

**ELECTRONIC AND DIGITAL  
SIGNATURES IN TAIWAN**

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## Electronic and Digital Signatures in Taiwan

### A. Preamble

In the early days of the Internet, sellers would simply set up a “virtual shop”. Completing a purchase meant just making a few “clicks” in an agreement to a purchase. It was a new and creative business model and allowed sellers to operate businesses while keeping costs down. While these businesses rapidly became commonplace, this new business model was not without its issues. There was the threat of customers denying a transaction, perhaps making the excuse that someone else had used their computer and made an order by accident, or that their machine had been hacked. Over a decade ago, electronic commerce was regulated under older laws such as the Civil Code, making many legal issues also hard to solve. In order to address commercial disputes and promote e-commerce, Taiwan enacted the Electronic Signature Act (hereinafter “the Act”) on November 14, 2001.

### B. Legislative Purpose of the Electronic Signature Act

Traditional business models utilize written documents and signatures or seals to establish rights and obligations between parties. The advent of e-commerce has led to businesses becoming more dependant on electronic records and signatures for communication, negotiations, and transactions. The most important aspects that make e-commerce popular and acceptable with enterprises and consumers are:

1. A safe and reliable internet environment
2. Electronic records and signatures that cannot be illegally duplicated
3. Identification of parties involved in the transaction
4. Smooth and easy transactions

Taiwan enacted the Electronic Signatures Act to encourage the use of electronic transactions, ensure their security, and facilitate the development of electronic government and commerce. The legal elements and effect of electronic records and signatures became well established under the act. As the nature of electronic records and signatures is very different from handwritten documents and signatures/seals, the Act aims to address two critical issues:

1. Do electronic records and signatures have the same legal effect as physical paper and signatures?
2. What are the requirements if the parties choose to use electronic records and signatures?

### C. Legal Position and Effect of Electronic Records

According to the Act, an electronic record is a record kept in electronic form, and can consist of text, sound, a picture, an image, symbol, or other information generated via electronic or other means not directly recognizable by human perception, and capable of conveying its intended information<sup>1</sup>. To set up a contract between parties, the Act requires the parties to reciprocally declare their concordant intent, either expressly or impliedly<sup>2</sup>. According to Taiwan's Civil Code, the intent can be declared by two methods: **inter praesentes**<sup>3</sup> (in the presence of the other party), or **inter absentes**<sup>4</sup> (not in the presence of the other party). As electronic records can be transmitted around the Internet, they are a medium obviously different from traditional declaration methods. Whether electronic records can be deemed as a declaration of intent is a primary issue. The Act provides that an electronic record be used as a declaration of intent if the other party gives their consent<sup>5</sup>, and thus the other party's consent is a prerequisite in order to employ electronic records. The consent can be either directly expressed or implied.

In some circumstances, a law or regulation expressly requires a transaction to be made in writing. An example is the transfer of real estate, which shall be made in the form of a written document, pursuant to Article 758 of the Civil Code. The written document, however, can be in electronic form, if, according to the Act, the following are met<sup>6</sup>:

- 1) The content of the information can be presented in its integrity;
- 2) The content remains accessible for subsequent reference; and
- 3) The other party gives their consent.

In some situations, a law or regulation may request that parties provide a document in its original form. For instance, the court may request parties to provide private documents as evidence in a civil case. The parties shall, according to Article 352, Paragraph 2 of the Civil Procedure Code, provide an original copy of the document to the court. This requirement can be satisfied by providing an electronic record, if the following two elements are met<sup>7</sup>:

- 1) The document is generated in electronic form; and
- 2) The content of the document can be presented in its integrity and remains accessible for subsequent reference.

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<sup>1</sup> Article 2 of the Act

<sup>2</sup> Article 153 of the Civil Code

<sup>3</sup> Article 94 of the Civil Code

<sup>4</sup> Article 95 of the Civil Code

<sup>5</sup> Article 4, Paragraph 1 of the Act

<sup>6</sup> Article 4, Paragraph 2 of the Act

<sup>7</sup> Article 5, Paragraph 1 of the Act

This rule, however, shall not apply under the following situations<sup>8</sup>:

- 1) Verification of handwriting, seals, or other methods for authenticating the integrity of a document are required;
- 2) A law or regulation that provides otherwise.

Some documents must be retained for a certain period or permanently, as required by law or regulation. To illustrate, Article 38 of the Business Entity Accounting Act provides that accounting documents must be kept for at least five years after completion of annual closing procedures, except for which should be permanently kept or which are related to unsettled accounting events. This requirement can also be satisfied with an electronic record, if the content of the document can be presented in its integrity and remains accessible for subsequent reference<sup>9</sup>. The electronic record, however, shall be limited to formats capable of being retained, main content, information regarding its dispatch location, receiving place, date, and information or data to verify or authenticate the electronic record<sup>10</sup>.

#### **D. Effective time of Dispatching Electronic Record**

Generally, an expression of intent **inter praesentes** becomes effective at the moment the other party understands the expression of intent<sup>11</sup>. An expression of intent **inter absentes** becomes effective the moment when the notification of the expression reaches the other party<sup>12</sup>. The method of dispatching an electronic record also differs, however, from traditional methods (such as sending a notification by mail). The effective time of dispatching an electronic record will be determined by a particular method. The Act stipulates that the time of dispatching an electronic record occurs when it enters the information system outside the control of the originator unless otherwise agreed to between the parties or prescribed by government agencies<sup>13</sup>. For the time of receipt of an electronic record, it shall be determined as follows<sup>14</sup>:

- 1) If the addressee has designated an information system for the purpose of receiving electronic records, receipt occurs at the time when the electronic record enters the designated information system; or if the electronic record is sent to an information system that is not the designated information system, at the time when the electronic record is retrieved by the addressee.

