods, the carrier only delivers the goods against production of the electronic record to one of specific persons,¹²⁰¹ which are: ‘the Consignee Holder, if one is identified in a Non-Negotiable Electronic Record’,¹²⁰² ‘the To Order Holder or such other person as the To Order Holder may designate through the ESS-Databridge™ when the Negotiable Electronic Record is Produced’¹²⁰³ or ‘the Bearer Holder identified in the ESS-Databridge™, if a Bearer Record’.¹²⁰⁴

3 English law

Electronic bills of lading perform the first two functions of paper bills, as a receipt for the goods and as evidencing or containing the contract of carriage under English law, as discussed

¹¹⁹⁷ *ibid.*

¹¹⁹⁸ Interviews (n 15).

¹¹⁹⁹ r 8.4.1 of DSUA. See the discussion in Harling (n 978).

¹²⁰⁰ r 8.4.2.

¹²⁰¹ r 8.2.

¹²⁰² r 8.2.1.

¹²⁰³ r 8.2.2.

¹²⁰⁴ r 8.2.3.

previously in Chapters Four and Five. However, for the document of title function, the case is different under English law, under both the case law and the statutes. As for the case law, there have been no specific cases regarding electronic bills of lading, as for Bolero bill of lading, which are already on the market, Aikens et al. say:

No cases have come before the English courts in which the Bolero mechanism has been scrutinised or challenged. The scheme appears to be a commercially effective and legally valid one for replication of the functions of traditional bills as between the subscribers to it. The limits to its use appear to have been more for commercial than legal reasons.¹²⁰⁵

Aikens et al. explain that 'the cases concerned with electronic communication have principally been concerned with its efficacy for the purposes of giving notice, as in *The Pamela*,¹²⁰⁶ and *Bernuth Lines v High Seas Shipping*.'¹²⁰⁷ Moreover, for the contract forms of Bolero Rulebook and essDOCS DSUA wherein the English law is the default law, Tan et al. argue that:

Although there have been several cases and case precedents involving electronic documents, we are not aware of any past or current cargo claims or disputes involving eBLs. ESS, Bolero and e-title have also confirmed that they are not aware of any cases in any jurisdiction questioning the validity of an eBL.¹²⁰⁸

Furthermore, there are cases that may recognize the functions of electronic bill of lading as a receipt for the goods and as evidencing or containing the contract of carriage, as seen previously, such as the cases on evidence in electronic forms,¹²⁰⁹ 'other means conveying information than written documents',¹²¹⁰ electronic signatures¹²¹¹ and electronically stored information.¹²¹² However, there might be a case that appears not to recognize electronic alternatives: *Glencore International AG*.¹²¹³ This case, for some scholars, 'indicates that courts have trended towards suspicion of electronic formats, often not treating them as "legally equivalent" to their paper counterparts'.¹²¹⁴ This case was first decided by the High Court of

¹²⁰⁵ Aikens, Lord and Bools (n 40) 44-50.

¹²⁰⁶ [1995] 2 Lloyd's Rep 249. See Aikens, Lord and Bools (n 40) 19.

¹²⁰⁷ [2005] EWHC 3020 (Comm). See Aikens, Lord and Bools (n 40) 19.

¹²⁰⁸ Tan, Starr and Wu (n 31).

¹²⁰⁹ As in *Marlton* (n 943), and in *Hill* (n 944).

¹²¹⁰ Faber (n 450), as in *Derby* (n 1000).

¹²¹¹ As in *Ex p Dryden* (n 953), *Goodman* (n 954), *British Estate Investment Soc. Ltd* (n 955), *Brydges* (n 956) and *Newborne* (n 957).

¹²¹² As in *Victor Chandler International* (n 1007).

¹²¹³ *Glencore International AG* (n 791).

¹²¹⁴ Bury (n 1181).

Justice, Queen's Bench Division, Commercial Court on 10 July 2015.¹²¹⁵ The claimant was the shipper, 'Glencore International AG (Glencore), a multinational commodity trading and mining company'.¹²¹⁶ The defendant was the carrier, MSC Mediterranean Shipping Company SA (MSC).¹²¹⁷ The claimant 'shipped three containers of cobalt briquettes from Fremantle to Antwerp under a bill of lading on May 21, 2012'.¹²¹⁸ The bill of lading 'named Glencore as the shipper and C Steinweg NV (Steinweg), Glencore's agents at Antwerp, as notify party'.¹²¹⁹ The bill of lading stated that it had to 'be surrendered by the Merchant to the Carrier ... in exchange for the Goods or a Delivery Order'.¹²²⁰ There was also an express choice of English law as applicable law to the bill of lading and the jurisdiction of the English High Court.¹²²¹ 'At Antwerp, the cargo was discharged, but two of the three containers were misappropriated'.¹²²² 'Glencore claimed damages against MSC for breach of contract, bailment and conversion'.¹²²³

The port of Antwerp used 'an electronic release system (ERS)'.¹²²⁴ The bill of lading was a negotiable bill marked 'To order' and provided: 'When the cargo arrived at Antwerp it was handled under an ERS used for containerised cargo.'¹²²⁵ 'Under the ERS carriers did not issue paper delivery orders or release notes against bills of lading, but instead provided computer-generated electronic numbers (PIN codes) which holders of bills presented to the terminal and so took delivery of their goods'.¹²²⁶ In other words, according to Skopec, ERS is 'a type of EDI, for containerized cargo release at port terminals'.¹²²⁷ It 'provides computer-generated electronic numbers, or PIN codes, which are emailed to agents to collect their shippers' containers'.¹²²⁸ ERS 'was created to replace the need for the carrier to issue paper delivery orders or to release cargo in return for bills'.¹²²⁹ MSC's agents emailed Steinweg a 'release note' for the three containers, with a PIN code for each of them.¹²³⁰ But Steinweg found that

¹²¹⁵ (2005) EWHC 3020 (Comm).

¹²¹⁶ Allison Skopec, 'PIN Chagrin: The Glencore Heist and EDI Through the Lens of Delivery Orders' (2017) 42(1) *Tulane Maritime Law Journal* 221-246.

¹²¹⁷ *Glencore International* (n 791).

¹²¹⁸ Skopec (n 1216).

¹²¹⁹ *ibid.*

¹²²⁰ *ibid.*

¹²²¹ *Glencore International* (n 791).

¹²²² *ibid.*

¹²²³ *ibid.*

¹²²⁴ Skopec (n 1216).

¹²²⁵ *Glencore International* (n 791).

¹²²⁶ *ibid.*

¹²²⁷ Skopec (n 1216).

¹²²⁸ *ibid.*

¹²²⁹ Skopec (n 1216).

¹²³⁰ *Glencore International* (n 791).

two of the containers had already been collected.¹²³¹ '[T]he PIN code had been compromised by an unknown third party'.¹²³² Therefore, 'Glencore brought an action against MSC, claiming damages for breach of contract, bailment and conversion'.¹²³³ The claimant 'submitted that the MSC - the defendant - should have delivered the cargo only on presentation of the paper bill of lading or a Delivery Order in exchange for it'.¹²³⁴ The defendant 'contended that it handled the cargo in accordance with the express terms of the paper bill of lading, or an implied term, based on the previous course of dealings, that permitted use of the ERS'.¹²³⁵ It 'also relied, inter alia, on an estoppel argument'.¹²³⁶ Therefore, the legal question before the Commercial Court was 'whether the ERS constituted a legal equivalent to a delivery order'.¹²³⁷ The court held that the defendant 'was in breach of contract and bailment, and gave judgment in favour of Glencore'.¹²³⁸ MSC appealed the decision and the Court of Appeal dismissed the appeal and held, inter alia, that '[t]he provision of the PIN codes did not amount to delivery of possession of the goods'.¹²³⁹ Therefore, the Court of Appeal confirmed the decision of the Commercial Court. Goldby comments on the decision that it 'demonstrates that in the absence of express agreement, the question of whether an electronic alternative is equivalent to paper document (in this case a delivery order) can be very difficult (and costly) to determine'.¹²⁴⁰

However, this research may argue that this case does not deal with electronic bills of lading and it concerns a delivery order and ERS that faced a cyber-attack for the lack of security protection. Therefore, if ERS system was secure, the case might have had a different outcome. The case also does not challenge any electronic bills of lading service providers like Bolero, essDOCS or any others. Moreover, there was no express agreement between the parties to use electronic alternatives of paper documents as stipulated in the multilateral agreements adopted by electronic bills of lading providers, such Bolero or essDOCS.

As regards the UK statutes, it seems safe to argue that there are two different points of view as to whether an electronic bill of lading or any electronic document can be a document of title.

¹²³¹ *ibid.*

¹²³² Skopec (n 1216).

¹²³³ *Glencore International* (n 791).

¹²³⁴ *ibid.*

¹²³⁵ *ibid.*

¹²³⁶ *ibid.*

¹²³⁷ Skopec (n 1216).

¹²³⁸ *Glencore International* (n 791).

¹²³⁹ [2017] EWCA Civ 365.

¹²⁴⁰ Goldby (n 479) 147.

The first is that there are some provisions *may* apply to electronic bills of lading and their functions, including the electronic message as document. The second is that there are some other provisions *may* still follow the traditional common law and statutory definitions, as discussed previously.¹²⁴¹ Accordingly, the statutory provisions that *may* apply to an electronic bill of lading as a document of title can be summarized as follows:

- a. Section 13 of Civil Evidence Act 1995 defines a ‘document’ as ‘anything in which information of any description is recorded.’
- b. Schedule 1 of Interpretation Act 1978 defines the term ‘writing’, where the electronic messages or document ‘may’ be included, stating that “Writing” includes typing, printing, lithography, photography and other modes of representing or reproducing words in a visible form, and expressions referring to writing are construed accordingly.’ However, as seen previously, there are differences on the interpretation of this definition as to whether it includes electronic documents.¹²⁴²
- c. Section 10(1)(c) of Civil Evidence Act 1968 (dealing with the admissibility of hearsay evidence) states that ‘document’ includes ‘any disc, tape, sound track or other device in which sound or other data (not being visual images) are embodied so as to be capable (with or without the aid of some other equipment) of being reproduced therefrom’.
- d. The Electronic Identification and Trust Services for Electronic Transactions Regulation 2016, which incorporated the EU Electronic Identification and Trust Services Regulation,¹²⁴³ provides, inter alia, for the legal value of Electronic documents and related certificates in Schedule 3(1) 7C on Electronic documents and related certificates states:

(1) In any legal proceedings an electronic document shall be admissible in evidence in relation to any question as to the authenticity of an electronic transaction.

(2) For the purposes of this section an electronic document is anything stored in electronic form, including text or sound, and visual or audiovisual recording.

¹²⁴¹ Aikens, Lord and Bools (n 40) 44-50. See section 4 ‘English law approach: a general view on the position of English law in relation to the use of electronic bills of lading’ in Chapter Three.

¹²⁴² Baughen (n 191) 25. See section 4 ‘English law approach: a general view on the position of English law in relation to the use of electronic bills of lading’ in Chapter Three.

¹²⁴³ Regulation 910/2014 (n 740). See Stephen Tricks and Robert Parson, ‘The Legal Status of Electronic Bills of Lading: A report for the International Chamber of Commerce (ICC)’, Appendix 1: England, <https://cdn.iccwbo.org/content/uploads/sites/3/2018/10/the-legal-status-of-e-bills-of-lading-oct2018.pdf>

- e. Section 7 of Electronic Communication Act 2000 recognizes electronic signatures as admissible evidence in respect of authenticity of the data or communication concerned.
- f. The UK incorporation of the EU Directive on electronic commerce into domestic law through the adoption of the Electronic Commerce (EC Directive) Regulations 2002.
- g. The UK incorporation of the EU Directive on electronic signature through the adoption of the Electronic Signatures Regulations 2002.

As for the statutory provisions that *may not* apply to electronic bills of lading and their functions, especially as a document of title, they can be summarized as follows:

- a. Subsection 1(5) and (6) of COGSA 1992 authorizes the Secretary of State to issue regulations to make provision extending the application of COGSA 1992 'to cases where "a telecommunication system or any other information technology" is used for effecting transactions involving bills of lading'.¹²⁴⁴ Yet, this provision may reflect an implied permission to use electronic bills of lading, as referred to previously.¹²⁴⁵ Therefore, it may be possible to place this provision within the previous list of statutory provisions that *may* apply to an electronic bill of lading as a document of title. But, this research places this provision under the second list of statutory provisions that *may not* apply to electronic bills of lading because the use of a new type or non-traditional document such as electronic bills of lading specially as document of title needs a clear and specific provision.
- b. In connection to the authorization given the Secretary of State under subsection 1(5) and (6) of COGSA 1992, as mentioned in Chapter Three, Baughen agrees that 'no equivalent power is contained in the Carriage of Goods by Sea Act 1971 allowing for a similar extension of the provisions of the Hague-Visby Rules'.¹²⁴⁶
- c. Contract (Rights of Third Parties) Act 1999 does not apply to carriage contracts of goods by sea 'contained in or evidenced by a bill of lading, sea waybill or a corresponding electronic transaction'.¹²⁴⁷ Subsections 6(6) and (7) of the Act provides for the 'Exceptions' from its scope of applications:

¹²⁴⁴ Aikens, Lord and Bools (n 40) 44-50. See section 4 'English law approach: a general view on the position of English law in relation to the use of electronic bills of lading' in Chapter Three.

