E-Signature Use in China: 
Four Case Studies

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ABSTRACT

The Electronic Signature Law of the People’s Republic of China has been implemented for over seven years. However, a wide variety of legal problems exists. This paper analyzes four cases about e-signature use in China that covers four different areas: E-mail, short text message, E-banking, and online shopping. Various solutions to problems concerning e-signature use are also discussed.

Keywords: Cell Phone Short Message, Data Message, E-Banking, E-Mail, E-Signature, Online Shopping

1. OVERVIEW

1.1. Purposes of the Study

The use of electronic signature concerns various types of cyber behaviors in the daily life. The present paper aimed to make contributions to the literature by describing various problematic cyber behaviors in the implementation of e-signature laws. As one of the earliest attempts to examine e-signature behaviors from the legal perspective, this paper used the legal analysis method to study four legal cases regarding e-signature use in China within a broader context of international e-signature laws.

1.2. Traditional Signature and E-Signature

In the traditional paper-pencil era, to keep contracts or documents safe and authentic, parties involved in the contract need to sign in order to validate these documents legally. For hundreds of years, official or personal stamps have been most widely used in China as a typical legal way of signatures. Traditional handwriting or stamp-based signature has three main functions. First, it identifies the signer. Second, it indicates the signer’s confirmation of content of the documents. Third, it constitutes the basis that the signer is responsible for exactness and integrity of the documents.

In the current Internet era, contrastingly, contracts and documents are transmitted and presented in an electronic data form. Thus, traditional ways of signatures could hardly be applied to the electronic data. To substitute the main functions of conventional signatures or stamps, e-signature is needed to represent a party’s identity on the Internet.

There are four major differences between e-signature and conventional signature. The first concerns different attributes. Handwriting signature is a physical part of a document. By contrast, the e-signature is linked to specific
features of the document. That is to say, handwriting signature stands for specific people, whereas e-signature stands for specific information. The second concerns different ways to identify a signer. In order to identify a signer, the authenticity of a handwriting signature of a signer can only assessed by comparing it with the other authentic signatures of the same signer. This method leaves room for other people to forge the signature. However, e-signatures applies open checking algorithm to identify the signer. A safe checking algorithm can be used to effectively prevent the signature from being forged. The third concerns different scopes of application. The Electronic Signature Law of the People’s Republic of China describes four types of documents that e-signature shall not apply to, including documents involving (1) personal relationships such as marriage, adoption and inheritance; (2) the transfer of rights in immovable property such as land and buildings; (3) the cessation of public utility services such as the supply of water, heat, gas and electricity; and (4) other circumstances in which laws or administrative regulations stipulate that electronic documents are not applicable(Zhang, 2010). Thus, the scope of e-signature is much narrower than that of conventional signature. The fourth concerns different appearance. E-signature has many kinds of appearance, such as implicit form (e.g., invisible digital signature) and image form (e.g., images of manuscript signatures or stamps). By contrast, conventional manuscript signature only has an appearance of handwritten text with distinctive characteristic.

1.3. E-Signature Laws


There exist substantial similarities and differences among these e-signature laws. For example, the UNCITRAL Model Law (2001) gives a comprehensive definition of e-signature as follows: “Electronic signature means 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. And the 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”(UNCITRAL Model Law, 2001, Article 2). Here, we can see that e-signature serves two functions, identifying the signatory and indicating the signatory’s approval of the information, using a wide variety of electronic, optical or similar means. In a much simpler manner, Electronic Signature Law of the People’s Republic of China (Electronic Signature Law, 2005) simply refers the term “electronic signature” to “data included in or appended to an electronic data message, in electronic form, to distinguish the signer and to indicate his consent to the contents therein” (Electronic Signature Law, 2005, Article 2). Rather than studying all the exiting e-signature laws as well as implementations of these laws in different counties, the present paper focuses only on one law, Electronic Signature Law of the People’s Republic of China (2005), hereafter referred to as the E-signature Law(2005). The E-signature Law(2005) was one of the latest developed and implemented in a country that has the largest population and extremely rapid growth of Internet use in the past decade. Thus,
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