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Legal Review On Indonesian "Electronic Data Interchange Policy On International Trade"

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Abstract: *This article purported to explore legal review on Indonesian electronic data interchange policy on international trade. It consist of six part namely historical background of EDI such as the origin of EDI, converted into tape, the file transfer protocol (FTP), the ANSIX12 standards, user's companies in the USA and communication between business partners; part two consist of international perspective includes WPF and UNCITRAL, world trade organization (WTO), Dave Whiteley; part three consist of basic agreement such as international perspective and Indonesian perspective, method for resolving any possible disputes; part four consist of validity of the electronic documents such as UNCITRAL model law and Indonesian law perspective, validity of the electronic signature such as national laws, UNCITRAL model law, Singapore and Indonesian law; part five consist of UNCITRAL model law and Singapore electronic act and finally conclusion as closing provision.*

Keywords: *Electronic Data Interchange, International Trade, Validity.*

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I. INTRODUCTION

The first initiative of World Trade Organization (WTO) to establish a single market in the world has hugely impacted the development of international business transaction. The effect could be spotted in numerous aspects, including economic, law, and other social aspects. In order to implement nations consent, states are creating union with other states in order slash trade barriers among them. European Union remains as one of the biggest role model in demonstrating single market policy on the European continent, although some development has evidenced a contra positive result, taking British Exit as a recent example.

While the EU are rising on the west side of the world, the eastern states are also creating states union. South East Asia states, consisting of Singapore, Indonesia, Philippines, Vietnam, Malaysia, Cambodia, Brunei, Thailand, Myanmar and Laos create ASEAN in order to strengthen relationship through social and culture. However, in its development, ASEAN members have agreed on creating AFTA (ASEAN Free Trade Agreement), making South East Asia to be a single market which aims to collaborate in enhancing the area's economic.

The liberalization along with the technology development has resulted in the demand of low price and fast legal certainty, which contributes to the development of Electronic Data Interchange (EDI). Change of data, agreement and other forms of documents through the internet are included in the scope of EDI. However, there are still some questions arises regarding the legal framework, validity and its quality as a proof before national and international judiciary bodies. This paper aims to answer these problematics in both international and Indonesian regulation perspectives.

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II. THE BRIEF HISTORY OF EDI
HISTORICAL BACKGROUND OF EDI

1. The Origins of EDI

The origins of EDI can be traced back to the 1960s, when computer systems acquired the ability to exchange data with each other. Ed Guilbert, the father of EDI, expanded upon the standardized shipping manifests. He had developed with U.S. Army officers during the 1948 Berlin airlift. Guilbert's expansion was an electronic message format for sending cargo information. The first EDI messages were sent in 1965 when the Holland-American steamship line sent trans-Atlantic shipping manifests using telex messages, which could send a full page of information in roughly 2 minutes.

2. Converted Into Tape

These messages were then converted into tape that could be loaded onto computers. In 1968, the Transportation Data Coordinating Committee (TDCC) was formed by a group of railroad companies to develop EDI standard formats, as oceanic shipping companies, railroads, airlines, and trucking companies were exchanging electronic messages. These messages were in varied formats, and it was creating confusion and problems.[3] Due to differing document formats, it was difficult for a company to exchange data electronically with many trading partners. What was needed was a standard format for the data being exchanged.[4]It was not until the late 1970's that work began for national EDI standards. Both users and vendors input their requirements to create a set of standard data formats that[5]: (a) are hardware independent; (b) are unambiguous, such that they could be used by all trading partners; (c) reduces the labor-intensive tasks of exchanging data (e.g., data re-entry); and (d) allows the sender of the data to control the exchange, including knowing if and when the recipient received the transaction.

3. The File Transfer Protocol (FTP)

By 1973, the File Transfer Protocol (FTP) was published and enabled file transfer between internet sites. In 1975, the TDCC releases the first EDI standards, of which Guilbert was a major contributor. In this year, the first Value Added Network (VAN), Telenet, was established. Telenet was the first commercial packet-switching network which added more than the basic service of linking computer systems, hence the name VAN. In 1977, a group of grocery companies and their business partners begin drafting an EDI project. The TDCC is renamed the Electronic Data Interchange Association (EDIA) in 1978. Later in that year, the EDIA is chartered by the American National Standards Institute and becomes the ANSIX12 committee. The ANSIX12 committee is responsible for the publication of EDI standards.

4. The ANSIX12 Standards

In 1981, the ANSIX12 standards are published and include the transportation, food, drug, warehouse, and banking industries. The following year, companies in the automotive industry, such as Ford and General Motors and large retailers, including Sears and Kmart, begin to mandate EDI for their suppliers. The EDIFACT EDI standard is created by the UN in 1985 to assist with the global reach of technology. While EDIFACT was adopted by the automotive industry, the other United States industries stuck with the ANSIX12 standard.

5. User's Companies in the USA

Nearly 12,000 companies in the Unites States of America (USA) were using EDI by 1991. In 1996, The Uniform Code Council started EDI over the internet (EDIINT) to standardize the communications of EDI data over the internet. In 2001, the AS/2 communication standard is published by the UCC. The AS/2 enables encrypted transmission of data over the internet, and uses the HTTP protocol. By 2004, Wal-Mart adopted the

[3] "EDI History" *Logic Broker*, accessed July 13, 2017, http://www.logicbroker.com/edi-history/.
[4] John J. Garguilo and Paul Markovitz, *Guideline for the Evaluation of Electronic Data Interchange Products* (USA: National Institute of Standards and Technology, 1996), page 2.
[5] John J. Garguilo and Paul Markovitz, *Guideline for the Evaluation of Electronic Data Interchange Products* (USA: National Institute of Standards and Technology, 1996), page 2-3.