¹²⁴⁵ Aikens, Lord and Bools (n 40) 36.

¹²⁴⁶ Baughen (n 191) 25. See section 4 'English law approach: a general view on the position of English law in relation to the use of electronic bills of lading' in Chapter Three.

¹²⁴⁷ Baughen (n 191) 25.

- (6) In subsection (5) ‘contract for the carriage of goods by sea’ means a contract of carriage—
- (a) contained in or evidenced by a bill of lading, sea waybill or a corresponding electronic transaction, or
 - (b) under or for the purposes of which there is given an undertaking which is contained in a ship’s delivery order or a corresponding electronic transaction.
- (7) For the purposes of subsection (6)—
- (a) ‘bill of lading’, ‘sea waybill’ and ‘ship’s delivery order’ have the same meaning as in the Carriage of Goods by Sea Act 1992, and
 - (b) a corresponding electronic transaction is a transaction within section 1(5) of that Act which corresponds to the issue, indorsement, delivery or transfer of a bill of lading, sea waybill or ship’s delivery order.

d. The definition of the term ‘writing’, in Schedule 1 of Interpretation Act 1978, does not apply to ‘an electronic message’.¹²⁴⁸

These different arguments may mean that there are no clear or specific provisions under present English law to recognize electronic bills of lading, particularly as documents of title. That is why, as mentioned previously, Goldby argues that the ‘electronic bill of lading systems designed to operate under English law must be based on multipartite agreements that effect the desired transfers of right through the concepts of novation and attornment’.¹²⁴⁹ Examples of ‘multipartite agreements’ are those under the contract forms of KTNET, Bolero Rulebook, essDOCS, E-Title, edoxOnline and Wave, as discussed previously. It appears that under some laws where electronic bills of lading are clearly recognized, for example Australian law, as mentioned in Chapter Three, there is no need to rely on ‘the principles of novation and attornment to transfer title under a BBL’.¹²⁵⁰ Therefore, the concepts of novation and attornment are applied under the contract forms which are governed by English law that lacks a clear recognition of electronic bills of lading as equivalents to paper bills. Novation is ‘a process whereby the old contract (between the carrier and the previous "holder") is terminated and a new one, on the same terms, comes into existence between the carrier and the new holder’.¹²⁵¹ In other words, Clare describes novation in the Bolero system, for example, as ‘the mechanism where the Bolero consignee acquires rights against the carrier: the carriers’ contract with the shipper is (not transferred but) extinguished and a new contract on the same terms is

¹²⁴⁸ *ibid.*

¹²⁴⁹ Goldby (n 799).

¹²⁵⁰ Laryea (n 833).

¹²⁵¹ Goldby (n 799).

created between the carrier and the consignee'.¹²⁵² As far as the concept of attornment is concerned, Reynolds describes it, saying that 'an attornment in respect of goods occurs where the possessor of goods, whether himself the transferor or the bailee of the transferor, acknowledges that he holds, and possesses, for another'.¹²⁵³ In other words, 'attornment is an act by a bailee in possession of the goods on behalf of another party. Attornment notionally transfers possession in the goods to the other person (constructive possession) and can thus be a delivery of goods sold'.¹²⁵⁴ Attornment, 'has its basis in medieval land law and consists of an undertaking by the bailee of the goods (the carrier) to the new "holder" that he will deliver the goods to him, thus giving the latter constructive possession of the goods'.¹²⁵⁵ In this connection, Bolero for example, according to Clarke, 'works by attornment and novation'.¹²⁵⁶ Clarke compares attornment in the case of paper bills of lading and in Bolero bills of lading:

In the paper world the 'key' is the negotiable bill of lading which the carrier has created. In the electronic world, the 'key' is the dominion [of the shipper] over the unique electronic message that the carrier has created. By advising the party with dominion over the unique electronic message that the carrier holds, the goods to that party's order, the carrier is making what is characterized under English law as attornment.¹²⁵⁷

4 Illustration of the legal mechanism of Issuing and transferring an electronic bill of lading until delivery of the goods

After the whole discussions on the three functions of electronic bills of lading under the international approach and English law approach, this section tries to illustrate the legal mechanism used in practice to issue and transfer an electronic bill of lading until delivery of the goods based on two graphs. Graph no. 1 embodies the issuance of electronic bills of lading. Graph no. 2 illustrates the transfer of electronic bills of lading until the goods are delivered to the consignee.

As graph no. 1 shows, the parties to the contract of carriage, the carrier and shipper that subscribe to use, for example, Bolero or essDOCS, as a third party to provide electronic bills

¹²⁵² Clarke (n 307).

¹²⁵³ FMB Reynolds, 'Attornment to Agent of Undisclosed Principal' (1984) 4(3) Oxford Journal of Legal Studies 434-437.

¹²⁵⁴ McGowan (n 286).

¹²⁵⁵ Goldby (n 799).

¹²⁵⁶ Clarke (n 307).

¹²⁵⁷ *ibid.*

of lading services. This subscription means that the parties to the contract of carriage agree to use electronic alternatives, or specifically electronic bills of lading. This agreement to use an electronic bill of lading may meet the ‘consent’ requirement under articles 3, 8(a) and 35 of Rotterdam Rules and article 7(3) of MLETR. Moreover, such subscription means that those parties or users agree to be bound by the contract forms, that is, Bolero Rulebook and essDOCS DSUA. By these contracts, the parties agree to deal with the electronic alternatives as functional equivalents to paper documents, and not to challenge the legal value of these electronic alternatives before courts. Bolero Rulebook and essDOCS DSUA are governed by English law, as discussed previously. The service providers of electronic bills of lading facilitates the process of issuance and transfer of these bills until delivery of the goods. The communications needed to carry out transactions between the parties to the contract of carriage, whether between the carrier and the shipper or between the carrier and each holder, are carried out via electronic alternatives provided at the provider’s platform, such as electronic messages, signatures, notifications or confirmations. For example, Bolero Rulebook provides for the use of ‘Digital Signature’,¹²⁵⁸ and essDOCS DSUA provides for the use of ‘Electronic Signature, as functional alternatives to handwritings.¹²⁵⁹

As graph no. 1 shows, the carrier via the platform services of the third parties, Bolero or essDOCS, issues an electronic bill of lading to the shipper based on the latter’s request. This request reflects the above-mentioned requirement of consent under the Rotterdam Rules and MLETR. The issuance of electronic bill of lading may comply with article 35 of Rotterdam Rules that deals with the issuance of the transport document or the electronic transport record. Such issuance of an electronic bill of lading means that the carrier receives the goods from the shipper in accordance with rule 4(a) of CMI Rules that deals with the form and content of the receipt message. This issuance process of electronic bill of lading may replicate the issuance process of paper bill of lading provided under article 3(3) of Hague-Visby Rules, which are applicable under English law, and articles 1(7) and 14(1) of Hamburg Rules that deal with the issuance of paper bills of lading. Graph no. 1 shows that the carrier issues the electronic bill of lading via two ways: one is partially electronic and the other is competently electronic, as discussed previously.¹²⁶⁰ The choice between these two ways may also rely on agreement between the carrier and shipper.

¹²⁵⁸ See subsection 2.4 ‘Bolero’ in Chapter Six.

¹²⁵⁹ See subsection 2.5 ‘essDOCS’ in Chapter Six.

¹²⁶⁰ See subsections 2.3 ‘Bolero’ and 2.4 ‘essDOCS’ in Chapter Four.

At issuance, the electronic bill of lading is signed electronically by the carrier or its agent, that is, the shipmaster. The electronic signature services are provided on the provider's platform. This electronic signature may 'identify the signatory in relation to the electronic transport record, (or the electronic bill of lading), and indicate the carrier's authorization of the electronic transport record' in accordance with article 38 of Rotterdam Rules. With such issuance and signature, the electronic bill of lading may replicate the first function of paper bill of lading as a receipt for the goods in accordance with article 1(8)(a) of Rotterdam Rules. This performance as a receipt seems possible under English law because English courts accept the electronic evidence and there is no clear provision under relevant UK statutes contesting the evidentiary value of electronic means.¹²⁶¹

Graph no. 1 also shows how the third function of paper bill of lading as evidencing or containing the contract of carriage can be dematerialized by the electronic bill of lading. In the issuance process, the carrier inserts its terms and conditions of the contract of carriage in the electronic bill of lading. These terms and conditions may be modified, changed or negotiated between the carrier and shipper based on agreement and then be included in the electronic bill of lading. This inclusion may comply with article 1(18)(b) of Rotterdam Rules that provides for the second function of electronic transport record as evidencing or containing the contract of carriage. These terms and conditions are part of other information related to the contract of carriage to be included in the electronic bill of lading. This information is referred to as 'contract particulars' that include, according to article 1(23) of Rotterdam Rules 'any information relating to the contract of carriage or to the goods (including terms, notations, signatures and endorsements) that is in a transport document or an electronic transport record'. These contract particulars cover information that describes the goods as a receipt for the goods and evidences or contains the contract of carriage. The inclusion of these terms and conditions along with other information or contract particulars in the electronic bill of lading may also comply with rule 4(b) of CMI Rules. Moreover, these terms and conditions and other contract particulars included in an electronic bill of lading have the same legal value and effect as those included in a paper bill of lading in writing based on the *principle of functional equivalence* provided in articles 8 and 3 of Rotterdam Rules. This inclusion to evidence or contain the contract of carriage by electronic bills of lading can be accepted under the English law as in the case of the receipt function since there are cases that already accepted the electronic

¹²⁶¹ See section 2.5 'English law' in Chapter Four.

evidence and there is no clear provision questioning the validity of that electronic evidence under relevant UK statutes.¹²⁶² Consequently, as graph no. 1 illustrates, electronic bills of lading can perform the first and second functions of paper bills of lading as receipts for the goods and evidencing or containing the contract of carriage respectively under international approach and English law approach.

Graph no. 2 illustrates the transfer process of an electronic bill of lading. The carrier sends the shipper a 'private key', as used by Bolero and essDOCS and under rules 4(b)(v) and 8 of CMI Rules 'to determine the rightful holder of the electronic bill of lading'.¹²⁶³ Therefore, when the shipper confirms receipt of the private key, it becomes the holder of the electronic bill of lading. Hence, the shipper has an 'exclusive control' over the electronic bill of lading or a negotiable electronic transport record according to articles 1(21), 1(22) and 8(b) of Rotterdam Rules. The electronic bill of lading must be 'subject to exclusive control from its creation until it ceases to have effect or validity'.¹²⁶⁴ The private key is deemed to enable the exclusive control over an electronic bill of lading as a functional equivalent that replicates the physical possession and holdership of a paper bill of lading. It also maintains the security of transactions. This functional equivalence of exclusive control is established under articles 8(b) of Rotterdam Rules that '[t]he issuance, exclusive control, or transfer of an electronic transport record has the same effect as the issuance, possession, or transfer of a transport document'. Similarly, article 11 of MLETR provides for the conditions of equalization between the possession and transfer of a transferable document or instrument and an electronic transferable record. More specifically article 11(1)(a) of MLETR provides for an exclusive control as one of the requirements to possess an electronic transferable record '[t]o establish exclusive control of that electronic transferable record by a person'.

Being a holder of the electronic bill of lading via possessing the private key, the shipper is entitled, inter alia, to transfer the electronic bill to another holder and to claim delivery of the goods. The transfer of electronic bill of lading is processed when the shipper (Holder 1) transfers the right of exclusive control to another person (Holder 2). This transfer of right of exclusive control is provided for under article 1(22) of Rotterdam Rules that '[t]he "transfer" of a negotiable electronic transport record means the transfer of exclusive control over the record'. The shipper informs the carrier via the provider platform that it intends to transfer the

¹²⁶² See section 2.5 'English law' in Chapter Five.

¹²⁶³ Goldby (n 26) 178.

