

Notification of the Electronic Transactions Commission

Subject: Rules and Procedures on the Creation or Conversion of Document and Information into Data Message Format B.E. 2553

Whereas current technological developments have modified a form and method of communication, transmission of document and data, as well as performance of transactions, more into a form of electronic transactions, including document and information which is subsequently created or converted into the data message format. And whereas the law governing the electronic transactions requires that the creation or conversion of document and information into data message format shall be in accordance with the rules and procedures prescribed by the Electronic Transactions Commission.

By virtue of Section 12/1, paragraph 2, of the Electronic Transactions Act B.E. 2544, amended by Electronic Transactions Act (No. 2) B.E. 2551, the Electronic Transactions Commission issues the following Notification:

Clause 1 This Notification is called “Notification of the Electronic Transactions Commission entitled Rules and Procedures on the Creation or Conversion of Document and Information into Data Message Format B.E. 2553”.

Clause 2 In this Notification:

“Creation or conversion of document and information into data message format” means the creation or conversion of document and information pursuant to this Electronic Transactions Commission’s Notification.

“Creator or Converter” means a person who creates or converts document and information into data message format, and shall also mean a person who creates or converts voice messages or video into data message format.

“Document” Document” means any paper or other material for expressing the meaning by letters, figures, plan or an other design, whether it be by way of printing, photographing or any other means, which is evidence of such meaning.

“Metadata” means data used to direct and explain other data.

Clause 3 Creation or conversion of document and information into data message format shall be in accordance with the following rules and procedures:

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(1) The created or converted data message shall have the same meaning or form as the original document and information which are created or converted into the data message format. The creator or converter shall audit and certify that such data message has the same meaning or form as the original document and information.

(2) The data message shall be created or converted by a reliable method for identification of the creator or converter responsible for such creation or conversion.

(3) The data message shall be created or converted with technology and measures preventing variation or revision from occurring to the data, except certification or additional record which does not affect the meaning of data message.

Details of the creation or conversion method of document and information into the data message format shall be in accordance with those prescribed in clauses 4 to 9.

Clause 4 The creation or conversion of document and information into data message format shall contain at least the following processes of creation or conversion of document and information:

(1) Process to create or converse document and information into data message format via an electronic method;

(2) Process to audit and certify that the created or converted data message has the same meaning as the original document and information;

(3) Process to record evidence of operations to create or converse the document and information into data message format.

(4) Process to record metadata in electronic form, which is information substantively describing the document and information so comprehensive as to enable correct searches for such document and information.

Clause 5 Creation or conversion of document and information via electronic method shall have a responsible person carrying out the creation or conversion of document and information via such method at least in the following matters:

(1) To Create or converse the document and information into data message format;

(2) To audit and certify the integrity and completeness of the data message derived from the creation or conversion of document and information into the data message format that the data message has the same meaning or form as the original document and information.

(3) To audit the process of creation or conversion of document and information into the data message format to be in accordance with as prescribed.

(4) To audit and certify the integrity and completeness of metadata pursuant to clause 4 (4).

Clause 6 Creation or conversion of document and information via electronic procedure shall prescribe measures regarding data message security, which must be a reliable method and at least encompass the following subject matters:

- (1) Identification
- (2) Authentication
- (3) Authorisation
- (4) Accountability

This is to ensure confirmation that the data message is created or converted only by a person with an access right. Such person with the access right shall include a person responsible for carrying out the creation or conversion, and a person with the right to audit pursuant to clause 5 who can be the same or different person.

Clause 7 Creation or conversion of document and information into the data message format shall provide the data message with resolution and clarity of the original document and information.

Clause 8 Creator or converter shall have a duty to maintain and preserve a valid system for the creation or conversion of document and information for supervision or audit at any time by the Electronic Transactions Commission or another agency delegated by the Electronic Transactions Commission, or another agency prescribed otherwise in this Notification.

Clause 9 Creator or converter shall establish procedures consistent with the appropriate organisation's characteristic and transaction category in operations under clause 4 through to clause 8 by using a requirement on general procedures or under specific procedures for certain transaction category in the creation or

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conversion of document and information into a data message format pursuant to the requirement annexed to this Notification as the minimum standard for operation, as the case may be.

Clause 10 This Notification shall come into force on the day following its publication in the Government Gazette.

Notified on the 30th day of September B.E. 2553

Juti Krairiksh

(Juti Krairiksh)

Minister of Information and Communication Technology

Chairman of Electronic Transactions Commission

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Requirement annexed to the Notification of the Electronic Transactions Commission

Subject: Rules and Procedures on the Creation or Conversion of Document and

Information into Data Message Format B.E. 2553

Number 1

Governing the Procedures for the Creation or Conversion of Document and

Information into Data Message Format

Chapter 1

General Provisions

Clause 1 In creation or conversion of document and information into data message format, the creator or converter shall comply with this requirement as a minimum standard, unless a certain minimum standard will not be applied.