AS/2 standard to communicate with suppliers. While other major retailers follow, many retailers continued to use VAN communication.[6]

6. Communication Between Business Partners

Today, over 100,000 companies in the United States use EDI to communicate with business partners. The AS/2 has risen in popularity, as it is less expensive than VAN and eliminates the need to go through a 'middle man'. Companies such as Target and Lowe's utilize AS/2, and require all of their suppliers to use it too. Over 90% of Fortune 500 companies are EDI capable, but more and more small businesses are adopting EDI as well. This reflects just how important EDI has become in regards to business to business relationships and communication. Since the 1960s, EDI has been experiencing significant development. The detail of its development could be found on the following table:

Major Event in the Historical Development of Electronic data Interchange Applications[7]

Year	Event
1968	Ten California banks form SCOPE to recommend specific rules and procedures for paperless payments and deposits using magnetic tapes. The transportation industry forms the TDCC having recognized the problems of communicating with different formats, protocols, and media speed.
Mid-1970s	National Data Corporation, General Electric, and several other companies develop systems using their time-sharing networks for banks to store and for customers to retrieve balance and transaction information.
1975	The ACH network begins to process Social Security payments.
1976	American Hospital Supply Corporation (now part of Baxter Healthcare Corporation) introduces MAP, a proprietary computer order-entry system.
1978	The U.S. Federal Reserve implements interregional exchange among automated clearinghouses. It recommends the use of a More-and-retrieve system for communications and grocery industry adaptation of the TDCC message format system.
1978/1979	ANSI forms the ASC X.12 to develop uniform, variable-length, cross-industry standards. It builds on the message format system developed by the TDCC.
1981	The AIAG, a nonprofit trade association, is formed by members of middle management in vehicle manufacturing companies and their suppliers. NACHA introduces the first corporate trade payment formats: CCD and CTP.
1982	JEDI is formed to combine dictionaries. EDI pilots are developed in Canada under the auspices of the Grocery Products Manufacturer; of Canada and another by the drug industry. The Public Warehousing Industry develops WINS.
1983	ANSI X.I2 publishes its first standards: ANSI X.12 standards become common standard for cross-country standards.
1984	The West European Technical Assessment Group produces an EDI standard that later becomes the basis for EDIFACT.
1985	EDI Council of Canada formed.
1986	General Motors announces a program to pay its suppliers electronically.
1987	WINS and UCC propose merging standards. ISO 9737 (international syntax) is approved.
1988	The AIAG realizes that U.S. auto makers and their suppliers need a standard, developed by ANSI.
1989	Canadian Inter-Financial Institutions EDI Committee forma responsible for establishing standards for financial institutions exchanging transactions with each other through EDI.
1992	Canadian Payments Association approves standards and guidelines applicable to EDI transactions.
1993	The Department of Defense implements a variety of pilot EDI systems at a number of buying installations.
1995	The ISO/IEC JTCl/SC30 is established. ISO, representing more than sixteen countries from Europe, Pan America. and Asia, announces the availability of reference models for open-EDI, which is the new framework for coordinating standards development.

[6] "EDI History" *Logic Broker*, accessed July 13, 2017, http://www.logicbroker.com/edi-history/.
[7] Hossein Bidgoli, *Electronic Commerce: Principles and Practice* (USA: Academic Press, 2002), 160-162.

1996/1997	The UN's CEFACT and ANSI's ASC X.12 create prototypes of model-generated EDI standards and discuss the institutional changes necessary to implement model driven standards development and maintenance process.
1998	The use of Internet for EDI transactions is considered as an alternative to traditional methods for communications.
2005	According to Jupiter Communications, business-to-business e-commerce online will approach $6.3 trillion (estimates).

Explanation of abbreviations in the table: "SCOPE" Special Committee on Paperless Entities; "TDCC" Transportation Data Coordinating Committee; "ANSI" American National Standards Institute; "ASC" Accredited Standards Committee; "CCD" Cash Concentration or Disbursement; "JEDI" Joint Electronic Data Interchange; "WINS" Warehousing Industry Network Standards; "EDIFACT" EDI for Administration, Commerce, and Transport; "UCC" Uniform Code Council; "AIAG" Auto Industry Action Group; "ISO/IEC JTCl/SC30" International Standards Organization/International Electrical Committee Joint Technical Committee/ Standards Committee 30.

III. THE DEFINITION OF EDI

1. International Perspectives

a. WPFITP and UNCITRAL

Based on Recommendation No.26[8] adopted by the Working Party on Facilitation of International Trade Procedures (WPFITP), Geneva, March 1995, ECE/TRADE/WP.4/R.1133/Rev.1 [Edition 96.1] by The United Nations Economic Commission for Europe (UNECE), Electronic Data Interchange (EDI) is the electronic transfer from computer to computer of commercial or administrative transactions using an agreed standard to structure the transaction or message data,[9] whilst The United Nations Commission on International Trade Law (UNCITRAL), based on UNCITRAL Model Law on Electronic Commerce, in the Article 2(b) states that Electronic data interchange (EDI) "means the electronic transfer from computer to computer of information using an agreed standard to structure the information,"[10]

b. World Trade Organization (WTO)

The WTO defines the EDI as an activity that usually requires the exchange of documents and information between computers of two businesses without human intervention. Its purpose is to lower costs and speed up bidding, order taking, invoicing, and so on,[11] whilst Mitsuo Matshusita and Dukgeun Ahn define the EDI as a paperless electronic data processing system.[12] Kim Viborg Anderson said that EDI denotes the direct computer-to-computer exchange of standardized business transaction documents, purchase orders, letters of discharge, invoices, etc. between two separate organizations.[13]

c. Dave Whiteley

[8] This Recommendation has been developed under Project 4.1 of the Action Programme on the Commercial and Legal Aspects of Trade Facilitation adopted by the Working Party on Facilitation of International Trade Procedures, as set forth in TRADE/WP.4/R.697 and includes the Model Interchange Agreement for the International Commercial Use of Electronic Data Interchange set forth in Annex A.

[9] Recommendation No.26, Annex Model Interchange Agreement for The International Commercial Use of Electronic Data Interchange, page 321.