¹²⁶⁴ Sturley, Fujita and Ziel (n 80) 55.

electronic bill of lading. Therefore, the carrier cancels the shipper' private key and issues a new one to the person whom the shipper designates. By possessing the new private key, this person, that is, Holder 2, becomes the holder of the electronic bill of lading. Consequently, Holder 2 has the exclusive control over the electronic bill. By virtue of such transfer, the rights under contract of carriage, evidenced or contained in the electronic bill of lading, are novated from the shipper to Holder 2. This novation terminates the previous or 'old contract' of carriage of goods 'between the carrier' and the shipper and creates a new contract between the same carrier and Holder 2 with 'the same terms' and conditions.¹²⁶⁵ This principle of novation is applied under the contract forms of Bolero Rulebook and essDOCS DSUA as a legal solution to cope with the transfer issue of electronic bills of lading under English law that govern those contracts.¹²⁶⁶ With this novation, Holder 2 acquires the rights of previous contract of carriage, including the transfer right of exclusive control over the electronic bill of lading.¹²⁶⁷

Therefore, Holder 2 can transfer the electronic bill of lading by transferring the right of exclusive control to a new holder, that is, Holder 3, as depicted in graph no. 2. As in the case with the shipper in the first transfer, Holder 2 informs the same carrier via the provider's platform that it intends to transfer the electronic bill of lading. Thus, the carrier cancels the private key of Holder 2 and issues a new one to the person whom Holder 2 designates. When this person, Holder 3, possesses that new private key, it becomes a holder of the electronic bill of lading. By virtue of novation principle, the last contract of carriage between Holder 2 and the carrier is terminated and a new contract is created between Holder 3 and the same carrier with the same terms and conditions. This process may continue with a new holder, that is, Holder 4 and so on in a possible chain of transfers. This process is called a 'novation of the contract'.¹²⁶⁸ The chain of novations under Bolero are carried out via the mechanism of Title Registry. Bolero Rulebook provides that this Title Registry is used 'to execute the functions relating to Holdership and transfer of Bolero Bill of Lading'.¹²⁶⁹ This Title Registry records 'the status of current Bolero Bills of Lading'.¹²⁷⁰ It is also 'an audit trail of dealings with such

¹²⁶⁵ Goldby (n 799).

¹²⁶⁶ *ibid.* See section 3 'English law' in Chapter Six.

¹²⁶⁷ See subsections 2.4 'Bolero' and 'essDOCS' in Chapter Six.

¹²⁶⁸ Baughen (n 191) 26.

¹²⁶⁹ r 1.1(53) of Bolero Rulebook. See subsection 2.4 'Bolero' in Chapter Six.

¹²⁷⁰ *ibid.*

Bolero Bills of Lading'.¹²⁷¹ The proposed holder has the option to accept or reject the transfer or novation.¹²⁷²

This agreed upon process of transfer between the parties to the contract of carriage may comply with the requirements provided under article 9 of Rotterdam Rules that deals with the procedures for use of negotiable electronic transport records. Article 9(1)(a) makes the use of negotiable electronic transport records subject to '[t]he method for the issuance and the transfer of that record to an intended holder'. This 'method' requirement is confirmed under article 10(1) of MLETR that requires the establishment of a 'reliable method' to use an electronic transferable record. Article 9(1)(b) of Rotterdam Rules requires 'that the negotiable electronic transport record retains its integrity'. Similarly, article 10(1)(b)(iii) of MLETR provides that the reliable method must 'retain the integrity of that electronic record'. Article 9(1)(c) of Rotterdam Rules requires that there must be a 'manner in which the holder is able to demonstrate that it is the holder'. This requirement can be observed in article 11 of MLETR that links between the reliable method and exclusive requirements control as well as the holder identification. Article 11 of MLETR requires that the reliable method used to possess an electronic transferable record must 'establish exclusive control of that electronic transferable record by a person; and identify that person as the person in control'.

As seen in the transfer process, the private key method plays a noticeable role to meet the above-mentioned requirements. The private key enables the holder of an electronic bill of lading to have an exclusive control over the bill to functionally replicate the physical possession of a paper bill of lading. Therefore, with this private key, the holder can exclusively transfer the electronic bill of lading. Moreover, the agreement between the parties to contract of carriage on a method to use the electronic alternatives plays another role to comply with the said requirements. Goldby, as mentioned previously, argues that 'Article 9 further emphasizes the role of the parties in setting up a system that allows electronic recording and communication of data constituting the transport record'.¹²⁷³ This argument may reflect the role of contract forms to establish the legal basis to use electronic bills of lading based on agreement as in Bolero Rulebook and essDOCS DSUA.

¹²⁷¹ *ibid.*

¹²⁷² Low (n 271). See subsection 2.4 'Bolero' in Chapter Six.

¹²⁷³ Goldby (n 26) 192.

As far as the legal mechanism of delivery is concerned, when the shipper or holder of an electronic bill of lading possesses the private key, as mentioned earlier, it has the right, *inter alia*, to claim delivery from the carrier. In the case of a carrier and shipper, the carrier is obliged to deliver the goods under the contract of carriage evidenced or contained in the electronic bill of lading. Moreover, this obligation is confirmed under article 11 of Rotterdam Rules that '[t]he carrier shall, subject to this Convention and in accordance with the terms of the contract of carriage, carry the goods to the place of destination and deliver them to the consignee'. The place of destination or delivery is also agreed upon between the carrier and shipper according to the contract of carriage. The place of delivery is one of the contract particulars to be included in an electronic bill of lading. This inclusion is provided for as one of the carrier's obligations under article 36(3)(c) of Rotterdam Rules that deals with contract particulars. The consignee, referred to in article 11 of Rotterdam Rules, that receives the goods is designated by the shipper under the contract of carriage and also under article 51 of Rotterdam Rules. In addition to the place of delivery, the date and time are agreed upon under the contract of carriage. Date and time are also part of the contract particulars in accordance to article 36(3)(c) of Rotterdam Rules.

In the case where the electronic bill of lading is transferred under the principle of novation, the goods are delivered under the principle of attornment.¹²⁷⁴ Articles 47 and 51 of Rotterdam Rules deal with the 'constructive or symbolic possession'.¹²⁷⁵ Attornment is used under the *essDOCS DSUA* 'to transfer constructive possession'.¹²⁷⁶ The carrier only delivers the goods against production of the electronic record to one of specific persons.¹²⁷⁷ Bolero Rulebook provides that the 'Holder-to-order or Consignee Holder' is the person who is entitled to the delivery.¹²⁷⁸ It states that the Bolero bill of lading must 'be surrendered either to the User identified as the Surrender Party or, if none, to the Carrier in accordance with the Operational Rules'.¹²⁷⁹ Graph no. 2 shows, under the chain of transfers, there are three consignees, (or more since this graph is just an example), because in each transfer there might be a different designation of the person who receives the goods in accordance with the relevant instructions of the shipper or each holder, Holder 2, 3 or 4.

¹²⁷⁴ See section 3 English law' in Chapter Six.

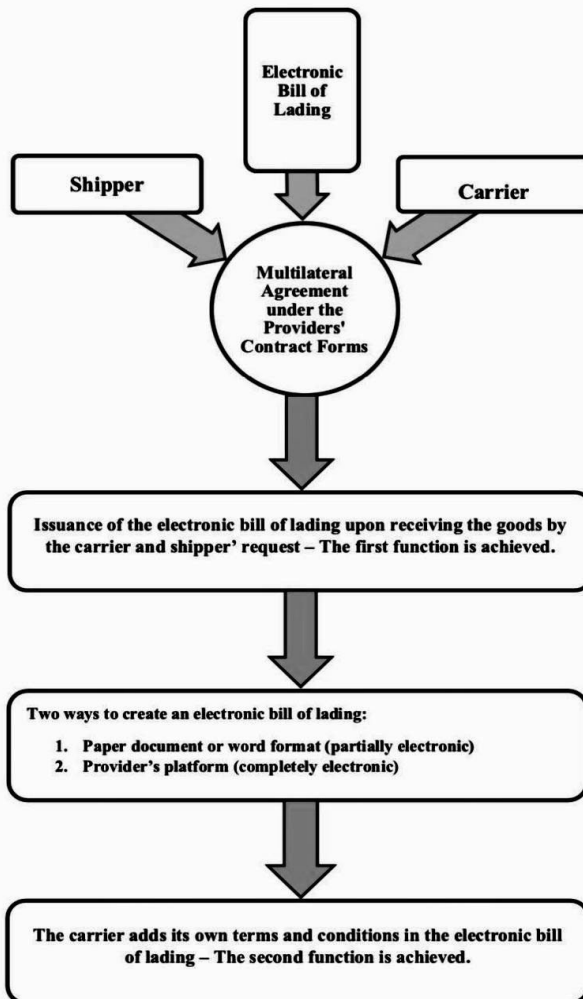
¹²⁷⁵ Goldby (n 26) 191 and Bal (n 604) 189.

¹²⁷⁶ Harling (n 978). See section 2.5 'essDOCS' in Chapter Six.

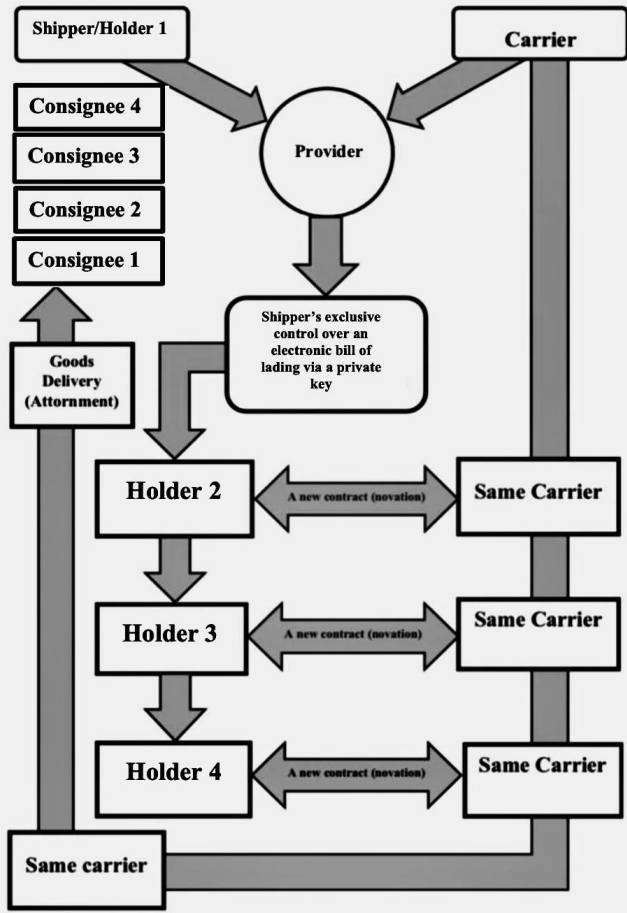
¹²⁷⁷ r 8.2. of DSUA. See section 2.5 'essDOCS' in Chapter Six.

¹²⁷⁸ r 3.6(1) of Bolero Rulebook.

¹²⁷⁹ r 3.6(2).



Graph 1 Issuance of an electronic bill of lading



Graph 2 Transfer of an electronic bill of lading and delivery of goods

5 Conclusion

This chapter concludes that the relevant international convention, model laws and contract forms have much more specific and clearer provisions to recognize electronic bills of lading as documents of title than English law. The Rotterdam Rules, MLETR and CMI Rules provide for electronic bills of lading or electronic transport records as negotiable documents. They adopt the *principle of functional equivalence* and provide for the transfer of those records and relevant transfer procedures. In practice, contract forms that involve Bolero Rulebook and essDOCS DSUA provide for electronic bills of lading as documents of title. Bolero Rulebook and essDOCS DSUA are governed by English based on agreements and the concepts of novation and attornment to cope with the negotiability challenge. This chapter also concludes that there is no clear or specific provision recognizing electronic bills of lading as documents of title under the English law. There are some cases and provisions that seem to support the recognition of the electronic bill of lading as a receipt for the goods or evidencing or containing the contract of carriage, but they may not support the recognition of that bill as a document of title. Therefore, electronic bills of lading are based on agreements and the concepts of novation and attornment, as mentioned earlier.

Chapter Seven: Conflict of Laws in Relation to Electronic Bills of Lading

1 Introduction

Based on the international approach of the research, this chapter starts the discussion with the conflict of laws issue under the Rotterdam Rules. It explores how the Rotterdam Rules provide for the issue in relation to electronic transport records. It also examines the position of MLETR and the CMI Rules. Next, it examines the position under contract forms of Bolero and essDOCS. The English law position is also examined in this chapter to follow the English law approach. The chapter will end up with a conclusion that shows the results reached in terms of the conflict of laws issue under international and English law approaches.

2 International approach

This approach involves the study of conflict of laws under relevant international conventions, model laws and contract forms.