Chapter 2

Method to Create or Converse Document and Information

Clause 2 Creator or converter shall audit the document and information which will be created or converted into the data message by considering the completeness of the entire information, the number of pages, sequential arrangement of content, and the presentation format of the document and information; and shall record the origin of such document and information. In case that the created or converted document and information is an original document or a copy thereof, such nature of the document and information shall be clearly recorded and displayed that it is the original document or copy.

Clause 3 The minimum standard for resolution shall be:

- (1) Line image or black & white image of at least 150 dots per inch (dpi).
- (2) Greyscale image of at least 200 dots per inch (dpi).
- (3) Colour image of at least 300 dots per inch (dpi).
- (4) Website-only image of at least 72 dots per inch (dpi).

Clause 4 The minimum standard for the bit depth shall be:

- (1) 1 bit for the bit depth of Black & white image.
- (2) 8 bits for the bit depth of greyscale image.
- (3) 24 bits for the bit depth of Colour image.

Clause 5 The minimum standard for conversion of an analogue signal into a digital signal, in case of voice messages, shall have a random minimum rate of the audio signal data at 44.1 kHz and a random minimum number of the audio signal data at 16 bits.

Clause 6 The minimum standard for conversion of an analogue signal into a digital signal, in case of video information, shall have the following minimum standards:

- (1) Random rate of sample data of Luminance shall have a minimum standard at 13.5 MHz.
- (2) Number of sample data of Luminance shall have a minimum standard at 8 bits per pixel (bpp).
- (3) Number of sample data of Chrominance shall have a minimum standard at 4 bits per pixel (bpp).
- (4) Luminance resolution equals to 720 pixels x 485 active lines.
- (5) Chrominance resolution equals to 360 pixels x 485 active lines.

Clause 7 Creator or converter shall name the data message file with a meaning that communicates the content of the data to enable searching. Such file name shall not be alike.

Clause 8 Upon execution, the creator or converter shall review the integrity and completeness of the created or converted data message.

Chapter 3

Audit and Assurance

Clause 9 Creator or converter shall provide an audit and assurance of quality of the process to create or converse the document and information into the data message and an audit and assurance of quality of the data message and a report

on the audit and assurance of quality for using in confirmation of the administration system of such creator or converter.

Clause 10 Audit and assurance of quality shall cover the following matters:

- (1) Quality of the tools and equipment used in such operation.
- (2) Operation procedures.
- (3) Quality and correctness of the data message passed through creation or conversion.
- (4) Quality and correctness of the data message used in identification of the creator or converter.

Clause 11 In case of operation for a high quantity of the data message or collection of a lot of data as a single set, the audit and assurance may use statistically random sampling to conduct the audit.

Chapter 4

Records

Clause 12 Creator or Converter shall provide a record of operations as evidence which must record the following items:

- (1) Name or list of the created or converted data message.
- (2) Name of the creator or converter.
- (3) Program or format used in the creation or conversion.
- (4) Date, month, year and the time of the creation or conversion.
- (5) Evidence of audit and assurance of quality and correctness of the data message, ensuring that the data message has the same meaning as the original document and information.

Clause 13 Creator or converter shall provide a metadata record displaying the essential substances being specific attributes and details of such data message, which shall comprise major elements of the data message, such as, the content (e.g. title, header, original/source, scope); the context (e.g. intellectual property or rights in such work, author of the work, joint author of the work); and the structure (e.g. date,

month, year of the work's creation, category of content, format of the work presentation, indicator or identifier of the resource) that will assist in enabling the correct and efficient search for document and information.

Chapter 5

Responsible Persons

Clause 14 Creator or converter shall clearly designate responsible persons in the following matters:

- (1) Creator or converter of document and information into data message format.
- (2) Quality inspector of the created or converted data message.
- (3) Inspector and certifier of the creation or conversion process of the document and information into data message format pursuant to clause 9.
- (4) Inspector and certifier of the correctness and completeness of the metadata pursuant to clause 13.

Chapter 6

Security

Clause 15 Creator or converter shall prescribe data message security measures through a reliable method which shall cover the data message security measure of at least the following subject matters:

- (1) User registration which shall prescribe be a procedure of practice for registration of the user for identification by which to be granted authorisation to access the data message and for removal from the user upon cancellation or revocation of such authorisation.
- (2) User management which shall provide control and restriction of a right to access and use each type of the data message as appropriate.
- (3) User password management which shall provide a strict administration process of passwords for Users.

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(4) Review of user access rights which shall provide a review process of user access rights of the data message within the prescribed time period.

(5) Password use which shall prescribe a good practical guidance for the user in setting the password, usage of the password and changing the password with quality.

(6) Protection of the equipment at the time of no user at the equipment shall prescribe a suitable procedure to prevent a person who has no right to access the equipment while absent a keeper.