[10] UNCITRAL Model Law on Electronic Commerce with Guide to Enactment 1996,with Additional Article 2 (b), U.N. Sales No. E.99.V.4 (1999), available at http://www.uncitral.org/pdf/english/texts/electcom/0589450_Ebook. pdf. Accessed July 12, 2017.

[11] Marc Bacchetta, et al.,*World Trade Organization Spesial Studies No. 2 on Electronic Commerce and the role of the WTO* (Geneva: WTO Publications, 1998), page 9.

[12]Mitsuo Matshusita and Dukgeun Ahn, *WTO and East Asia; New Perspectives* (London: Cameron May, 2004), page 212.

[13] Kim Viborg Anderson, *EDI and Data Networking in the Public Sector* (Copenhagen: Kluwer Publisher, 1998), page 2.

Dave Whiteley on "*Doing Business Electronically: A Global Perspective of Electronic Commerce*" said that EDI is accepted 'technology' in large organizations that are heavily reliant on purchases from their suppliers. EDI is an enabling technology for just-in-time manufacture and quick-response supply. EDI is normally initiated with a limited number of trading partners and on specific trade transactions, the discovery and introductory stages of EDI development. The next stage is the integration stage; this involves more trading partners, additional transactions in the trade cycle and the integration of EDI with the organization's business information systems. A fully operational EDI system requires a critical mass of electronic transactions and close co-ordination with trading partners. This integration process leads to, what has now become known as, an Inter-organization System (IOS) and is part of the strategic IS/IT infrastructure of the organization. The development of a mature EDI infrastructure so alters the nature of logistics that it sets up new ways of doing business and allows for changes in the nature of the product itself, mass-customization been a prime example. This development is the innovation stage of EDI maturity and it gives a new frontier of opportunity for competitive advantage.[14] From the definitions above-mentioned, we could conclude that EDI possess the following elements:

(a) Electronic transfer between devices, *inter alia* computer;
(b) Lowering costs, speed up bidding, order taking, invoicing, and so on;
(c) Using a standardized format.

2. Indonesia National Perspectives

a. Presidential Regulation No.10 Year 2008

Article 1(8) of Indonesian Presidential Regulation Number 10 of 2008[15] defines that EDI is a legal act done through an electronic system between the parties who exchange data.[16] Based on Article 1(1) of Indonesia Regulation of the Director General of Customs and Excise (DGCE) Decree No. P-34/BC/2010[17] EDI is defined as the submissions of customs documents in the form of integrated electronic data interchange through inter applications and inter organizations communication by using the data communications systems.[18]

b. Vincent Gaspersz

Vincent Gaspersz defines EDI as a paperless transaction documents, but electronically such as purchase orders, delivery notices, invoices, using standard document formats.[19] Dr. Sukarmi, S.H., M.H. defines that EDI is an electronic transfer from computer to computer for information created in a certain standard.[20] Conclusively, EDI could be generally defined to contain the following elements : (a) Legal act; (b) Through data exchanging; and (c) Using electronic system.

IV. LEGAL FRAMEWORK OF EDI

[14] Dave Whiteley, *Doing Business Electronically; A Global Perspective of Electronic Commerce* (London: Springer-Verlag, 1998), page xi.

[15] Presidential Regulation *Concerning Use of Electronic Systems in Indonesia Framework national Single Window,* Presidential Reg.10 of 2008.

[16] Indonesia President Regulation Number 10 of 2008 Concerning Use of Electronic Systems in Indonesia Framework national Single Window on Article 1(8).

[17].Director General of Customs and Excise (DGCE) *Concerning Trying of Electronic Data Interchange (EDI) Implementation of Notification of Imported Goods to be Piled in Bonded Hoarding Place (BC 2.3),* Decree No. P-34/BC/2010.

[18] Regulation of the Director General of Customs and Excise Number P-34/BC/2010 Concerning Trying of Electronic Data Interchange (EDI) Implementation of Notification of Imported Goods to be Piled in Bonded Hoarding Place (BC 2.3) on Article 1(1).

[19] Vincent Gaspersz, *Production Planning and Inventory Control Berdasakan Pendekatan Sistem Terintegrasi MRP II dan JIT Menuju Manufakturing 21* (Jakarta: PT GramediaPustakaUtama, 1998), 223.

[20] Dr. Sukarmi, S.H., M.H., *(Prespektif Cyber Law) Kontrak Elektronik dalam Bayang-Bayang Pelaku Usaha* (Bandung: Pustaka Sutra), 75.

1. Basic Agreement

Basically EDI requires an agreement between trading partners, in regulating all related EDI legal issues, in addition to determining the standard data format for their computer to computer communications. In the absence of clear governing legal rules and principles, an interchange agreement provides a company with a readily available solution for formalizing the EDI relationships between it and its trading partners. It is obvious that well-drawn trading partner agreement (hereinafter "TPA") considered as primary source of EDI law can prevent disputes by settling legal questions in advance.[21]

2. International Perspective

In the perspective of International law, in order to help trading partners to draft valid, enforceable and all-caught TPA Model TPAs were elaborated throughout the world. The first set of EDI rules was formed in 1987, working in cooperation with the Working Party; the International Chamber of Commerce developed and produced the Uniform Rules of Conduct for Interchange of Trade Data by Tele-transmission (the UNCID Rules; ICC Publication no. 452). The UNCID Rules were aimed at facilitating the interchange of trade data affected by tele-transmission, through the establishment of agreed rules of conduct between parties engaged in such transmission.[22]

The UNCID rules are created to provide a background for users of EDIFACT and other systems of EDI.[23] However, these rules were primary used in Europe and have not caught on among North American traders,[24] which preferred "homemade" standards. Thus, in June 1990, the American Bar Association (ABA) published a Model Trading Partner Agreement and Commentary together with explanatory report, which was developed by the ABA's Electronic Messaging Service Task Force. The ABA Model's provisions consisted of three rough categories[25]: (a) the enforceability of EDI contracts; (b) the manner in which EDI is concluded; and (c)the trade terms and conditions applicable to the underlying transactions facilitated by EDI.

