



## **Comments to the Consultation Paper on the Review of the Electronic Transactions Ordinance from Management and Technology Committee of the Law Society**

The Electronic Transactions Ordinance (Cap. 553) ("the Ordinance") was enacted on 5 January 2000. At the time of its enactment, ITBB came on record that a review of the Ordinance was to be undertaken within 18 months. A consultation paper on the review of the Ordinance was issued in March 2002, more than two years since the enactment of the Ordinance.

The purpose of the review was to ensure that Hong Kong has up to date legislation for the conduct of e-business.

The general comment of the Law Society Management and Technology Committee to the Consultation Paper is that the proposed review falls short of addressing the main shortcoming in the Ordinance identified in the last two years. Many issues have been omitted from the review and those that are being considered propose only minor and cosmetic amendments that do not go far enough.

The proposals put forward in the Consultation Paper are considered in turn.

### **Legal Recognition of Other Forms of Electronic Signatures**

The Ordinance accords legal recognition to electronic signatures and digital signatures and to electronic contracts. Under the Ordinance, an electronic signature is defined as any letters, characters, numbers or other symbols in digital form attached to or logically associated with an electronic record and executed or adopted for the purpose of authenticating or approving the electronic record.

Digital signatures, on the other hand, are one form of electronic signatures and in the context of the Ordinance they mean an electronic signature generated by the transformation of the electronic record using an asymmetric cryptosystem and a hash function.

Where the law requires a transaction and/or document to be in writing, both an electronic signature and a digital signature satisfy that requirement. A requirement for a document to be signed is only satisfied by a document signed with a digital signature supported by a recognised certificate and generated within the validity of that certificate. A recognised certificate is a certificate issued by a Certification Authority recognised under the Ordinance. This in essence means that the Ordinance gives status only to digital signatures issued by CAs recognised under the Ordinance. The framework for digital signatures adopted in Hong Kong is therefore technologically restrictive and prescriptive.

The Consultation Paper proposes for the signature requirement to be satisfied by other types of signatures than digital signatures. In particular, the Consultation Paper proposes that personal identification numbers (PINs) should be accepted for satisfying the signature requirement. Biometric means of authentication, however, have been discounted. This is, to say the least,

surprising and leaves Hong Kong behind while the rest of the world appears to be embracing smart card technology and biometrics at a fast pace.<sup>1</sup>

Roughly, user authentication can be categorised into: (i) what you know (passwords, PINs or other forms of challenge response); (ii) what you have (smart cards, tokens or computer hardware identifiers, such as serial numbers or IP addresses); and (iii) what you are (biometrics).

Passwords and PINs have been around for a long time and they offer low security protection. It is also difficult to see how one branch of the government (ITBB) can reject one technology (biometrics), while the same is being embraced by another government department (Immigration Department), which plans to introduce smart ID cards which would employ biometrics to include thumbprint information. PINs and passwords have been associated with large business-to-consumer applications, while more advanced and sophisticated technological solutions, such as those employing smart cards and biometrics, are used by business-to-business applications. The proposed amendment to the Ordinance does not take Hong Kong away from a technologically restrictive approach to digital signatures and would also seem to be limiting the sphere and scope of electronic commerce in Hong Kong.

This disappointing proposal shows again a reluctance on the part of ITBB to embrace a technologically neutral approach.

At the international level, two motivations have been behind the promotion of electronic transactions or electronic commerce legislation, namely: (i) to remove the existing legal obstacles to the recognition of electronic signatures and records; and (ii) to establish a legal framework for the operation of public key infrastructure.

Jurisdictions in favour of the first approach normally prefer broad criteria-based definitions of what constitutes an electronic signature, while those in favour of the second approach prefer a legislation that ties the legal effect of an electronic signature to the use of a technology that is specifically approved by the legislation. This typically is digital signature technology and sometimes only the digital signatures that are authenticated by licensed CAs are recognised. This is exactly the case of Hong Kong.

Many countries are adopting minimalist approaches (see Australia, New Zealand, United States), while countries such as Malaysia, India, South Korea and, to a certain extent, Singapore have adopted more prescriptive approaches. Again, generally countries with civil law traditions tend to have more stringent and particularised requirements with regard to signatures and writing, while common law countries veer towards more minimalist and technologically neutral approaches. As a common law country, Hong Kong should have followed a more minimalist approach.

If Hong Kong wishes to achieve international status in electronic commerce, it needs to have a system that acknowledges the recognition of electronic signatures elsewhere. With a system that prescribes its own standards, Hong Kong will find it difficult to enter into the kinds of mutual recognition and cross-certification agreements that are the way forward in the international recognition of electronic signatures.