Requirement annexed to the Notification of the Electronic Transactions Commission

Subject: Rules and Procedures on the Creation or Conversion of Document and

Information into Data Message Format B.E. 2553

Number 2

Governing the Procedures for the Creation or Conversion of Document and

Information into Data Message Format

For the Clearing System with the Cheque Image and the Archiving System of the

Cheque Image

Chapter 1

Creation or Conversion of the original Cheque into Data Message format

Clause 1 Creating or converting bank shall inspect the validity of the cheque under the law and examine the cheque forgery by checking the paper texture, the size of the cheque and the middle watermark before entering into a creation or conversion system of the original cheque into the data message format.

Clause 2 Cheque which will be entered into the creation or conversion system of the original cheque into the data message format shall be the original only.

Clause 3 Data message which will be transmitted into the clearing system with the cheque image and the archiving system of the cheque image shall comprise the cheque data, cheque image and metadata, requiring a complete and correct structure and essential substances of the transactions under a rule of the Bank of Thailand governing the clearing system with the cheque image and the archiving system of the cheque image.

Metadata pursuant to the first paragraph shall be able to demonstrate the essential substances being attributes and details in accordance with a specific feature of such data message, such as, the physical condition tag of the original cheque, the IQA Tag.

Clause 4 Creating or converting bank shall provide a system to create or convert the original cheque into the data message format in order to acquire the cheque image in accordance with the standard of cheque image under the rule of the

Bank of Thailand governing the clearing system with the cheque image and the archiving system of the cheque image. Such standard shall at least have the following format, colour scale and resolution:

Image No. 1: Front shall be set as JPEG 8-bit Grayscale 100 dpi

Image No. 2: Front shall be set as TIFF Black & White 200 dpi

Image No. 3: Back shall be set as TIFF Black & White 200 dpi

Clause 5 Creating or converting bank shall record the data message derived from creation or conversion into a data message file by naming such data message file as to provide the meaning that communicates the content of the data, have a structure of the name helpful to enable easy tracking or searching, and contain the file name that shall not be alike in accordance with the rule of the Bank of Thailand governing the clearing system with the cheque image and the archiving system of the cheque image.

Chapter 2

Audit and certification of the process to create or convert the original cheque into the data message format, and quality assurance of the data message

Clause 6 Creating or converting bank shall provide a system for audit and certification of the process to create or convert the original cheque into the data message format and and quality assurance of the data message.

Clause 7 Creating or converting bank shall inspect the quality of the tools or equipment used in the process to create or convert the original cheque into the data message format in order to ensure that such tools or equipment are able to create or convert the original cheque into the data message format effectively and constantly.

Clause 8 Creating or converting bank shall monitor the process to create or convert the original cheque into the data message format to be proceeded in accordance with a procedure and process of practice as specified in the manual prepared by the creating or converting bank by providing an inspector and certifier at least once a year and presenting a report about a result of the audit and certification to executives of the creating or converting bank and the Bank of Thailand.

Clause 9 Creating or converting bank shall inspect the quality to view whether the data message derived from the creation or conversion is readable and has the resolution, luminance, size and format in accordance with the standard of cheque image as prescribed in the rule of the Bank of Thailand governing the clearing system with the cheque image and the archiving system of the cheque image.

Clause 10 Creating or converting bank shall assure the quality and correctness of the data message derived from the creation or conversion by affixing an electronic signature before transmitting such data message derived from the creation or conversion into the clearing system with the cheque image and the archiving system of the cheque image in order to enable verification that such data message derived from the creation or conversion has the same meaning or format as the original check.

Chapter 3

Record of evidentiary Operations

Clause 11 Creating or converting bank shall record the evidence of operations to create or convert the original cheque into the data message format for use to reference the operations and in the status of occurred operations, including for use in auditing the history of the creation or conversion of the original cheque into the data message format with at least the following record of evidentiary operations:

- (1) File name of the data message.
- (2) Name of the operator in each procedure of the system to create or convert the original cheque into the data message format.
- (3) Date, month, year and the time of operation in each procedure of the system to create or convert the original cheque into the data message format.

Chapter 4

Measures regarding the data message security

Clause 12 Creating or converting bank shall provide reliable measures regarding the data message security covering at least the following subject matters:

(1) Identification of the operator in each procedure of the system to create or convert the original cheque into the data message format.

(2) Authentication of the operator in each procedure of the system to create or convert the original cheque into the data message format.

(3) Exclusive Authorisation to the entitled person to access the system to create or convert the original cheque into the data message format, including provision of the physical security system in order to avert any person without related responsibilities to access to the system to create or convert the original cheque into the data message format.

(4) Accountability shall be effectuated by records of evidentiary operations to create or convert the original cheque into the data message format in order to prevent denial of liability and use in auditing the history of the creation or conversion of the original cheque into the data message format.

This is to enable confirmation that the data message for the clearing system with the cheque Image and the archiving system of the cheque image has been created or converted only by the entitled person to access.

Chapter 5

Miscellaneous

Clause 9 Bank of Thailand shall be a supervisor of the operations under this procedure and shall prepare and propose a report to the Electronic Transactions Commission at least once a year.