Besides the USA, Model Trading Partner Agreements were also elaborated in other countries. The most important of them are the EDI Association Standard Electronic Data Interchange Agreement, prepared by the EDI Association of the United Kingdom, and the EDI Trading Partner Agreement and Commentary prepared by the Legal and Audit Issues Committee of the EDI Council of Canada.[26]

All above-mentioned Model TPAs (except UNCID rules) were based on the national law of the countries where they were elaborated. It created significant obstacles for international using of EDI. To solve such problem in 1991 the Model Interchange Agreement for the International Commercial Use of Electronic Data Interchange has been developed as a part of a project under the Action Program on the Legal and Commercial Aspects of Electronic Data Interchange adopted by United Nations Economic Commission for Europe Working Party on Facilitation of International Trade Procedures (UN/ECE WPFITP).[27]

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[21] David Barka, "EDI and American Law: A Practical Guide, by Benjamin Wright, J.D. TDCC: The Electronic Data Interchange Association, Book Review 1990," *Berkeley Law* Accessed July 13, 2017, http://www.law.berkeley.edu/journals/btlj/articles/05_1/Barkan%20Book%20Review/html/text.html#B.

[22] Recommendation No.26, Annex Model Interchange Agreement for The International Commercial Use of Electronic Data Interchange, Background, 320.

[23] Uniform Rules Of Conduct For Interchange Of Trade Data By Tele-transmission, Introductory Note, Chapter 1, Article 1. http://www.unece.org/trade/untdid/texts/d210_d.htm.

[24] Jane K. Winn, Benjamin Wright, *Law of Electronic Commerce,* Supra Note 2, at 5.62.

[25] Jane K. Winn, Benjamin Wright, *Law of Electronic Commerce,* Supra Note 2, at 5.62.

[26] Michael S. Baum, Henry H. Perritt, Jr, *Electronic contracting, publishing, and EDI law,* 1998, Wiley Law Publication: 54.

[27] Recommendation No.26, Annex Model Interchange Agreement for The International Commercial Use of Electronic Data Interchange, 319.

In 1995 UN/ECE WPFITP recommended the international community of EDI users, including commercial parties, to use this Model Agreement in connection with international trade transactions.[28] The main its feature was combining of element of more than 20 Model Trading Partner Agreements from more than 15 countries (including UNCID Rules and the ABA Model TPA).[29] It intended to ensure that EDI transactions are legally effective, regardless of which national legal system may be applied.

Generally speaking, Model Interchange Agreement covers the following aspects of EDI[30]:
(a).Selection of EDI messages, message standards and methods of communication.
(b). Responsibilities for ensuring that the equipment, software and services are operated and maintained effectively;
(c).Procedures for making any systems changes, which may impair the ability of the trading partners to communicate.
(d).Security procedures and services.
(e).The points at which EDI messages have legal effect;
(f).The roles and contracts of any third party service providers;
(g).Procedures for dealing with technical errors;
(h).The needs (if any) for confidentiality;
(i). Liabilities in the event of any delay or failure to meet agreed EDI communications requirements;
(j).The laws governing the interchange of EDI messages and the arrangements of the parties;

3. Indonesian Perspective

In the perspective of Indonesia law, EDI has been mentioned in several laws and regulations, such as Article 1(1) Law No. 19 of 2016, regulates that EDI belongs to electronic information, as well to text, sounds, images, maps, drafts, photographs, electronic data interchange (EDI), electronic mails, telegrams, telex, telecopy or the like, letters, signs, figures, access codes, symbols or perforations. UUITE set that Electronic Information and/or Electronic Documents and/or the printouts thereof are valid legal evidence. Any Electronic System Provider (include EDI Provider) must provide Electronic Systems in reliable and secure manner and shall be responsible for the proper operation of the Electronic Systems , and any Electronic System Provider is required to operate Electronic Systems in compliance with the following minimal requirements :
(a). can redisplay Electronic Information and/or Electronic Documents in their entirety in accordance with the retention period as provided for by Rules;
(b). can protect the availability, entirety, authenticity, confidentiality, and accessibility of Electronic Information in the Provision of Electronic Systems;
(c). can operate in compliance with procedures or guidelines for the Provision of Electronic Systems;
(d). are furnished with procedures or guidelines that are announced with languages, information, or symbols that are understandable to parties attributed to the Provision of Electronic Systems; and
(e).adopt sustainable mechanism in order to maintain updates, clarity, and accountability for the procedures or guidelines;

Further provisions on Provision of Electronic Systems has been regulated by Government Regulation No. 82 of 2012 On Implementation of Electronic System and Transactions. UUITE also governs agreement between trading partners (TPA), which in UUITE is called an Electronic Contract, which contains Electronic Transactions between the parties. Article 18 UUITE, regulates that Electronic Transactions that are stated in Electronic Contracts shall bind on parties. Parties shall have the power to choose law applicable to international Electronic Transactions they enter and if parties do not make choice of law in international Electronic Transactions, the applicable law shall be under the principles of the Private International Law. Same as the Electronic Systems, the Electronic Transactions has been regulated by Government Regulation No. 82 of 2012 On Implementation of Electronic System and Transactions.

[28] Recommendation No.26, Annex Model Interchange Agreement for The International Commercial Use of Electronic Data Interchange, Chapter I Background, Article 6, 320.
[29] Recommendation No.26, Annex Model Interchange Agreement for The International Commercial Use of Electronic Data Interchange, Chapter II Preparation of the Model Agreement, Article 9, 320.

[30] Recommendation No.26, Annex Model Interchange Agreement for The International Commercial Use of Electronic Data Interchange, An Introduction to Interchange Agreements, 322.