2.1 Rotterdam Rules

Chapter 14 of Rotterdam Rules on jurisdiction is applicable ‘only if States pursuant to article 74 declare to be bound by the provisions of chapter 14 (so-called an "opt-in" option).¹²⁸⁰ Article 74 of Rotterdam Rules provides that ‘[t]he provisions of this chapter shall bind only Contracting States that declare in accordance with article 91 that they will be bound by them’. Berlingieri argues that Chapter 14 of Rotterdam Rules avoids the EU restrictions on its Member States saying that:

Within the European Union the provisions on jurisdiction contained in both the Hamburg Rules and the Rotterdam Rules come under the competence of the Commission and of the Council of Europe and, therefore, individual Member States would be prevented to become individually parties to such Rules. This difficulty has been overcome by the Rotterdam Rules by making the chapter on jurisdiction applicable only if States pursuant to article 74 declare to be bound by the provisions of chapter 14 (so-called ‘opt in’ option).¹²⁸¹

¹²⁸⁰ Berlingieri (n 279).

¹²⁸¹ *ibid.*

In other words, Diamond explains that the ‘EU Member States cannot become parties to an international Convention containing jurisdiction provisions without a reference to, and the agreement of, the Council of the EU’.¹²⁸² Article 91, referred to in article 74 provides for the ‘procedure and effect of declarations’.¹²⁸³ The Rotterdam Rules also provide for the competent court in Chapter 14. The plaintiff is entitled ‘to institute judicial proceedings’ against the carrier in ‘a competent court within the jurisdiction’ in one of specific places,¹²⁸⁴ which are: ‘[t]he domicile of the carrier’,¹²⁸⁵ ‘[t]he place of receipt agreed in the contract of carriage’,¹²⁸⁶ ‘[t]he place of delivery agreed in the contract of carriage’¹²⁸⁷ or ‘[t]he port where the goods are initially loaded on a ship or the port where the goods are finally discharged from a ship ...’¹²⁸⁸ Yet, the competent court can be designated based on agreement between the shipper and carrier in accordance with the relevant rules of the Conventions (the Rotterdam Rules).¹²⁸⁹ Article 67 Rotterdam Rules deals with the ‘choice of court agreement’. The jurisdiction of the court might be ‘exclusive’ and this is ‘only if the parties so agree and the agreement conferring jurisdiction’¹²⁹⁰ in accordance to the following requirements:

- (a) Is contained in a volume contract that clearly states the names and addresses of the parties and either (i) is individually negotiated or (ii) contains a prominent statement that there is an

¹²⁸² Diamond (n 606).

¹²⁸³ art 91 of Rotterdam Rules states:

1. The declarations permitted by articles 74 and 78 may be made at any time. The initial declarations permitted by article 92, paragraph 1, and article 93, paragraph 2, shall be made at the time of signature, ratification, acceptance, approval or accession. No other declaration is permitted under this Convention.
2. Declarations made at the time of signature are subject to confirmation upon ratification, acceptance or approval.
3. Declarations and their confirmations are to be in writing and to be formally notified to the depositary.
4. A declaration takes effect simultaneously with the entry into force of this Convention in respect of the State concerned. However, a declaration of which the depositary receives formal notification after such entry into force takes effect on the first day of the month following the expiration of six months after the date of its receipt by the depositary.
5. Any State that makes a declaration under this Convention may withdraw it at any time by a formal notification in writing addressed to the depositary. The withdrawal of a declaration, or its modification where permitted by this Convention, takes effect on the first day of the month following the expiration of six months after the date of the receipt of the notification by the depositary.

¹²⁸⁴ art 66(a).

¹²⁸⁵ art 66(a)(i).

¹²⁸⁶ art 66(a)(ii).

¹²⁸⁷ art 66(a)(iii)

¹²⁸⁸ art 66(a)(iv).

¹²⁸⁹ art 66(b).

¹²⁹⁰ art 67(1).

exclusive choice of court agreement and specifies the sections of the volume contract containing that agreement; and

(b) Clearly designates the courts of one Contracting State or one or more specific courts of one Contracting State.¹²⁹¹

The Rotterdam Rules also provide for the case where ‘[a] person is not a party to a volume contract’.¹²⁹² In such a case, this person will be ‘bound by an exclusive choice of court agreement’, as discussed earlier.¹²⁹³ However, this case is restricted by the following:

(a) The court is in one of the places designated in article 66, subparagraph (a);

(b) That agreement is contained in the transport document or electronic transport record;

(c) That person is given timely and adequate notice of the court where the action shall be brought and that the jurisdiction of that court is exclusive; and

(d) The law of the court seized recognizes that that person may be bound by the exclusive choice of court agreement.¹²⁹⁴

The above-mentioned term ‘volume contract’ is defined as ‘a contract of carriage that provides for the carriage of a specified quantity of goods in a series of shipments during an agreed period of time. The specification of the quantity may include a minimum, a maximum or a certain range’.¹²⁹⁵ The volume contracts might be viewed as ‘a special category that enjoy conditional immunity from the mandatory regulatory regime otherwise established by the Rules’.¹²⁹⁶ The plaintiff is also entitled under the Rotterdam Rules to bring an action against the ‘maritime performing party’.¹²⁹⁷ The term ‘maritime performing party’ is defined:

‘Maritime performing party’ means a performing party to the extent that it performs or undertakes to perform any of the carrier’s obligations during the period between the arrival of the goods at the port of loading of a ship and their departure from the port of discharge of a ship. An inland carrier is a maritime performing party only if it performs or undertakes to perform its services exclusively within a port area.¹²⁹⁸

¹²⁹¹ *ibid.*

¹²⁹² art 67(2).

¹²⁹³ *ibid.*

¹²⁹⁴ *ibid.*

¹²⁹⁵ art 1(2).

¹²⁹⁶ Thomas (n 20) Chapter 1.

¹²⁹⁷ art 68 Rotterdam Rules.

¹²⁹⁸ art 1(7).

The plaintiff may institute judicial proceedings against the maritime performing party in a competent court in one of two places,¹²⁹⁹ which are: '[t]he domicile of the maritime performing party'¹³⁰⁰ or '[t]he port where the goods are received by the maritime performing party, the port where the goods are delivered by the maritime performing party or the port in which the maritime performing party performs its activities with respect to the goods'.¹³⁰¹ The Rotterdam Rules also provide for the issue of 'recognition and enforcement' of court decisions made in Contracting States.¹³⁰² If a decision made by a competent court in a Contracting State, it will 'be recognized and enforced in another Contracting State' in accordance with article 73(1) of Rotterdam Rules.¹³⁰³ However, a court may reject such recognition and enforcement, if the refusal is attributed to the court's law.¹³⁰⁴

2.2 MLETR

Chapter IV of MLETR deals with the issue of the 'cross-border recognition of electronic transferable records'. Article 19 provides for 'non-discrimination in relation to foreign electronic transferable records'. Article 19 'aims at eliminating obstacles to cross-border recognition of an electronic transferable record arising exclusively from the fact that it was issued or used abroad. It does not affect private international law rules.'¹³⁰⁵ The electronic transferable record must not 'be denied legal effect, validity or enforceability on the sole ground that it was issued or used abroad'.¹³⁰⁶ It seems possible to argue that this provision, article 19(1), may aim at adapting to the movable nature of bills of lading in the sense that these bills move from one place to another or from one country to another. It 'aims to avoid that the place of origin or use of the electronic transferable record could be considered in itself the reason to deny legal validity or effect to an electronic transferable record'.¹³⁰⁷ Article 19(1) may echo article 12(1) the UNCITRAL Model Law on Electronic Signatures (2001),¹³⁰⁸ which states:

¹²⁹⁹ art 68.

¹³⁰⁰ art 68(a).

¹³⁰¹ art 68(b).

¹³⁰² art 73.

¹³⁰³ art 73(1).

¹³⁰⁴ art 73(2).

¹³⁰⁵ Explanatory Note to MLETR (n 781).

¹³⁰⁶ art 19(1).

¹³⁰⁷ Explanatory Note to MLETR (n 781).

¹³⁰⁸ *ibid.*

1. In determining whether, or to what extent, a certificate or an electronic signature is legally effective, no regard shall be had:
 - (a) To the geographic location where the certificate is issued or the electronic signature created or used; or
 - (b) To the geographic location of the place of business of the issuer or signatory.

The terms ‘issued’ or ‘used’ provided in article 19(1) of MLETR are intended to cover ‘all events occurring during the life cycle of an electronic transferable record. In particular, they include endorsement and amendment of the electronic transferable record’.¹³⁰⁹ Article 14 may be ‘relevant’ to determine ‘the location of the place of business’,¹³¹⁰ as follows:

1. A location is not a place of business merely because that is:
 - (a) Where equipment and technology supporting an information system used by a party in connection with electronic transferable records are located; or
 - (b) Where the information system may be accessed by other parties.
2. The sole fact that a party makes use of an electronic address or other element of an information system connected to a specific country does not create a presumption that its place of business is located in that country.

Moreover, the term ‘abroad used in article 19(1) of MLETR ‘refer to a jurisdiction other than the enacting one, including a different territorial unit in States comprising more than one’.¹³¹¹ The provision in article 19(1) of MLETR does not affect ‘the application to electronic transferable records of rules of private international law governing a transferable document or instrument’.¹³¹² Article 19(2) aims to ensure that MLETR ‘should not displace existing private international law applicable to transferable documents or instruments, which is considered substantive law for the purposes of the Model Law – MLETR’.¹³¹³ The Explanatory Note to MLETR clarifies that ‘[t]he introduction of a special set of private international law provisions for electronic transferable records would lead to a dual private international law regime, which is not desirable’, and ‘[s]ince paragraph 1 - Article 19(1) of MLETR - refers only to non-discrimination, while paragraph 2 - Article 19(2) - relates to private international law, the two paragraphs operate on different levels and do not conflict with each other’.¹³¹⁴

¹³⁰⁹ *ibid.*

¹³¹⁰ *ibid.*

¹³¹¹ *ibid.*

¹³¹² art 19(2). Explanatory Note to MLETR (n 781).

¹³¹³ *ibid.*

¹³¹⁴ *ibid.*

2.3 CMI Rules

The CMI Rules address the application of international conventions or national laws under and state 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'.¹³¹⁵ There seems to be a challenge with rule 11 of CMI Rules in respect of the jurisdiction provision.¹³¹⁶ Rule 11 provides that 'Electronic Data is Equivalent to Writing' and states:

The carrier and the shipper and all subsequent parties utilizing these procedures agree that any national or local law, custom or practice requiring the Contract of Carriage to be evidenced in writing and signed, is satisfied by the transmitted and confirmed electronic data residing on computer data storage media displayable in human language on a video screen or as printed out by a computer. In agreeing to adopt these Rules, the parties shall be taken to have agreed not to raise the defence that this contract is not in writing.

The challenge is that the above provision may not decide the jurisdiction on the validity of electronic data as equivalent to writing.¹³¹⁷ The stipulated agreement of 'not to raise the defence that the contract of carriage is not in writing' is not a solution, because certain national laws may still require that a contract of carriage be evidenced in writing.¹³¹⁸ Therefore, '[t]he legal effect and validity of such provisions, however, will depend on the applicable law'.¹³¹⁹ In Goldby's view:

It is doubtful whether art 11 is sufficient to override statutory requirements for writing which may apply in certain jurisdictions. Furthermore, the CMI Rules make no express provision for rights and liabilities pertaining to the contract of carriage to be transferred along with the Right of Control and Transfer, relying instead on the provisions of r 6 and 11, whereby transfer of such rights and liabilities would occur in accordance with provisions in applicable transport Conventions, or national laws. This means that for holders of electronic bills to realize the full benefits conferred by statutes affecting bills of lading, the receipt message and the Private Key have to be recognized as constituting a bill

¹³¹⁵ r 6 of CMI Rules.

¹³¹⁶ UNCTAD, 'Electronic Commerce and International Transport Service', Report by the UNCTAD secretariat 2001, TD/B/COM.3/EM.12/2 31 July 2001 https://unctad.org/en/PublicationsLibrary/tdbcom3em12d2_en.pdf

¹³¹⁷ *ibid.*

¹³¹⁸ *ibid.*

¹³¹⁹ *ibid.*

of lading under applicable laws. This was and remains highly uncertain in the case of current English law.¹³²⁰

2.4 Bolero

Under Rule 2.5(2) of Bolero Rulebook, the governing law of the relations between the parties is deemed English law stating that '[a]pplicable Law. This Rulebook is governed by and shall be interpreted in accordance with English Law'. Bolero Rulebook provides for exclusive and non-exclusive jurisdiction agreements.¹³²¹ Marshall and Keyes say that '[e]xclusive jurisdiction agreements designate the jurisdiction of the courts of a single country to the exclusion of all others'.¹³²² Marshall and Keyes argue that such 'agreements are a common feature of international contracts'.¹³²³ In comparison, '[n]on-exclusive jurisdiction agreements indicate the parties' submission to the jurisdiction of the nominated court, but also preserve their rights to bring proceedings in any competent courts'.¹³²⁴ Under Bolero Rulebook, disputes arising solely from matters relating to 'non-compliance with or breach of' Bolero Rulebook are 'subject to the exclusive jurisdiction of the English courts' according to rule 2.5(3). However, Bolero Rulebook contains a 'non-exclusive jurisdiction' agreement that preserves Bolero users' freedom to choose their jurisdiction for other matters that do not relate to the Rulebook:

Non-exclusive Jurisdiction. Any other dispute arising out of this Rulebook shall be subject to the non-exclusive jurisdiction of the English courts. Nothing in this Rule 2.5 limits the right of a User to bring proceedings in connection with this Rulebook, other than those which fall within paragraph (3) of Rule 2.5, in any other court or tribunal of competent jurisdiction.¹³²⁵

It seems relevant to mention that Bolero Rulebook includes special clauses that apply US law: they are found in the Annex to Bolero Rulebook under the title of 'U.S. Law Clauses'. The Annex provides for the 'Ad valorem Declarations' that obliges the carrier to provide the shipper with 'the opportunity to declare the value of the goods', if the contract of carriage of goods

¹³²⁰ Goldby (n 461).

