Date: Nov. 5, 1999

The Legislative Council,
Hong Kong Special Administrative Region

Attn. Ms. Salumi Chan, Clerk to Bills Committee

Dear Ms. Chan,

Re: Bills Committee on Electronic Transactions Bill

Thank you for your letter of Oct. 23, 1999 to our Ir Raymond W F Ho, Immediate Past Chairman of IT Division, on the above subject.

The IT Division of Hong Kong Institution of Engineers is supportive of the initiatives taken by HKSAR government of promoting e-commerce by passing the proposed Electronic Transactions Bill (ETB).   We totally agree that the Bill should adopt a technology-neutral approach to cope with rapid technological changes as well as a light-handed regulatory approach, which allows the industry to flexibly develop in response to changes in market conditions.

In addition, we would like to raise some issues / suggestions for the Bills Committee to consider.

1. **Standards for Certification Authorities**

    There should be an open and internationally acceptable standard for all Certification Authorities (CA's) so that the auditor appointed by the Information Technology Services Department (ITSD) will be able to check and audit the operation and security standards of the CA's. Also, the professional qualifications of the auditor should be covered in the ETB.

2. **Interoperability of different CA's**

    How will the Bill cater for situations where the two parties of the e-transactions are subscribing to different CA's?

    Take an example, if the HKSAR government is registered with Hongkong Post's CA while a supplier is registered with a different one, will the government do e-transactions with this supplier? We expect that there will be numerous cases like this in the cyber world. The problem will be exacerbated if we have to deal with overseas business partners who may have registered with different CA's in other countries.

3. Termination of CA Services

According to the recent Draft code of practice published by ITSD, it mentions about the possibility of a CA terminating its service. Should this happen to a CA who has operated for a substantial period of time, it might cause great disturbance to the society which would have been heavily involved in e-transactions.

Running a CA is not like running a retail shop. In the latter each transaction is almost instantaneous without long lasting effects. But a CA business is very much different. If a subscriber X signs an agreement to make a transaction in Oct-2000, and then the transaction is disputed in Jan-2001 (e.g. the signature being queried) how can one possibly verify X's signature if the CA who issued the certificate for X has already closed its business? Obviously X, just like any average consumer, is not protected in anyway against such unlucky events.

The obligations of a CA, in case it terminates its business, are not mentioned in the Bill. Should it hand over the records to Hongkong Post so that past digital signatures can still be verifiable? A more fundamental question is whether the records about the subscribers belong to the subscribers themselves or to the CA? In addition, how will the consumers know that a CA has terminated its business?

4. Time of Transactions

The time of transactions is not specified in the Bill. Time may be a critical issue for some transactions, like auctions and tendering where closing date and time are normally specified. As different computers or servers have different timers normally not synchronised with each other, there may be possibility of dispute on which time stamp (sender's or receiver's) should be used. It may be necessary in some cases to have an independent and trustworthy third-party to provide a mutually recognised time stamp. Reputable organisations like Hongkong Post may play this role.

5. Encryption

When advanced cryptographic technologies become popular, the average people may use encryption in electronic transactions. The ETB has not mentioned whether encryption is recognised by law, or promoted by the Government.

With the use of public key encryption techniques, the public key/private key pair can be used to encipher a piece of document to make it illegible except to the private key holder. What are the Government's views towards the possibility that strong encryption techniques my be available to the general public in future?

6. Public / Private Key Generation

It is not mentioned in the Bill whether CA's would always generate the public/private key pairs for their subscribers, or the subscribers may have option to generate the key pairs themselves. If the user chooses to take the trouble of generating its own key pair and submit ONLY the public key to the CA for registration, can the

CA refuse such a service request? Or should the CA be required (say, under a code of practice) to accept such a service request on a non-discriminatory basis?

7. Exemptions

We understand that some ordinances may be exempted from the ETB, which will be done by means of an exemption list. Given the rapid changes in e-commerce, the exemption list may need to be updated very frequently. Will the Bills Committee look at this issue and work out a more efficient way for exemption and future updates?

8. Government Involvement

The Hongkong Post and ITSD are government departments. How will they resolve conflicts which may happen, as the former is a recognized CA and the latter is supposed to be the regulator of CA's?

9. Recognised IT Professionals

As e-transactions may involve huge amount of money and there may be possibility of frauds, the HKSAR government should encourage employment of professional IT engineers in some critical tasks in order to ensure that the relevant systems and processes are working according to the required standards. Members of the Hong Kong Institution of Engineers, registered under the Information Discipline (INF), are engineers who can practise proficiently in this profession.

Please feel free to contact me if you need additional information.

Yours truly,

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