The arrangement of information and electronic transactions in the UUITE refers to several international instruments, such as the UNCITRAL Model Law on Electronic Commerce and the UNCITRAL Model Law on Electronic Signature. This section is intended to accommodate the needs of business people on the internet and the general public in order to obtain legal certainty in conducting electronic transactions

4. Methods for Resolving Any Possible Disputes.

The main goal is to help parties in the process of drafting of their own TPA. Thus, parties have the right to deviate from the model provisions by abandoning some of them or by adding new ones reflecting the specificity of perspective relationships. Introduction to Model Interchange Agreements (IMA) for the International Commercial Use of Electronic Data Interchange (ICUEDI) provides that this Model Agreement is an entirely voluntary.[31] Moreover, parties are strongly encouraged to closely scrutinize provisions of their TPAs and use independent judgment as to the effectiveness and advisability of using of this Model Agreement provisions.[32]

V. THE VALIDITY OF DOCUMENTS & SIGNATURE SENT BY EDI

1. Validity of the Electronic Documents

According to UNECE, based on Recommendation No.26 adopted by the Working Party on Facilitation of International Trade Procedures, Geneva, March 1995, ECE/TRADE/WP.4/R.1133/Rev.1 [Edition 96.1], the parties agree that valid and enforceable obligations may be created by the communication of Messages incompliance with this Agreement. The parties expressly waive any rights to object to the validity of a transaction solely on the ground that communication between the parties occurred through the use of Electronic Data Interchange.[33] Without regard to the absence of any writings and written signatures, to the extent permitted by law, the records of Messages maintained by the parties shall be admissible and may be used as evidence of the information contained therein.[34] A contract concluded through the use of Electronic Data Interchange under this Agreement shall be deemed to be formed when the Message sent as acceptance of an offer has been received.[35]

a. UNCITRAL Model Law

UNCITRAL Model Law on Electronic Commerce, state in the Article 5, that Information shall not be denied legal effect, validity or enforceability solely on the grounds that it is in the form of a data message.[36] Article 5 embodies the fundamental principle that data messages should not be discriminated against, i.e., that there should be no disparity of treatment between data messages and paper documents. It is intended to apply notwithstanding any statutory requirements for a "writing" or an original.

That fundamental principle is intended to find general application and its scope should not be limited to evidence or other matters covered in chapter II. It should be noted, however, that such a principle is not intended

[31] Recommendation No.26, Annex Model Interchange Agreement For The International Commercial Use Of Electronic Data Interchange, An Introduction to Interchange Agreements, 322.

[32] Foreword to ABA Model TPA, Commercial Use of Electronic Data Interchange: A Report and Model Training Partner Agreement, Prepared by the Electronic Messaging Services Task Force, UCC Committee, ABA Section of Business Law, 1992: 67.

[33] Recommendation No.26, Annex Model Interchange Agreement for The International Commercial Use of Electronic Data Interchange, 324.

[34] Recommendation No.26, Annex Model Interchange Agreement for The International Commercial Use of Electronic Data Interchange, Section 4.2, 324.

[35] Recommendation No.26, Annex Model Interchange Agreement for The International Commercial Use of Electronic Data Interchange, Section 4.3, 324.

[36] UNCITRAL Model Law on Electronic Commerce with Guide to Enactment 1996, Article 5, U.N. Sales No. E.99.V.4 (1999), available at http://www.uncitral.org/pdf/english/texts/electcom/ 05-89450_Ebook.pdf. Accessed July 14, 2017.

to override any of the requirements contained in articles 6 to 10. By stating that "information shall not be denied legal effectiveness, validity or enforceability solely on the grounds that it is in the form of a data message", article 5 merely indicates that the form in which certain information is presented or retained cannot be used as the only reason for which that information would be denied legal effectiveness, validity or enforceability. However, article 5 should not be misinterpreted as establishing the legal validity of any given data message or of any information contained therein.[37]

One example of a country in Southeast Asia that ratifies the UNCITRAL provisions is Singapore. Article 6 of Singapore Electronic Act; stipulate that, for the avoidance of doubt, it is declared that information shall not be denied legal effect, validity or enforceability solely on the ground that it is in the form of an electronic record.[38] Its means there is no record can be considered to be illegal solely on the ground that it is in an electronic form; in other words, the mere fact that some information was stored in an electronic form can never be used to invalidate that information in any manner. The Singapore Electronic Act gives legal validity to all electronic records provided certain conditions are fulfilled. This provision is the same as that in Article 5 of UNCITRAL Model Law on Electronic Commerce.

b. Indonesian Law Perspective

In the perspective of Indonesia law, provisions on the validity of documents sent by EDI, regulated in UUITE, because, as explained earlier, that EDI is one of the Electronic Information regulated in the UUITE. Article 5 UUITE, regulates that[39]:

(a).Electronic Information and/or Electronic Documents and/or the printouts thereof are valid legal evidence.
(b).Electronic Information and/or Electronic Documents and/or the printouts thereof as intended by paragraph (1) shall be the expansion of lawful means of proof in accordance with the Law of Procedure applicable in Indonesia.
(c).Electronic Information and/or Electronic Documents shall be declared to be lawful if using Electronic Systems in accordance with provisions as governed by this Law.

Provisions on Electronic Information and/or Electronic Documents as intended by paragraph (1) shall not apply to:
(a).certificates that under Laws must be made in writing form; and
(b).certificates along with their papers that under Laws must be made in notary deed or deed made by land conveyances.

Article 6 UUITE, also regulates that, where other provisions are in place other than those regulated in Article 5 paragraph (4) requiring that information must be in writing or original form, Electronic Information and/or Electronic Documents shall be deemed to be lawful to the extent information contained therein is accessible, displayable, assured as to its integrity, and accountable in order to be explanatory.[40]

In accordance with Article 5 (3) of the obligation to use a legitimate electronic system, then Article 7 regulates that any Person who asserts rights, affirms existing rights, or denies other Persons' rights with respect to the existence of Electronic Information and/or Electronic Documents must ensure that Electronic Information and/or Electronic Documents with him/her originate in Electronic Systems eligible under Laws and Regulations.[41]

2. Validity of the Electronic Signatures.

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[37] UNCITRAL Model Law on Electronic Commerce with Guide to Enactment 1996, Article-by-Article-Remark, Article 5, U.N. Sales No. E.99.V.4 (1999), available at http://www.uncitral.org/pdf/english/texts/electcom/05-89450_Ebook.pdf. Accessed July 14, 2017.