¹³²¹ r 2.5(3) and r 2.5(4) of Bolero Rulebook.

¹³²² Brooke Adele Marshall and Mary Keyes, 'Australia's Accession to the Hague Convention on Choice of Court Agreements' (2017) 41(1) Melbourne University Law Review 246-283.

¹³²³ *ibid.*

¹³²⁴ *ibid.*

¹³²⁵ r 2.5(4) of Bolero Rulebook.

covered by a Bolero bill of lading ‘includes carriage to or from a port or place in the United States’.¹³²⁶ Such ‘declaration or absence’ must ‘be binding on the first Holder and any successive Holder to the same extent as if the opportunity to declare a value had been contained in a paper bill of lading’.¹³²⁷ Moreover, the US COGSA 1936 must ‘be incorporated and form part of the contract of carriage contained in or evidenced by the Bolero Bill of Lading’, if ‘the carriage covered by the Bolero Bill of Lading evidences Carriage to or from a port or place in the United State’.¹³²⁸ It seems possible to say that through the exclusive jurisdiction agreement, Bolero Rulebook may try to preserve its system and to ensure the recognition of Bolero bills of lading as functional and legal alternatives to paper bills of lading. Additionally, the non-exclusive jurisdiction agreement may seek to preserve users’ freedom to agree on the terms and conditions of their own contract.

2.5 essDOCS

essDOCS DSUA is ‘governed by the English law’,¹³²⁹ like Bolero Rulebook, as discussed previously. Yet, Gaskell argues ‘... it seems a possibility of some flexibility’ in the choice of law.¹³³⁰ Gaskell cites an example in this regard that the ‘US law could apply if the relevant carriage concerned the USA’.¹³³¹ essDOCS DSUA adopts both exclusive and non-exclusive jurisdiction. This position under essDOCS DSUA seems similar to that under Bolero Rulebook where there is an English exclusive jurisdiction only in matters of non-compliance with or breach of Bolero Rulebook, and non-exclusive jurisdiction over any other dispute arising out of Bolero Rulebook, as seen in the previous discussion. Harling comments:

[T]he philosophy of the ESS DSUA is that it and the contracts of carriage are and remain separate contracts, albeit that the DSUA acts as a facilitator of certain incidences of the contract of carriage. In pursuit of this, the provision for the resolution of disputes aims only at those disputes arising solely out of the DSUA.¹³³²

¹³²⁶ Annex (1) to Bolero Rulebook.

¹³²⁷ *ibid.*

¹³²⁸ Annex (2).

¹³²⁹ Goldby (n 26) 142 and Gaskell (n 608).

¹³³⁰ Gaskell (n 608).

¹³³¹ *ibid.*

¹³³² Harling (n 978).

Under essDOCS DSUA, English courts have exclusive jurisdiction, but there might be a slight difference between the positions of Bolero Rulebook and essDOCS DSUA in this regard since the latter provides in rule 17.2 for the choice of New York jurisdiction:

Jurisdiction – Non-ESS related Claims: Any dispute between two or more Users arising solely out of, or in connection with, the construction of this Agreement and/or an alleged breach of this Agreement shall be subject to the exclusive jurisdiction of the High Court of Justice in London, England unless each and every User which is a party to any such dispute has made an election for New York jurisdiction in accordance with the provisions of T&C 17.3.1 below in which case any such dispute shall be subject to the jurisdiction provisions set out therein.

As argued in respect of Bolero Rulebook, by carrying an exclusive jurisdiction agreement, essDOCS DSUA may also try to preserve its system and the recognition of essDOCS bills of lading as functional and legal electronic alternatives to paper bills. While for the non-exclusive jurisdiction agreement, it may try to preserve the right of its users to agree on terms and conditions for their own contract.

3 English law

Conflict of laws, according to Dicey et al., is ‘the branch of English law’ and ‘that part of the law of England, which deals with cases having a foreign element’.¹³³³ As regards the contract of carriage, Tricks and Parson explain that ‘if the English court has jurisdiction, it will consider the application of foreign law to all or some of the issues in the case when asked to do so by one of the parties. If the relevant contract contains an express choice of law clause, that will normally be recognized and applied’.¹³³⁴ Dicey et al. explain the meaning of the term ‘foreign’ in that it may mean outside England,¹³³⁵ as follows:

Because of this distinction between ‘country’ and ‘State’, the word ‘foreign’ as used in this book normally means simply ‘not English.’ It does not mean foreign in the political sense. Thus the expression ‘foreign country’ means any country except England, and applies as much to Scotland or Northern Ireland as to France or Italy; and the expressions ‘foreign

¹³³³ AV Dicey, L Collins and JHC Morris, *Dicey, Morris & Collins on the Conflict of Laws* (15th edn, Sweet and Maxwell 2012) 3.

¹³³⁴ Tricks and Parson (n 1243).

¹³³⁵ Dicey, Collins and Morris (n 1333) 32.

judgment’ and ‘foreign arbitration award’ mean judgment or awards given or made outside England.¹³³⁶

English law is the chosen and applicable law in the contract of carriage evidenced or contained in an electronic bill of lading under Bolero Rulebook and essDOCS, as seen earlier. However, a problem may still persist under English law even if the applicable law is expressly provided for in a contract of carriage evidenced or contained by electronic bill of lading. This is because of the absence of a clear recognition of electronic bills of lading as equivalents to paper bills under English law, as concluded in the discussion of Chapter Six. Moreover, bills of lading can move from one country to another of different jurisdictions with the lack of an international framework that regulates the use of electronic bills of lading since the Rotterdam Rules are not in force yet. Nevertheless, English courts *may* hear the case and apply the chosen law if there is ‘a bilateral or multilateral contractual arrangement’,¹³³⁷ or in other words, according to Goldby as referred to previously, ‘... multipartite agreements that effect the desired transfers of right through the concepts of novation and attornment’.¹³³⁸ as in Bolero Rulebook and essDOCS DSUA.

The UK implemented the ‘Rome Convention on the Law Applicable to Contractual Obligations of 19 June 1980’, ‘by the Contracts (Applicable Law) Act 1990’.¹³³⁹ The Rome convention ‘lays down rules relating to the designation of the law applicable to contractual obligations and also provides an essential regulatory framework for the contracting parties’.¹³⁴⁰ The ‘Regulation (EC) No 593/2008 on the law applicable to contractual obligations (Rome I)’ replaced ‘the Rome Convention’.¹³⁴¹ This Regulation ‘came into force in the EU (except for Denmark) for all contracts concluded on or after 17 December 2009’.¹³⁴² Rome I Regulation applies to cases of conflict of laws that involve ‘contractual obligations in civil and commercial matters’ and it does not apply ‘... to revenue, customs or administrative matters’.¹³⁴³ Since the contract forms, that deal with electronic bills of lading such as Bolero Rulebook and essDOCS

¹³³⁶ *ibid.*

¹³³⁷ Tricks and Parson (n 1243).

¹³³⁸ Goldby (n 799).

¹³³⁹ Christine Riefa ‘Article 5 of the Rome Convention on the Law Applicable to Contractual Obligations of 19 June 1980 and Consumer E-contracts: The Need for Reform’ (2004) 13(1) Information Communications Technology Law 59-74

¹³⁴⁰ *ibid.*

¹³⁴¹ Baughen (n 191) 392.

¹³⁴² *ibid.*

¹³⁴³ r 1(1) of Rome I Regulation.

DSUA as mentioned earlier, are governed by English law, the Rome I Regulation provides that the contract must ‘be governed by the law chosen by the parties’.¹³⁴⁴ It requires that the choice of law must ‘be made expressly or clearly demonstrated by the terms of the contract or the circumstances of the case’.¹³⁴⁵ It also states that ‘the parties can select the law applicable to the whole or to part only of the contract’.¹³⁴⁶ However, the Rome I Regulation may not be applicable to electronic bills of lading, specifically negotiable electronic bills of lading, because it excludes ‘negotiable instruments’ from its scope of application, as stated in its exclusion list that ‘... (d) obligations arising under bills of exchange, cheques and promissory notes and other negotiable instruments to the extent that the obligations under such other negotiable instruments arise out of their negotiable character’.¹³⁴⁷

Yet, it seems safe to argue in light of this provision that non-negotiable sea waybills are included under the scope of application of the Rome I Regulation. It also seems possible to argue that the Rome I Regulation may still apply to ‘negotiable’ electronic bills of lading despite the exclusion in article 1(2)(b), because there is no express reference to electronic bills of lading. Moreover, there is no international recognition or international framework that regulates the use of electronic bills of lading. Therefore, if it is accepted that the Rome I Regulation excludes electronic bills of lading, it means that the Rome I Regulation excludes not yet existed or not yet internationally recognized bills. Furthermore, the EU has adopted electronic commerce and signatures as in the EU Directive on electronic commerce and EU Directive on electronic signature, which are incorporated into UK domestic law.¹³⁴⁸ However, this argument may not stand with the presence of the ‘explicit’ exclusion of negotiable instruments under the Rome 1 Regulation since electronic bills of lading are intended to be ‘functional equivalents’ to paper bills of lading.

Referring to the EU treaties is pertinent in light of Brexit.¹³⁴⁹ In other words, what will be the position of the UK towards EU obligations after Brexit? It is submitted that the ‘[j]udicial

¹³⁴⁴ r 3(1).

¹³⁴⁵ *ibid.*

¹³⁴⁶ *ibid.*

¹³⁴⁷ r 1(2)(d).

¹³⁴⁸ See section 4 ‘English law approach: a general view on the position of English law in relation to the use of electronic bills of lading’ in Chapter Three.

¹³⁴⁹ Brexit is:

cooperation in civil and commercial matters is generally perceived to be of a rather "specialist and technical nature".¹³⁵⁰ This is set out in the 17th Report of the 2016–2017 Session of the European Union Committee of the House of Lords under the heading ‘Brexit: justice for families, individuals and businesses?’, item 8 paragraph 7,¹³⁵¹ which states:

Given their highly specialist and technical nature, it is not surprising that these three Regulations, and the system of civil justice cooperation that they maintain, received little public attention during the referendum campaign or subsequently. However, they each play an important role in facilitating the daily operation of the European legal system, while also protecting the rights of EU citizens and the ability of businesses to engage with the Single Market.

If judicial cooperation is not preserved, or no agreement is reached between the UK and the EU, ‘because, for example, the UK and the EU cannot settle the issues of enforcement and dispute resolution’, Ruhl argues that ‘the UK should apply the Rome I and Rome II Regulations unilaterally and become a party to the Lugano Convention of 2007 as well as the Hague Convention on Choice of Court Agreements’.¹³⁵² The Rome II Regulation or ‘Regulation (EC) No 864/2007 of the European Parliament and of the Council of 11 July 2007 on the law applicable to non-contractual obligations (Rome II)’ applies to cases of ‘conflict of laws’ that involve ‘non-contractual obligations in civil and commercial matters’ and it does not apply ‘... to revenue, customs or administrative matters or to the liability of the State for acts and omissions in the exercise of State authority (*acta iure imperii*)’.¹³⁵³ The Rome II Regulation, as does the Rome I Regulation, excludes ‘negotiable instruments’ from its scope of application, as stated in its exclusion list that ‘... (c) non-contractual obligations arising under bills of exchange, cheques and promissory notes and other negotiable instruments to the extent that the

[A] combination of the words ‘Britain’ and ‘exit’, which refers to Britain's withdrawal from the European Union. For Europe, the shock of Brexit is profound since Britain is the only major country to have left the European Union. The people of Britain voted for a withdrawal from the European Union in a historic referendum on Thursday 23 June 2016. According to The Economist, the referendum resulted in an overall vote to leave the EU, by 51.9% to 48.1%. However, the vote was split between the constituent countries of the United Kingdom, with England and Wales voting to leave, and Scotland and Northern Ireland voting to remain. [businessdictionary.com](http://www.businessdictionary.com) <<http://www.businessdictionary.com/definition/brexit.html>> accessed 8 June 2019.