### **The Legal Requirement of Delivery by Post or in Person**

This proposed amendment is to be welcomed as it clarifies that where delivery by post or in person to certain government departments is required, delivery by electronic means would suffice as well. However, it is to be hoped that the manner and format in which this delivery is to take place will not be prescribed as well, as has been the case so far when for communication with government only certain formats and technologies have been deemed acceptable (see G.N. 2780 of May 2001 issued by ITBB under Section 11(2) of the Ordinance).

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<sup>1</sup> See "Beyond Passwords" by Deborah Radcliff in Computerworld, 1 February 2002.

## **Exemptions under ETO**

This deals with a requirement for wet-ink signatures, i.e. signatures made by hand in certain circumstances (such as, for example, signing of wills, statutory declarations, affidavits, powers of attorney, court orders, warrants, bills of exchange, etc), which are exempted from the operation of the Ordinance. Minor amendments are envisaged here which do not warrant a comment.

## **The Operation of the Voluntary Recognition Scheme for Certification Authorities**

The two changes proposed, again, are not radical. The first change relates to the requirement for a report to be furnished by an independent assessor to the Director of Information Technology Services ("the Director") and which should show whether the applicant is capable of complying with the provisions of the Ordinance and the code of practice for CAs issued under the Ordinance. The proposed amendment is simply that the independent assessor report should be concerned only with the trustworthiness of the certification service, while for the other requirements which do not concern trustworthiness of the certification service, a declaration from an authorised person of the CA concerned would suffice.

The second proposal regarding CAs is that in addition to the once yearly independent report assessing whether the respective CA has complied with all the provisions of the Ordinance applicable to it, the Director would also have the authority to ask the recognised CA to furnish an assessment report, again prepared by an independent and qualified person approved by the Director, as and when there are or will be major changes relating to the financial status of the CA; the arrangements to cover the liability of the CA; and the system procedures, security arrangements and standards used by the CA to issue certificates to its subscribers.

The proposed amendment confers wide powers on the Director and, unless further guidelines are issued, a concern remains that this power may be used arbitrarily. For example, it is difficult to see how the Director would determine when such a report is required. Further guidelines as to the circumstances in which the Director might require such a report to be produced would be advisable.

More pressing issues regarding CAs have failed to be addressed in this Consultation Paper. In particular, issues regarding the recognition of foreign CAs remain unaddressed. At the moment, under the Ordinance, a CA licensed in another jurisdiction may qualify as a recognised CA under the Ordinance if two requirements are satisfied, namely: (i) the CA licensed abroad has a "comparable" status to a recognised CA under the Ordinance; and (ii) the recognised CAs under the Ordinance are afforded recognition in the jurisdiction of the applicant foreign CA.

As far as we are aware, no foreign CA has yet been recognised in Hong Kong. The "comparable" status is not defined in the Ordinance and remains a nebulous term. Given the need for digital signatures to transcend national borders so that electronic commerce could flourish, one would have thought that an issue such as the recognition of foreign CAs should have deserved some elaboration from the part of ITBB. In particular, guidelines as to the documentation and information required by the Director to establish comparable status for a foreign CA would have been welcome.

## **Other Issues that have failed to be addressed in the Consultation Paper**

These include issues concerning the sending and receiving of electronic records and the proper formation of contracts and the time of formation of contracts. Under the current provisions under the Ordinance, many terms remain confusing and fail to bring clarity to electronic transactions. For example, Section 19 of the Ordinance, which deals with the sending and receiving of electronic records, contains a number of concepts that would benefit from further clarification, such as "designated information system"; knowledge of recipient (how can one prove or know at

what specific time the receiver did receive the e-mail and was physically made aware of the contents of an e-mail, for example).

## **Conclusion**

The Consultation Paper offers a disappointing review of the Ordinance and ignores recent developments at international level.

Notably, in 1999 the ITU put forward certain solutions for the international harmonisation of electronic signatures, namely: (i) an international agreement on the definition of electronic signatures; (ii) the adoption of two-tier legislative models (through international agreements or by way of MOUs) that would allow parties to prove a broad class of electronic signatures; and (iii) the creation of a global web of cross-certified CAs which would practices that fulfilled the requirements of major commercial jurisdictions (thus lessening the need for international agreements on the recognition of electronic signatures).

In July 2001, UNCITRAL put forward a new model law for electronic signatures adopting a technology neutral approach.

A closer look at these documents when amending the Ordinance may benefit Hong Kong in the long run.

30 April 2002  
Management and Technology Committee  
Law Society