[38] Singapore Act 16 of 2010—Electronic Transactions Act 2010, Article 6

[39] Indonesian Law No. 19 of 2016 on the Amendment to Law No. 11 of 2008 on Electronic Information and Transactions, in the Article 6.

[40] Indonesian Law No. 19 of 2016 on the Amendment to Law No. 11 of 2008 on Electronic Information and Transactions, in the Article 7.

[41] Indonesian Law No. 19 of 2016 on the Amendment to Law No. 11 of 2008 on Electronic Information and Transactions, in the Article 5 (1)-(4).

a. National Laws

According to UNECE, based on Recommendation No.26 adopted by the Working Party on Facilitation of International Trade Procedures, Geneva, March 1995, ECE/TRADE/WP.4/R.1133/Rev.1 [Edition 96.1], states that, certain national laws may permit a trading partner to object to the validity of certain communications on the basis that a writing or signed writing is otherwise required. Section 4.1 of the Agreement makes clear that the validity of a transaction may not be challenged by either party because it was EDI in nature. This provision may not always be enforceable under some legal systems; the choice of governing national law under Section 7.1 maybe influenced by this consideration. In considering that the use of EDI results in the elimination of written signatures, parties are encouraged to evaluate the security procedures and services which may be selected and used between the trading partners. Though electronic signatures may be acceptable between the parties and specified in the Technical Annex, no assurance can be given that all electronic signature services will perform all of the same functions (including legal functions) as traditional signatures used in similar contexts.[42]

b. UNCITRAL Model Law

According to UNCITRAL Model Law on Electronic Signature in the Article 2, states that, nothing in this Law, except article 5, shall be applied so as to exclude, restrict or deprive of legal effect any method of creating an electronic signature that satisfies the requirements referred to in article 6, paragraph 1,or otherwise meets the requirements of applicable law.[43]

Article 6 regulates the Compliance with a requirement for a signature, that[44]:Where the law requires a signature of a person, that requirement is met in relation to a data message if an electronic signature is used that 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. Paragraph 1 applies whether the requirement referred to therein is in the form of an obligation or whether the law simply provides consequences for the absence of a signature.

An electronic signature is considered to be reliable for the purpose of satisfying the requirement referred to in paragraph 1 if:

(a).The signature creation data are, within the context in which they are used, linked to the signatory and to no other person;

(b).The signature creation data were, at the time of signing, under the control of the signatory and of no other person;

(c).Any alteration to the electronic signature, made after the time of signing, is detectable; and

(d).Where a purpose of the legal requirement for a signature is to provide assurance as to the integrity of the information to which it relates, any alteration made to that information after the time of signing is detectable.

Thereafter, Article 8 further stipulates the conduct of signatory, that[45]:Where signature creation data can be used to create a signature that has legal effect, each signatory shall:

(a). Exercise reasonable care to avoid unauthorized use of its signature creation data;

(b). Without undue delay, utilize means made available by the certification service provider pursuant to article 9 of this Law, or otherwise use reasonable efforts, to notify any person that may reasonably be expected by the signatory to rely on or to provide services in support of the electronic signature if:

(c). The signatory knows that the signature creation data have been compromised; or

(d). The circumstances known to the signatory give rise to a substantial risk that the signature creation data may have been compromised;

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[42] Recommendation No.26, Annex Model Interchange Agreement for The International Commercial Use of Electronic Data Interchange, The Commentary to the Model Interchange Agreement, Section 4.1, 328.

[43] UNCITRAL Model Law on Electronic Signature with Guide to Enactment 2001, Article 2, U.N. Sales No. E.02.V.8 (2002), available at https://www.uncitral.org/pdf/english/texts/electcom/ml-elecsig-e.pdf. Accessed July 12, 2017.

[44] UNCITRAL Model Law on Electronic Signature with Guide to Enactment 2001, Article 6, U.N. Sales No. E.02.V.8 (2002), available at https://www.uncitral.org/pdf/english/texts/electcom/ml-elecsig-e.pdf. Accessed July 12, 2017.

[45] UNCITRAL Model Law on Electronic Signature with Guide to Enactment 2001, Article 8, U.N. Sales No. E.02.V.8 (2002), available at https://www.uncitral.org/pdf/english/texts/electcom/ml-elecsig-e.pdf. Accessed July 12, 2017.

Where a certificate is used to support the electronic signature, exercise reasonable care to ensure the accuracy and completeness of all material representations made by the signatory that are relevant to the certificate throughout its life cycle or that are to be included in the certificate. A signatory shall bear the legal consequences of its failure to satisfy the requirements of paragraph 1.

c. Singapore Laws

Singapore law also stipulates the validity of electronic signatures. Article 8of Singapore Electronic Act; stipulate the requirement for signature, that where a rule of law requires a signature, or provides for certain consequences if a document or a record is not signed, that requirement is satisfied in relation to an electronic record if:

(a).a method is used to identify the person and to indicate that person's intention in respect of the information contained in the electronic record; and

(b). the method used is either:

(1)..as reliable as appropriate for the purpose for which the electronic record was generated or communicated, in the light of all the circumstances, including any relevant agreement; or

(2).proven in fact to have fulfilled the functions described in paragraph (*a*), by itself or together with further evidence.[46]

d. Indonesian Law

In Indonesia law, UUITE also stipulates on the conditions to be applied for the Electronic Signature. Article 11 paragraph (1) stipulates that Electronic Signatures shall have lawful legal force and legal effect to the extent satisfying the following requirements:

(a). Electronic Signature creation data shall be associated only with the Signers;

(b). Electronic Signature creation data at the time the electronic signing process shall be only in the power of the Signers;

(c). Any alteration in Electronic Signatures that occur after the signing time is knowable;

(d). Any alteration in Electronic Information associated with the Electronic Signatures after the signing time is knowable;

There are certain methods adopted to identify the identity of the Signers; and There are certain methods to demonstrate that the Signers have given consent to the associated Electronic Information.[47]
Further provisions on Provision of Electronic Systems has been regulated by Government Regulation No. 82 of 2012 On Implementation of Electronic System and Transactions.