¹³⁵⁰ G Ruhl, ‘Judicial Cooperation in Civil and Commercial Matters after Brexit: Which Way Forward’ (2018) 67(1) International and Comparative Law Quarterly 99-128.

¹³⁵¹ *ibid.*

¹³⁵² *ibid.*

¹³⁵³ r 1(1) of Rome II Regulation.

obligations under such other negotiable instruments arise out of their negotiable character'.¹³⁵⁴ However, the Rome II Regulation is not examined in this discussion because there is a contract involved, which is the contract of carriage evidenced or contained in an electronic or a paper bill of lading. The Lugano Convention of 2007 or 'Convention on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters' applies to '... civil and commercial matters whatever the nature of the court or tribunal' and it does not apply '... to revenue, customs or administrative matters'.¹³⁵⁵ As regards the Hague Convention on Choice of Court Agreements of 2005 applies to '... international cases to exclusive choice of court agreements concluded in civil or commercial matters'.¹³⁵⁶

4 Conclusion

The Rotterdam Rules provide for a private international law regime where issues of competent court and recognition and enforcement of court decisions are dealt with. However, there seems no specific provisions that address electronic transport records in particular. MLETR deals with the issue of legal effect, validity or enforceability of the electronic transferable records. It provides for the principle of non-discrimination in relation to foreign electronic transferable records. The CMI Rules provide for the applicable law issue but not adequately. The CMI Rules still refer to international and national laws to decide claims if a paper bill of lading had been issued, as provided in rule 6. As regards the contract forms, Bolero Rulebook and essDOCS DSUA provide for the issues of applicable law and competent courts. They apply the English law as a default law. They also provide for the exclusive and non-exclusive jurisdiction agreements. English courts may only recognize the evidentiary value of an electronic bill of lading as a receipt for the goods and as evidencing or containing the contract of carriage, but not as a document of title. This is because no clear case law or statute recognizes the electronic bill of lading as a document of title under English law. However, as discussed in Chapter Six, this problem may be dealt with in practice through the contract forms based on agreements that apply the concepts of novation and attornment, as used under Bolero Rulebook and essDOCS DSUA.

¹³⁵⁴ r 1(2)(c).

¹³⁵⁵ r 1(1) of Lugano Convention of 2007.

¹³⁵⁶ r 1(1) of Hague Convention on Choice of Court Agreements.

Chapter Eight: Conclusion

1 Introduction

This chapter sets out the findings of the thesis, providing answers to the thesis questions. Based on the international approach of the thesis, Chapter Eight summarizes the position of the relevant international convention, model laws and contract forms in relation to the recognition of electronic bills of lading as functional equivalents to paper bills of lading. In relation to international conventions, it presents the position under the Rotterdam Rules. It also addresses the position under the model laws, namely, MLETR and CMI Rules. It then tackles the position in practice under contract forms, namely, Bolero and essDOCS. Based on the English law approach of the thesis, Chapter Eight summarizes the position of English law in relation to the functions of electronic bills of lading under case law and statutory provisions. Moreover, Chapter Eight sets out the recommendations of the thesis in relation to the recognition of electronic bills of lading under the international and English law approaches. Furthermore, the chapter shows how this thesis enriches the knowledge on the subject of electronic bills of lading. It also suggests future studies to be carried out on the subject.

2 Findings

The discussion of the research findings has two parts: the international approach and the English law approach. The international approach summarizes the position under the relevant international convention, model laws and contracts forms. The English law approach summarizes the position under the case law and statutes.

2.1 International approach

The thesis concludes that the international community has tried to adapt to the rapid developments in communication technologies. Since the early 1970s, many attempts have been made to adapt to electronic commerce in general. Some of those attempts have been made to adapt to electronic bills of lading in particular. Therefore, specialized international rules, model laws and contract have been adopted to recognize and regulate the electronic bills of lading.

2.1.1 Rotterdam Rules

The Rotterdam Rules, in article 1(8), expressly recognize the electronic transport record as performing the first function of a paper bill of lading or transport document, that is, as a receipt of goods. In the same article, they also recognize that electronic transport record performs the second function, that is, evidencing or containing the contract of carriage of goods. In other words, the Rotterdam Rules recognize electronic bills of lading as performing these two functions as functional equivalents to transport documents. The Rotterdam Rules adopt the *principle of functional equivalence* to equalize the legal validity between electronic transport records and transport documents in articles 1(9), 1(10), 1(11), 1(19), 1(22), 1(23), 8(3), 10, 35, 36 and 38.

The Rotterdam Rules also recognize electronic transport records as performing the third function of transport documents, that is, as documents of title. Chapter 3 of the Rotterdam Rules specifically deals with electronic transport records. Article 8 deals with the use and effect of electronic transport records. Article 8 establishes the *principle of functional equivalence*. Article 9 lays down the procedures for use of negotiable electronic transport records. Article 10 deals with the replacement of negotiable transport documents or negotiable electronic transport records. The Rotterdam Rules require exclusive control over electronic transport records. The Rotterdam Rules equalize the physical control of a negotiable transport document and the ‘exclusive control’ over a negotiable electronic transport record, as in articles 1(21), 1(22), 8(b), 47 and 51 of Rotterdam Rules.¹³⁵⁷ The Rotterdam Rules also provide for conflict of laws issues.

2.1.2 Model laws

Model laws play a role, directly and indirectly, in the development of electronic bills of lading. The direct role is played by a group of model laws that specifically deal with electronic bills of lading or electronic transport records, namely MLETR and CMI Rules. The indirect role involves a second group of model laws that deal with electronic commerce and contracts, such as: the UNCITRAL Model Law on Electronic Commerce of 1996, the UNCITRAL Model Law on Electronic Signatures (2001) and the United Nations Convention on the Use of Electronic Communications in International Contracts (2005). The second group of model laws may assist

¹³⁵⁷ See subsection 2.1 ‘Rotterdam Rules’ in Chapter Six and see Diamond (n 606), Goldby (n 26) 191 and Bal (n 604) 189.

in the development of electronic bills of lading because both the first and second groups of model laws reflect the impact of modern means of communication and scientific technologies. Both groups of model laws play a part in electronic commerce. Moreover, both of these groups deal with similar subjects, such as: EDI, electronic writing, electronic signature, the *principle of functional equivalence* and electronic communication.

2.1.2.1 MLETR

MLETR is the most recent model law that deals directly with electronic transport records. However, it provides only for the third function performed by a negotiable electronic transport record, that is, as a document of title. It does not provide for the first two functions, as a receipt for the goods and as evidencing or containing the contract of carriage. The focus of MLETR on the third function may be attributed to international attempts to cope with the most challenging question of transferability of negotiable electronic transport records. MLETR defines three relevant terms in respect of electronic transfer in article 2, namely, ‘electronic record’, ‘Electronic Transferable Record’ and ‘Transferable Document or Instrument’. MLETR adopts the *principle of functional equivalence* in articles 8, 9 and 10. It relies on this principle to address the issue of symbolic *or constructive possession* of goods in the case of negotiable electronic transport records. Moreover, article 11 provides for the conditions of equalization between the possession and transfer of a transferable document or instrument and an electronic transferable record.

MLETR also adopts two other principles. The first is the *principle of non-discrimination against the use of electronic means*. Article 7(1) states that ‘[A]n electronic transferable record shall not be denied legal effect, validity or enforceability on the sole ground that it is in electronic form.’ The second is the *principle of technological neutrality*. This principle ‘entails adopting a system-neutral approach, enabling the use of various models whether based on registry, token, distributed ledger or other technology’.¹³⁵⁸ MLETR sets forth ‘a consistent and technology neutral general standard on the assessment of reliability that applies whenever a provision of the Model Law requires the use of a "reliable method" for the fulfilment of its functions’.¹³⁵⁹ It also gives the right to replace a transferable document with an electronic transferable record and vice versa in articles 17 and 18. It further provides for conflict of laws

¹³⁵⁸ Explanatory Note to MLETR (n 781).

¹³⁵⁹ *ibid.*

issues. Chapter IV of MLETR deals with the issue of cross-border recognition of electronic transferable records. Article 19 provides for the non-discrimination in connection with foreign electronic transferable records.

2.1.2.2 CMI Rules

The CMI Rules are the first specialized model law to deal with electronic bills of lading. They adopt the *principle of functional equivalence* in rules 4(d) and 11. The CMI Rules provide for the three functions of electronic bills of lading. Rule 4 of CMI Rules provides for the receipt function of electronic bills of lading. The CMI Rules also provide for the second function to evidence or contain the contract of carriage in rules 4(b) and 5(a) and (b). The CMI Rules also provide for the challenging issue of transferability of electronic bills of lading as documents of title in rules 7 and 8. The CMI Rules adopt the concepts of ‘private key’, ‘holder’ and ‘exclusive rights’ acquired from the holdership of a private key to cope with the document of title function question. The CMI Rules also establish the procedures for transferring exclusive rights to other new proposed holders.

2.1.3 Contract forms

The contract forms reflect the practical side of the thesis and play a role in the justification of the study because electronic bills of lading are in use in the maritime industry. These forms provide the legal solutions to deal with electronic bills of lading, including the transfer of electronic bills of lading issue, which are based on agreement. This agreement obliges all parties to treat electronic bills of lading as functional equivalents of paper bills and not to contest the legal validity of these bill before any court. The solutions also relies on the concepts of novation and attornment to deal with the issue of transfer of electronic bills of lading. The contract forms of Bolero Rulebook and essDOCS are examined to reflect how the contract forms legally dematerialize the three functions of paper bills of lading. Bolero and essDOCS are approved by the International Group of P&I Clubs. Moreover, interviews are carried out with both Bolero and essDOCS. The thesis finds that there are two ways to create an electronic bill of lading.¹³⁶⁰ The first way uses a paper document or Word format or similar, which is scanned and uploaded to the provider’s system.¹³⁶¹ This is a partially electronic way of creating

¹³⁶⁰ Interviews (n 15).

¹³⁶¹ *ibid.*

an electronic bill. The second way uses the structure data in the provider's platform and is completely electronic.¹³⁶²

2.1.3.1 Bolero

Bolero Rulebook adopts the *principle of functional equivalence* in rules 2.2.2(1), (2) and (3), 2.2.3(1), (2) and (3), 3.1(3), 3.2(1)(b), 3.2(2) and (3), 3.9(1)–(6), 3.10(1)–(6), and 3.11(1)–(4), and Annex (1). Bolero Rulebook deals with the receipt function in rules 3.1(1)(a) and 1.1(6). It provides for the second function of bills of lading as evidencing or containing the contract of carriage in rule 3.1(1)(b). As regards the document of title function, the Title Registry executes 'the functions relating to Holdership and transfer of Bolero Bill of Lading' in accordance to rule 1.1(53). Bolero Rulebook provides for relevant key players to perform the document of title function, for example, private key, digital signature core messaging platform and different types of holders. As seen in the chapters, since the COGSA 1992 may not apply to electronic bills of lading, Bolero Rulebook relies on agreement and the concepts of novation and attornment to cope with the transfer of Bolero bills of lading and deliver goods to the holder.¹³⁶³

2.1.3.2 essDOCS

essDOCS DSUA adopts the *principle of functional equivalence*. Under the essDOCS system, the receipt function is achieved by inserting the descriptions of the goods in the essDOCS bill of lading which acts as a receipt for the goods as does a paper bill of lading.¹³⁶⁴ essDOCS DSUA also deals with the second function where the carrier adds its own terms and conditions of the contract of carriage to be included or evidenced in the essDOCS electronic bill of lading.¹³⁶⁵ essDOCS DSUA provides for the document of title function challenge and the key terms or players to transfer electronic bills of lading such as the electronic record, right of control and holder. Like Bolero Rulebook, essDOCS DSUA is based on agreement and the concepts of novation and attornment to cope with the transfer of essDOCS bills of lading and deliver goods to the holder.¹³⁶⁶

¹³⁶² *ibid.*

¹³⁶³ Goldby (n 799), Clarke (307), Baughen (n 191) 26, Tan, Starr and Wu (n 31) and Interviews (n 15).

¹³⁶⁴ Interviews (n 15).

¹³⁶⁵ *ibid.*

¹³⁶⁶ Goldby (n 799), Clarke (307), Baughen (n 191) 26, Harling (n 978), Tan, Starr and Wu (n 31) and Interviews (n 15).