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<sup>8</sup> Article 5, Paragraph 1 of the Act

<sup>9</sup> Article 6, Paragraph 1 of the Act

<sup>10</sup> Article 6, Paragraph 2 of the Act

<sup>11</sup> Article 94 of the Civil Code

<sup>12</sup> Article 95 of the Civil Code

<sup>13</sup> Article 7, Paragraph 1 of the Act

<sup>14</sup> Article 7, Paragraph 2 of the Act

2) If the addressee has not designated an information system, receipt occurs at the time when the electronic record enters an information system of the addressee.

#### **E. Legal Position and Effect of Electronic Signature and Digital Signature**

An electronic signature is basically data attached to and associated with an electronic record. It can also be executed with the intention of identifying and verifying the identity or qualification of the signatory of the electronic record, as well as authentication of the electronic record<sup>15</sup>. Under some circumstances, a law or regulation requires a signature or seal on a record. For example, according to Article 14 of the Security and Exchange Act, the chairperson, managerial officers, and accounting officers shall sign or stamp financial reports. Under the Act, a signature or seal can be satisfied by using an electronic signature if the other party gives their consent<sup>16</sup>.

The Act further states that a digital signature can have the same legal effect if it meets the following requirements<sup>17</sup>:

- 1) Utilizes a certificate issued by a certification service provider; and
- 2) The certificate is still valid and has not exceeded the area of utilization.

But what exactly is the difference between an electronic signature and a digital signature? A digital signature means a certain length of digital information of an electronic record created by a mathematical or other formula. Confidentiality is added using a secret key of the signatory party forming an electronic signature, with the key opened to the public for certification. Accordingly, the meaning of a digital signature differs from an electronic signature.

For the purposes of transaction safety and online identity authentication, many electronic certification technologies have been created and adopted. They are based on electronic forms and associated with electronic records. These technologies all belong to "electronic signature" technology. In practice, digital signature technology was developed earliest and has matured the most. A digital signature is a type of electronic signature technology.

The operating procedures of a digital signature are as follows:

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<sup>15</sup> Article 2 of the Act

<sup>16</sup> Article 9, Paragraph 1 of the Act

<sup>17</sup> Article 10 of the Act

When a certificate user (who owns a private key) sends a purchase order to an electronic shop (who owns a public key) via email, the user needs to add his private key to the email in order to generate a digital signature and then transmit the email to the shop. Upon receipt of the email, the shop will compare the private key with the corresponding public key. If the outcome of the comparison is correct, the shop can ensure that the purchase order is from the user. Under this operating procedure, the certificate user cannot deny the e-commerce transaction and the online identification problem is also solved.

#### **F. Certificate and Certification Service Provider**

As noted, in order to make a digital signature effective, it must have a certificate issued by a certificate authority. A certificate is an electronic attestation which links signature-verification data to a person and confirms the identity and attribute of that person<sup>18</sup>. A certification service provider is a government agency or a juridical person that can provide digital signatures and electronic certification services. The Act requires that before providing certificate issuance services to the public, a certification service provider shall<sup>19</sup>:

- 1) Prepare a certification practice operations standard;
- 2) Submit the standard to the competent authorities (Ministry of Economic Affairs);
- 3) Obtain approval from the authorities; and
- 4) Publicly announce the approved certification practice on a website established by the certification service provider. Many companies provide certificate issuance services in Taiwan, such as the Government Certification Authority of Chung Hwa Telecomm Co., Ltd., and Taiwan-CA Inc.

The competent authorities may also grant permission, under the principles of reciprocity and equivalent secure requirements, to foreign certification service providers organized or registered pursuant to foreign law. Certificates issued by permitted foreign certification service providers shall be equivalent to ones issued by domestic certification service providers<sup>20</sup>. Further requirements for a foreign certification service provider can be found in the Regulations Governing Permission of Foreign Certification Service Providers..

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<sup>18</sup> Article 2 of the Act

<sup>19</sup> Article 11, Paragraph 1 of the Act

<sup>20</sup> Article 15, Paragraph 1 of the Act

## G. Practical Examples for the Application of the Act

Contracts for sales of goods<sup>21</sup> and rentals<sup>22</sup> can be simply constituted by both parties with their concordant intent, and a written form is not required. Both parties can agree to utilize an electronic record as an electronic transaction method according to Article 4, Paragraph 1 of the Act. If the object of a transaction is real estate, a written form is required and both parties can also agree to use an electronic record to complete the transaction according to Article 4, Paragraph 2 of the Act. Moreover, where customers use a credit card as a payment method for an electronic transaction, a signature is required under the Standard Form Contract for Credit Card. An electronic signature can be used if both parties agree according to Article 9, Paragraph 1 of the Act. However, if a customer appoints a broker to buy or sell securities by an electronic order, a digital signature with a certificate from the customer is required, according to the Electronic Trading Account for Appointment of Trading Securities Agreement.

## H. Conclusion

The Act standardizes the usage of electronic records and signatures, establishes an electronic certification system, and enhances transaction safety. The Act creates a safer and more reliable internet environment, reduces the opportunity for forgery, allows for the identities of parties to be confirmed, and prevents the denial of a transaction by a party.

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<sup>21</sup> Article 2 of the Act

<sup>22</sup> Article 11, Paragraph 1 of the Act

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