VI. DIGITAL EVIDENCE IN EDI

Digital evidence or electronic evidence is any probative information stored or transmitted in digital form that a party to a court case may use at trial. Before accepting digital evidence a court will determine if the evidence is relevant, whether it is authentic, if it is hearsay and whether a copy is acceptable or the original is required.[48] Based on Recommendation No.26 adopted by the Working Party on Facilitation of International Trade Procedures, Geneva, March 1995, ECE/TRADE/WP.4/R.1133/Rev.1 [Edition 96.1], the regulation of evidence is provided in section 4.2, that without regard to the absence of any writings and written signatures, to the extent permitted by law, the records of Messages maintained by the parties shall be admissible and may be used as evidence of the information contained therein.[49]

1. UNCITRAL Model Law

[46] Singapore Act 16 of 2010—Electronic Transactions Act 2010, Article 8

[47] Indonesian Law No. 19 of 2016 on the Amendment to Law No. 11 of 2008 on Electronic Information and Transactions, in the Article 11 (1).

[48]Casey, Eoghan (2004). Digital Evidence and Computer Crime, Second Edition. Elsevier. ISBN 0-12-163104-4, 12

[49]Recommendation No.26, Annex Model Interchange Agreement for The International Commercial Use of Electronic Data Interchange, Section 4.2, 324.

UNCITRAL Model Law on Electronic Commerce also stipulates digital evidence. It is regulated in Article 9 on admissibility and evidential weight of data messages, that[50]: In any legal proceedings, nothing in the application of the rules of evidence shall apply so as to deny the admissibility of a data message in evidence: (a). on the sole ground that it is a data message; or, (b). If it is the best evidence that the person adducing it could reasonably be expected to obtain, on the grounds that it is not in its original form. Information in the form of a data message shall be given due evidential weight. In assessing the evidential weight of a data message, regard shall be had to the reliability of the manner in which the data message was generated, stored or communicated, to the reliability of the manner in which the integrity of the information was maintained, to the manner in which its originator was identified, and to any other relevant factor.

2. Singapore Electronic Act`

Like UNCITRAL, Singapore Electronic Act also regulates digital evidence, in besides Article 6 that regulates the validity of electronic documents, Article 19 of Singapore Electronic Act provides that[51]:

(a). In any proceedings involving a secure electronic record, it shall be presumed, unless evidence to the contrary is adduced, that the secure electronic record has not been altered since the specific point in time to which the secure status relates.

(b). In any proceedings involving a secure electronic signature, it shall be presumed, unless evidence to the contrary is adduced, that:

(1) the secure electronic signature is the signature of the person to whom it correlates; and

(2) the secure electronic signature was affixed by that person with the intention of signing or approving the electronic record.

In the absence of a secure electronic record or a secure electronic signature, nothing in this Part shall create any presumption relating to the authenticity and integrity of the electronic record or electronic signature.

In the perspective of Indonesia law, provisions on the digital or electronic evidence, also regulates in UUITE. As described earlier, Article 5 UUITE, on the paragraph (1) and (2) regulates that[52]:

(a). Electronic Information and/or Electronic Documents and/or the printouts thereof are valid legal evidence.

(b). Electronic Information and/or Electronic Documents and/or the printouts thereof as intended by paragraph (1) shall be the expansion of lawful means of proof in accordance with the Law of Procedure applicable in Indonesia

Besides that, digital evidence are also regulated in Article 44 UUITE, which states that means of proof on the investigation, prosecution and examination at court under the provisions of this Law shall be as follows:

(a). means of proof as intended by provisions of Laws; and

(b). other means of proof in the form of Electronic Information and/or Electronic Documents as intended by Article 1 paragraph 1 and paragraph 4 as well as Article 5 paragraphs (1), (2), and (3).[53]

VII. CONCLUSION
VIII.

EDI began in the 1960s, when computer systems acquired the ability to exchange data with each other. The emergence of EDI is motivated by the need for fast and efficient data exchange. Ed Guilbert, the father of EDI, expanded upon the standardized shipping manifests he had developed with U.S. Army officers during the 1948 Berlin airlift. Guilbert's expansion was an electronic message format for sending cargo information. Currently, over 100,000 companies in the United States use EDI to communicate with business partners.

Under International perspective, EDI could be concluded as electronic transfer between devices, *inter alia* computer, with the intention of lowering costs, speed up bidding, order taking, invoicing, and so on using a

[50]UNCITRAL Model Law on Electronic Commerce with Guide to Enactment 1996, Article-by-Article-Remark, Article 9, U.N. Sales No. E.99.V.4 (1999), available at http://www.uncitral.org/pdf/english/texts/electcom/05-89450_Ebook.pdf. Accessed July 17, 2017.

[51]Singapore Act 16 of 2010—Electronic Transactions Act 2010, Article 19

[52] Indonesian Law No. 19 of 2016 on the Amendment to Law No. 11 of 2008 on Electronic Information and Transactions, in the Article 5 (1)(2).

53Indonesian Law No. 19 of 2016 on the Amendment to Law No. 11 of 2008 on Electronic Information and Transactions, in Article 44.

standardized format. The Indonesian national perspective, on the other hand, defines EDI to possess the following elements: legal act, through data exchanging, and using electronic system.