2.2 English law approach

English law seems slower in adapting to developments in means of communication and technology in terms of electronic bills of lading. As regards the case law, there are cases that have accepted the evidence in electronic forms,¹³⁶⁷ ‘other means conveying information than written documents’,¹³⁶⁸ electronic signatures¹³⁶⁹ and electronically stored information.¹³⁷⁰ These cases reflect the possibility that English courts may admit the evidentiary value of electronic bills of lading. As such, English courts may admit the electronic bill of lading as a functional equivalent to perform the first two functions of paper bills, that is, as a receipt for the goods and as evidencing or containing the contract of carriage. For a number of scholars, *Glencore International*¹³⁷¹ does not appear to recognize electronic bills of lading. However, it is submitted that this case does not apply to electronic bills of lading. There is an absence of a specific case law that denies or admits the electronic bills of lading and their functions. In relation to UK statutes, The thesis discusses two groups of statutory provisions. The first group may apply to electronic bills of lading, while the second group may not apply. The second group of statutory provisions may still traditionally rely on the physical nature of the paper bill of lading.¹³⁷²

The thesis concludes that the *current* English law may recognize electronic bills of lading as a receipt for goods or as evidencing or containing the contract of carriage. With regard to the third function, the *current* English law may not recognize electronic bills of lading as documents of title. There is no specific case law or statutory provisions on the transferability of electronic bills of lading. In sum, there is currently no specialized English law that deals with electronic bills of lading or electronic transport records, especially no regulations have been issued under the authorization of subsection 5(1) of COGSA 1992. It may be possible to argue that the timing seems not yet right for the recognition of electronic bills of lading or electronic transport records under English law in comparison with the relevant position under other national laws, like the Australian and US laws. The thesis finds that the English courts took centuries before they admitted paper bills of lading as documents of title, a period of time

¹³⁶⁷ As in *Marlton* (n 943), and in *Hill* (n 944).

¹³⁶⁸ *Faber* (n 450), as in *Derby* (n 1000).

¹³⁶⁹ As in *Ex p Dryden* (n 953), *Goodman* (n 954), *British Estate Investment Soc. Ltd* (n 955), *Brydges* (n 956) and *Newborne* (n 957).

¹³⁷⁰ As in *Victor Chandler International* (n 1007).

¹³⁷¹ *Glencore International AG* (n 791).

¹³⁷² *Aikens, Lord and Bools* (n 40) 44-50 and *Baughen* (n 191) 25.

that ran from the fourteenth century, when the receipt function was recognized, until the 1794 when *Lickbarrow*¹³⁷³ decided that a paper bill of lading was a document of title. However, it may be not appropriate to compare the time needed to recognize paper bills of lading with that needed for the recognition of electronic ones. The current advanced means of communication and technologies were not available in those centuries when paper bills emerged, whereas The thesis finds that electronic bills of lading emerged rapidly in the 1970s. They came into common use in 1990. They took only a few years to emerge in comparison with the emergence of paper bills of lading, which took centuries. Yet, the rapid emergence of electronic commerce in general is already reflected in the English law as for the incorporation of EU Directives on electronic commerce and signature into domestic law. Moreover, the electronic commerce is reflected even in subsection 1(5) of COGSA 1992. This section authorizes the Secretary of State to issue regulations to make provision extending the application of COGSA 1992 ‘to cases where "a telecommunication system or any other information technology" is used for effecting transactions involving bills of lading’.¹³⁷⁴ As a *legal* and *provisional* solution to use electronic bills of lading, including as documents of title under current English law, electronic bills of lading rely on agreement and concepts of novation and attornment.¹³⁷⁵ Such agreement along with the concepts of novation and attornment are currently in use under the contract forms, such seen in Bolero Rulebook and essDOCS DSUA.

3 Recommendations

The thesis recommends solutions for the outstanding obstacles that hinder the *clear* recognition of electronic bills of lading. The recommendations can be carried out in the international and English law approaches.

3.1 International approach

Electronic bills of lading can perform the three functions of paper bill of lading under the Rotterdam Rules, as concluded earlier in this chapter. The Rotterdam Rules adapt to new technologies in maritime transportation, but the Rules are not in force yet.¹³⁷⁶ Article 94 of

¹³⁷³ *Lickbarrow* (n 62). See Aikens, Lord and Bools (n 40) 1-17.

¹³⁷⁴ Aikens, Lord and Bools (n 40) 44-50.

¹³⁷⁵ Goldby (n 799), Clarke (307), Baughen (n 191) 26, Harling (n 978), Tan, Starr and Wu (n 31) and Interviews (n 15).

¹³⁷⁶ UN, ‘Treaties’ <https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg_no=XI-D-8&chapter=11&clang=en> accessed 25 December 2020.

Rotterdam Rules, which deals with the entry into force, requires twenty instruments of ratification, acceptance, approval or accession:

1. This Convention enters into force on the first day of the month following the expiration of one year after the date of deposit of the twentieth instrument of ratification, acceptance, approval or accession.
2. For each State that becomes a Contracting State to this Convention after the date of the deposit of the twentieth instrument of ratification, acceptance, approval or accession, this Convention enters into force on the first day of the month following the expiration of one year after the deposit of the appropriate instrument on behalf of that State.
3. Each Contracting State shall apply this Convention to contracts of carriage concluded on or after the date of the entry into force of this Convention in respect of that State.

There are currently only 25 Signatories and 5 parties to the Rotterdam Rules.¹³⁷⁷ The thesis may recommend that the international community, in particular those specialist international organizations that deal with international trade and commerce, may try to increase the awareness on the merits of the Rotterdam Rules. The merits include the adaptation to new technologies in international trade and maritime transportation, and bridging the gaps in the current international legal regime of Hague-Visby Rules and Hamburg Rules that still governs the carriage of goods by sea.

As regards model laws, the research concludes that these model laws play a practical role in the emergence of electronic bills of lading because they assist national legislators to establish legal frameworks for drafting laws that may recognize electronic bills on the national level, which is especially important in light of the lack of a current, valid international convention that governs the use of electronic bills of lading. Moreover, these model laws, especially the CMI Rules, establish the general principles to the use of electronic bills of lading under contract forms, such Bolero Rulebook and essDOCS DSUA, as for the *principle of functional equivalence*, and necessary terms and mechanisms such private key and holdership. However, the adoption of the CMI Rules was almost 40 years ago. Therefore, the CMI Rules may not be suitable in light of new developments in means of communication and Internet. Article 11 of CMI Rules, for example, refers or limits the data storage to 'a video screen or as printed out by a computer':

¹³⁷⁷ *ibid.*

The carrier and the shipper and all subsequent parties utilizing these procedures agree that any national or local law, custom or practice requiring the Contract of Carriage to be evidenced in writing and signed, is satisfied by the transmitted and confirmed electronic data residing on computer data storage media displayable in human language on a video screen or as printed out by a computer. In agreeing to adopt these Rules, the parties shall be taken to have agreed not to raise the defence that this contract is not in writing.

Today, data storage and process seem quite different from 40 years ago. Data now can be stored, processed, displayed and sent easily by devices such as mobile phones, iPads or laptops via Internet. Transactions or payments can be made with just one touch. Anyone can make these transactions from any palace in the world via her/his personal mobile phone and Internet. Anyone can sell, buy, rent, transfer, shop or enter into agreements online via advanced means of communication and technologies. New model is needed. Therefore, in 2017, MLETR was adopted to cope with the transferability challenge of electronic bills of lading as documents of title. However, MLETR deals only with the transfer issue and does not address the first two functions to be performed by electronic bills of lading as receipts for the goods and evidencing or containing the contract of carriage. MLETR provides only for the document of title function because that the first two functions seem easier to be dematerialised and recognized rather than the challenging function of document of title. Consequently, The thesis may recommend the adoption of a *comprehensive* model law that deals with the three functions of electronic bills of lading.

With regard to the contract forms, the thesis concludes that these forms are practical and functioning properly. The contract forms may cope with challenges that face the use of electronic bills of lading, specially the transferability challenge, based on agreement and concepts of novation and attornment, as mentioned earlier. However, regardless of this success, the thesis concludes that it is not satisfactory to keep depending on agreement and the concepts of novation and attornment to deal with the electronic bills of lading. The contract forms may work as a *provisional* solution since currently there is no law that recognizes electronic bills of lading. A ratified and in-force international convention or law is needed to recognize electronic bills of lading for the sake of consistency and security in international transactions that deal with such a type of new bills. The movable nature of a bill of lading, as moving from one country to another, increases the need for an international law. Therefore, the thesis again may

recommend increasing the awareness of the merits of the Rotterdam Rules to accelerate their entry into force.

3.2 English law approach

What is mentioned in the previous discussion on the contract forms is applicable to English law, because the applicable law under the contract forms is English law. Therefore, the use of electronic bills of lading under English law, as mentioned earlier, is based on agreement and concepts of novation and attornment, as a *provisional* solution to bridge the legal lacuna in the case law and statutory provisions. Hence, the thesis may recommend the adoption of a new legislation that governs electronic bills of lading and bridge the above-mentioned gap in the current English law to recognize electronic bills of lading or electronic transport records as functional equivalents to paper bills of lading. The thesis may also recommend issuing the regulations referred to in subsection 1(5) of COGSA 1992. The provision of subsection 1(5) of COGSA 1992 may look to be an implied permission to use electronic bills of lading.¹³⁷⁸ On other hand, subsection 1(5) may be looked upon as an express provision that the use of electronic bills of lading are not yet allowed under English law. Whatever the case, subsection 1(5) may pave the way for the recognition of electronic bills of lading under English law as it is the foundation upon which to issue the intended regulations.

The thesis also may recommend that the new regulations need to be clear in its recognition of electronic bills of lading. The new legislation should expressly provide for the three functions, as receipts for the goods, as evidencing or containing the contract of carriage and as documents of title functions, to be performed by electronic bills of lading. Electronic bills of lading cannot replace paper bills of lading as functional equivalents if they, for example, perform only the first two functions without being documents of title. In this case where electronic bills of lading perform only the first two functions without being a document of title, these electronic bills of lading would be functional equivalents to paper waybills since these waybills are not negotiable. Therefore, clarity in the new legislation is important in order to avoid any conflicting interpretations or doubt about the application of the new legislation. Equally important, clarity in the new legislation is needed because some national legislations provide for electronic records, electronic writing, electronic signatures and electronic contracts but do

¹³⁷⁸ Aikens, Lord and Bools (n 40) 44-50. See section 4 'English law approach: a general view on the position of English law in relation to the use of electronic bills of lading' in chapter three.

not clearly or expressly provide for the third function to be performed by electronic bills of lading as documents of title.

4 Contribution to Knowledge

Though it seems a considerable number of studies have been carried out on electronic bills of lading, this thesis is a genuine research based on solid academic standards. The thesis tries to cover all aspects of the subject and to answer its relevant questions. It intends to enrich the knowledge in the subject of electronic bills of lading, which are currently in use, but facing, inter alia, legal challenges. It examines these legal challenges under present international rules, model laws and contract forms as well as English law. It relies on approaches and characteristics that distinguish it from other studies. There might be found one or more of these approaches or characteristics in other works but seemingly not all in one academic research at a Ph.D. level.

The thesis is function-based research. It rests its analysis on the three functions of bills of lading as criteria to answer the main and sub-questions on whether electronic bills of lading can be functional equivalents to paper bills of lading. It avoids traditional questions, such as ‘What is a document, negotiability, electronic writing or signature?’ Instead, it rests its arguments on a more comprehensive and effective principle, that is, the *principle of functional equivalence*. This principle equalizes between electronic and paper bills of lading in the legal value and enforceability. Therefore, the thesis finds that this principle must be provided for under any instrument that deals with electronic documents in general and electronic bills of lading in particular. Consequently, as one of its analysis techniques, the thesis used to start its discussion on every function by investigating whether a relevant instrument provides for this principle.

The thesis follows an international approach that covers a wide range of instruments. This approach includes three groups of international instruments, as discussed in the methodology in Chapter One, that covers all relevant instruments on paper bills of lading, electronic commerce and electronic bills of lading. The thesis also follows an English law approach. The importance of this approach stems from that English law is a default law in contract forms. Moreover, English courts have an exclusive jurisdiction on those contracts. Furthermore,

English courts seem the first to recognize the three functions of paper bills of lading, as discussed in Chapter One.¹³⁷⁹

The thesis also rests on Chapter Two as a foundation chapter on paper bills of lading for the sake of a better understanding of electronic bills of lading. Since electronic bills of lading are intended to be functional equivalents to paper bills, the reader needs first to understand paper bills and their functions. In other words, the reader needs to know who replaces who. Therefore, this Chapter paves the way for the arrival of electronic bills of lading. What also distinguishes the thesis is the chronological order to deal with the subject in Chapters Two and Three. The advantage of this approach is to show how the legal concept of paper and electronic bills of lading originated and developed. It also shows how the international and English laws reacted in relation to the recognition of these bills and their three functions.