The legal framework of EDI in the international perspective, prefer to use an agreement between trading partners, in regulating all related EDI legal issues, in addition to determining the standard data format for their computer to computer communications. In order to help trading partners to draft valid and enforceable trading partner agreement (TPA), international law establishes a TPA's model that can be used as a reference for agreement making between companies, even between countries. In the perspective of Indonesia law, EDI has been mentioned in several laws and regulations, such as Law No. 19 of 2016 on the Amendment to Law No. 11 of 2008 on Electronic Information and Transactions (UUITE). Provisions in the UUITE, also adopted several TPA's model established by international law, such as UNCITRAL Model Law on Electronic Commerce and UNCITRAL Model Law on Electronic Signature.

International law also regulated the validity of documents & signature sent by EDI, For example like Recommendation No.26, Annex Model Interchange Agreement for The International Commercial Use of Electronic Data Interchange, UNCITRAL Model Law on Electronic Commerce, and UNCITRAL Model Law on Electronic Signature, which basically states that, the parties expressly waive any rights to object to the validity of a transaction solely on the ground that communication between the parties occurred through the use of Electronic Data Interchange. In the perspective of Indonesia law, provisions on the validity of documents & signature sent by EDI regulated in UUITE, which basically states that, Electronic Information and/or Electronic Documents and/or the printouts thereof are valid legal evidence. Electronic Signatures shall have lawful legal force and legal effect as long as they meet the requirements set forth in the UUITE.

EDI as digital or electronic evidence is a very crucial issue as it leads to the final legal conclusion to be taken by the judicial body. International law regulates EDI as electronic evidence, which basically states that, electronic documents or electronic information cannot be denied of its validity as valid evidence, simply because it is in digital or electronic form. In the perspective of Indonesia law, provisions on the digital or electronic evidence, also regulates in UUITE. As described earlier, Article 5 UUITE, on the paragraph (1) regulates that Electronic Information and/or Electronic Documents and/or the printouts thereof are valid legal evidence.

BIBLIOGRAPHY

Books

[1]. Casey, Eoghan (2004). Digital Evidence and Computer Crime, Second Edition. Elsevier.
[2]. Dave Whiteley, Doing Business Electronically; A Global Perspective of Electronic Commerce (London: Springer-Verlag, 1998).
[3]. Hossein Bidgoli, Electronic Commerce: Principles and Practice (USA: Academic Press, 2002).
[4]. John J. Garguilo and Paul Markovitz, Guideline for the Evaluation of Electronic Data Interchange Products (USA: National Institute of Standards and Technology, 1996).
[5]. Kim Viborg Anderson, EDI and Data Networking in the Public Sector (Copenhagen: Kluwer Publisher, 1998).
[6]. Marc Bacchetta, et al.,World Trade Organization Spesial Studies No. 2 on Electronic Commerce and the role of the WTO (Geneva: WTO Publications, 1998).
[7]. Mitsuo Matshusita and Dukgeun Ahn, WTO and East Asia; New Perspectives (London: Cameron May, 2004).
[8]. Michael S. Baum, Henry H. Perritt, Jr, Electronic contracting, publishing, and EDI law, 1998, Wiley Law Publication.
[9]. Dr. Sukarmi, S.H., M.H., (Prespektif Cyber Law) Kontrak Elektronik dalam Bayang-Bayang Pelaku Usaha (Bandung: Pustaka Sutra).
[10]. Vincent Gaspersz, Production Planning and Inventory Control Berdasakan Pendekatan Sistem Terintegrasi MRP II dan JIT Menuju Manufakturing 21 (Jakarta: PT GramediaPustakaUtama, 1998).
[11]. Jane K. Winn, Benjamin Wright, Law of Electronic Commerce.

Articles

[12]. David Barka, "EDI and American Law: A Practical Guide, by Benjamin Wright, J.D. TDCC: The Electronic Data Interchange Association, Book Review 1990," Berkeley Law Accessed July 13, 2017,
[13]. http://www.law.berkeley.edu/journals/btlj/articles/05_1/Barkan%20Book %20Review/html/text.html#B.

[14]. Documents
[15]. Act of Singapore Concerning Electronic Transaction, Act No.16 Year 2010
[16]. Law Concerning the Amendment to Law No. 11 of 2008 on Electronic Information and Transactions (UUITE), Law No.19 Year 2016.
[17]. Law Concerning the Amendment to Law No.11 of 2008 on Electronic Information and Transactions, Law No.19 Year 2016
[18]. Presidential Regulation Concerning Use of Electronic Systems in Indonesia Framework national Single Window, Presidential Reg.10 of 2008.
[19]. Director General of Customs and Excise (DGCE) Concerning Trying of Electronic Data Interchange (EDI) Implementation of Notification of Imported Goods to be Piled in Bonded Hoarding Place (BC 2.3), Decree No. P-34/BC/2010.

Others

[20]. EDI History" Logic Broker, accessed July 13, 2017,

[21]. http://www.logicbroker.com/edi-history/
[22]. Foreword to ABA Model TPA, Commercial Use of Electronic Data Interchange: A Report and Model Training Partner Agreement, Prepared by the Electronic Messaging Services Task Force, UCC Committee, ABA Section of Business Law, 1992: 67.
[23]. Recommendation No.26, Annex Model Interchange Agreement for The International Commercial Use of Electronic Data Interchange.
[24]. UNCITRAL Model Law on Electronic Commerce with Guide to Enactment 1996, with Additional Article 2 (b), U.N. Sales No. E.99.V.4 (1999), available at
[25]. http://www.uncitral.org/pdf/english/texts/electcom/0589450_Ebook. pdf. Accessed July 12, 2017.
[26]. Uniform Rules Of Conduct For Interchange Of Trade Data By Tele-transmission, Introductory Note, Chapter 1, Article 1.
[27]. http://www.unece.org/trade/untdid/texts/d210_d.htm.
[28]. Foreword to ABA Model TPA, Commercial Use of Electronic Data Interchange: A Report and Model Training Partner Agreement, Prepared by the Electronic Messaging Services Task Force, UCC Committee, ABA Section of Business Law, 1992: 67.

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