Moreover, the thesis intends to be the first to illustrate the legal mechanism of issuance and transfer of electronic bills of lading until delivery of the goods on two genuine graphs in Chapter Six. Moreover, the thesis does not only present these graphs, but it also accompanies them with a substantial discussion to reflect the said legal mechanism under key instruments and English law. The thesis also seems to be the first to present the ways of creating electronic bills of lading as used in practice under the contract forms.¹³⁸⁰ In this connection, the thesis also tackles the recent technologies and developments from a legal perspective such as the single window, blockchain and cyber risk.

In addition to the above-mentioned approaches and characteristics, the thesis is structured in a coherent mode that makes its eight chapters focused and liked. After the introductory chapter, Chapter Two studies paper bills of lading. Then, Chapter Three deals with electronic bills of lading. Chapter Four examines the first function to be performed by an electronic bill loading as a receipt for the goods. Chapter Five discusses the second function as containing or evidencing the contract of carriage. Chapter Six examines the third function as a document of title, which involves the challenging question of the thesis. Next, Chapter Seven deals with the relevant issue of conflict of laws. At the end, the thesis concludes with the intended findings and recommendations in Chapter Eight. Moreover, the thesis is specific in its objectives, legal

¹³⁷⁹ See section 2 ‘Origin of paper bills of lading’ and relevant cases discussed in this section in Chapter Two.

¹³⁸⁰ Interviews (n 15).

questions, approaches and structure, as shown earlier. A result of such specification, the thesis reaches specific findings and recommendations.

5 Future studies

The thesis inspires potential researchers to carry out further studies on the subject of electronic bills of lading. New studies may discuss the recognition of electronic bills of lading under the civil law system as the thesis deals with the common law system that involves English law.

Since this thesis is a legal research based primarily on the study of legal texts, new studies may be conducted on electronic bills of lading from technical perspective. The suggested studies may deal with the electronic systems that provide the electronic bills of lading services. These studies may provide detailed technical information on the mechanism of how these electronic bills are issued and transferred.

Moreover, potential studies may be carried out on electronic bills of lading from an economic perspective with wide statistics on the business of electronic bill of lading. This type of suggested studies may examine the role of these bills in the market. These studies may discuss the technical barriers or challenges that may face the use of such bills. They may tackle the economic competence of some countries, specially developing countries, to meet the technical requirements of using electronic bills of lading.

Furthermore, in connection to economic competence, the new studies may deal with the issue of fees that are paid to service providers under the contract forms. These studies may examine the impact of this issue on the current and potential users of service systems and on the development of electronic bills of lading. The thesis does not tackle this issue not only because it is non legal but also due to the lack of data on those fees. Despite of the author's attempts in this regard, the data on those fees are not available.

Furthermore, new studies may also examine the tendency and confidence of carriers, shippers, traders and banks to use electronic bills of lading instead of paper bills in the market. As the interviews may show, there are tendency and willingness towards dematerialization of paper documents,¹³⁸¹ that include the use of electronic bills of lading in the maritime industry.

¹³⁸¹ Interviews (n 15) and Appendix 1.

6 Summary of conclusion

The thesis reaches that paper bills of lading developed throughout the ages to perform three main functions: as receipts for the goods, as containing or evidencing the contract of carriage of goods and as documents of title. English law seems to take the lead to establish the concept of paper bills of lading. English courts decided leading cases in this regard, specially ‘begins at the end of the eighteenth century with the landmark decision in *Lickbarrow*,¹³⁸² where the paper bill of lading was recognized as a document of title. Relevant statutes were also enacted to recognize paper bills of lading such as the Factors Act 1889, Sale of Goods Act 1979, COGSA 1924, COGSA 1971 and COGSA 1992.

Electronic bills of lading are intended to replicate the three functions of paper bills of lading. These electronic bills have developed during the last four decades since the first experiment in the 1970s with DFR. These electronic bills are a reaction to scientific developments in trade and maritime transportation. The use of these electronic bills reduces time, costs and efforts in the transactions. Therefore, the thesis notices a sort of similarity between paper and electronic bills of lading since both of them are created to meet commercial needs. However, the thesis finds that there are still legal challenges that face the dematerialization of paper bills of lading. At the international level, the relevant international convention, model laws and contract forms have been adopted to recognize and regulate electronic bills of lading or electronic transport records to replicate paper bills of lading. English law seems slow in its reaction to recognize electronic bills of lading. The Secretary of State in the UK is authorized under subsection 5(1) of COGSA 1992 to issue regulations that *may* apply to electronic bills of lading, but no such regulations have been issued.

The thesis concludes that electronic transport records can perform the first two functions of paper bills of lading, that is, as receipts for the goods and as containing or evidencing the contract of carriage of goods under the Rotterdam Rules. The CMI Rules provide for these two functions to be performed by electronic bills of lading since these Rules are specialized to regulate the use of electronic bills of lading in comparison with MLETR that provides for the document of title function only. Electronic bills of lading are functional equivalents to paper bills of lading under the contract forms of Bolero Rulebook and essDOCS DSUA. They can function as receipts for the goods and evidencing or containing the contract of carriage under

¹³⁸² *Lickbarrow* (n 62). See Aikens, Lord and Bools (n 40) 1-17.

these contract forms. The thesis also concludes that electronic bills of lading may perform these two functions under the English law since English courts already accepted the electronic evidence. The UK statutes also do not contest the evidentiary value of electronic evidence.

As regards the document of title is concerned, the thesis concludes that negotiable electronic bills of lading or negotiable electronic transport records can function as documents of title as functional equivalents to negotiable paper bills of lading under the Rotterdam Rules, model laws and contract forms. The Rotterdam Rules, model laws of MLETR and CMI Rules and contract forms of Bolero Rulebook and essDOCS DSUA adopt the *principle of functional equivalence* and provide for the transfer of electronic bills of lading and negotiable electronic transport records.

Electronic bills of lading are already in use in the market as documents of title under Bolero Rulebook and essDOCS DSUA based on agreement and concepts of novation and attornment. With regards to the English law, the thesis concludes that there is no case law nor statutory provision to recognize electronic bills of lading as documents of title. Since electronic bills of lading are intended to perform the three functions of paper bills lading, the thesis concludes that the present English law does not recognize the electronic bills of lading. Therefore, the use of electronic bills of lading in practice currently are based on contract forms mentioned earlier, especially with absence of the intended regulations provided for under subsection 5(1) of COGSA 1992.

Consequently and following the international approach, the thesis may recommend to urge and encourage the entry into force of the Rotterdam Rules through the role of concerned international organizations and other bodies. These originations may increase the awareness and knowledge about the advantages of the Rotterdam Rules. Thus, such originations may lead a role to encourage governments to accede to these Rules. Moreover, the thesis may recommend the adoption of a new comprehensive model law that provides for the three functions of electronic bills of lading, not only one function as in MLETR that provides for the document of title function only.

Following, the English law approach, the thesis may recommend the enactment of the regulations referred to earlier under subsection 5(1) of COGSA 1992. The thesis also may recommend that the new regulations must be clear in the provision for the three functions to be

performed by electronic bills of lading, especially as documents of title. The thesis concludes this chapter and the whole discussion with its contribution to knowledge, particularly in the subject of electronic bills of lading and suggests certain future studies in the subject.

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Appendix 1

1 Interview questions

The following interview questions were reviewed and approved by the Research Ethics Committee (REC) of the World Maritime University (WMU):

The interview questions basically focus on the three main functions of electronic bills of lading as equivalents to their paper counterparts. The questions are as follows:

1. Could you briefly describe the mechanism of issuing your electronic bill of lading?
2. Does your electronic bill of lading function as a receipt for the goods? If yes, how is this achieved?
3. Does your electronic bill of lading function as an evidence of the contract of carriage of goods by sea? If yes, how is this achieved?
4. The following sub-questions concern the third function of the bill of lading as a document of title and its negotiability feature:
 - a. How can your electronic bill of lading meet the requirement of signature and on what legal base?
 - b. How can your electronic bill of lading deal legally with the problem of the physical possession of the electronic bill of lading since this physical possession means the possession of the goods?
 - c. How can your electronic bill of lading achieve, under the existing law, the “intrusion” of a non-contracting party, the endorsee to the contract of carriage of goods by sea as it is evidenced in an electronic bill of lading, especially when it claims delivery of the cargo?
5. From your information, is your electronic bill of lading issued frequently under Incoterms?
6. How do you view the progression and tendency towards the use of electronic bills of lading in recent times?

Thank you in advance for your valuable time and cooperation.

2 essDOCS interview

essDOCS' answers to the interview questions might be summarized in the following indented passages:

1. Could you briefly describe the mechanism of issuing your electronic bill of lading?

There are two ways to draft a bill of lading in the essDOCS system. The first way is by data entry through a word document or an excel document on the essDOCS platform. The second way is based on data available on the essDOCS online system.

2. Does your electronic bill of lading function as a receipt for the goods? If yes, how is this achieved?

The receipt function would be achieved simply by having the terms covered in bills of lading electronically. Moreover, under the essDOCS agreement, there is a specific provision which provides that the electronic bill will act like a receipt, essentially like paper bill.

3. Does your electronic bill of lading function as an evidence of the contract of carriage of goods by sea? If yes, how is this achieved?

... The agreement under the essDOCS is one agreement which ensures that the electronic bill of lading is the legal and functional equivalent of paper bill.

4. The following sub-questions concern the third function of the bill of lading as a document of title and its negotiability feature:

- a. How can your electronic bill of lading meet the requirement of signature and on what legal base?

There is an electronic signature in the essDOCS system. This electronic signature is treated as an equivalent of a manning signature according to the agreement.

- b. How can your electronic bill of lading deal legally with the problem of the physical possession of the electronic bill of lading since this physical possession means the possession of the goods?

The essDOCS ensures that only one party has control over the original electronic bill. The party could endorse the bill onto the next party in the chain or surrender

it to the carrier to take delivery of the cargo. So, the physical possession of a paper bill is replicated through the electronic rights of control over the electronic record. The party would identify that he wanted to transfer either to bearer or to order, and he can do either exactly the same way he would as paper.

- c. How can your electronic bill of lading achieve, under the existing law, the “intrusion” of a non-contracting party, the endorsee to the contract of carriage of goods by sea as it is evidenced in an electronic bill of lading, especially when it claims delivery of the cargo?

If the transferee is not a party or user to the essDOCS system, the solution is by issuing to him a paper bill of lading.

5. From your information, is your electronic bill of lading issued frequently under Incoterms?

The Incoterms permit the use of electronic documentation. But it is up to the parties to contractually agree to use the essDOCS system for the transaction.

6. How do you view the progression and tendency towards the use of electronic bills of lading in recent times?

There is a massive shift recently in acceptability and move towards dematerialization. Finally, law is not so much of a barrier now.

3 Bolero interview

Bolero’s answers to the interview questions might be summarized in the following indented passages:

1. Could you briefly describe the mechanism of issuing your electronic bill of lading?

There are two ways to create a Bolero EBL. The first way is to prepare a paper document in the same way used in a traditional bill of lading and scan and upload it into the Bolero system. The second way is based on the structure data in the Bolero system. It is completely electronic.

2. Does your electronic bill of lading function as a receipt for the goods? If yes, how is this achieved?

The document contains the details of the cargo, and effectively that is a confirmation from the carrier that he has either shipped on board or received the shipment or the goods described in the document.

3. Does your electronic bill of lading function as an evidence of the contract of carriage of goods by sea? If yes, how is this achieved?

The carrier also attaches his terms and conditions. His terms and conditions are part of the contract. So, Bolero bills of lading include the same terms as in traditional paper bills.

4. The following sub-questions concern the third function of the bill of lading as a document of title and its negotiability feature:

- a. How can your electronic bill of lading meet the requirement of signature and on what legal base?

Every message that passes through the Bolero system is digitally signed. The parties agree to use a digital signature according to the multilateral agreement of Bolero. The whole system of Bolero is a messaging platform.

- b. How can your electronic bill of lading deal legally with the problem of the physical possession of the electronic bill of lading since this physical possession means the possession of the goods?

The key cleverness in the particular aspect of a bill is its transferability, and that is achieved by the practice of novation. The holder, who has the control of a singular electronic bill, can pass the holdership to somebody else and the new holder will control that electronic bill. The holder or holdership is a very important term and it is an equivalent to the possession of the bill.

- c. How can your electronic bill of lading achieve, under the existing law, the “intrusion” of a non-contracting party, the endorsee to the contract of carriage of goods by sea as it is evidenced in an electronic bill of lading, especially when it claims delivery of the cargo?

The holder who wants to transfer the electronic bill to a non-contracting party, will issue to him a paper bill of lading.

5. From your information, is your electronic bill of lading issued frequently under Incoterms?

The Incoterms is related to the sale contract and not to a bill of lading issue.

6. How do you view the progression and tendency towards the use of electronic bills of lading in recent times?

The tendency is still relatively small. There is a willingness towards dematerialization of commercial documents in the market.



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