

# 立法會 *Legislative Council*

LC Paper No. CB(1)985/03-04

Ref. : CB1/BC/16/02/1

## **Background brief on Electronic Transactions (Amendment) Bill 2003**

### **Purpose**

This paper gives a summary of the views and concerns expressed by members of the Panel on Information Technology and Broadcasting when being briefed on the review of the Electronic Transactions Ordinance (Cap. 553) (the Ordinance) and the Administration's proposed way forward on 11 March and 7 November 2002.

### **Background**

2. The Electronic Transactions Ordinance, which was enacted on 5 January 2000, aims to provide a clear legal framework for the conduct of electronic transactions by giving electronic record and digital signature the same legal recognition as that of their paper-based counterpart. It also establishes a voluntary recognition scheme for certification authorities (CAs). At the Second Reading debate of the Electronic Transactions Bill, the Administration has undertaken to review the Ordinance 18 months after its enactment in the light of operational experience, international e-business development and technological advancement so as to ensure that Hong Kong has the most up-to-date legal framework for the conduct of e-business.

3. Following an internal review among individual bureaux and departments within the Government on the implementation of the Ordinance, the Administration conducted a public consultation from March to April 2002 to seek the community's views on a set of proposals to improve and update the Ordinance. The areas of review included whether legal recognition should be extended to other forms of electronic signatures and whether changes should be introduced to the scheme of recognition of CAs under the Ordinance. Having regard to the views received during public consultation, the Administration has formulated a set of proposed amendments to the Ordinance.

4. The Administration briefed the Panel on key proposals in the consultation paper on 11 March 2002. Subsequently, on 7 November 2002, the Administration reported to the Panel the outcome of the consultation exercise and its revised proposals formulated after considering the comments received. The relevant extracts of the minutes of the aforesaid two meetings are at **Annex I and Annex II** respectively.

## **Major proposals to amend the Ordinance**

### Legal recognition of other forms of electronic signatures

5. At present, the Ordinance does not recognize all forms of electronic signature; it only gives legal recognition to digital signatures generated by the Public Key Infrastructure (PKI) technology. The Bill seeks to give legal recognition to all forms of electronic signature in transactions not involving the Government, subject to certain conditions and consent of the parties concerned. However, for transactions with the Government, the existing requirement on the use of digital signature will continue.

### Service of documents by electronic means

6. To facilitate the implementation of the E-government programme, the Bill proposes to provide that the service of documents in the form of electronic records would satisfy the requirement of service by post or in person under the statutory provisions set out in the proposed new Schedule 3 to the Ordinance. These provisions relate to the service of notice, application or other documents on or by the Commissioner of Rating and Valuation and related parties under certain Ordinances.

### Operation of the voluntary recognition scheme for CAs

7. To improve the operation of the voluntary recognition scheme for CAs, the Bill proposes that the requirement to engage qualified and independent assessors will only apply to assessment of the trustworthiness of the certification service, such as system security and financial viability of the CA concerned, while other operational aspects may be dealt with through a statutory declaration to be made by a responsible officer of the CA.

## **Issues of concern**

8. In the course of examining the Administration's proposals, members have raised the following concerns :

- (a) Some government departments seemed to adopt a security level lower than that of digital certification in conducting their electronic transactions. Queries were raised on whether it was cost-effective or appropriate for individual departments to develop their own security infrastructure for electronic transactions.
- (b) There was reservation on the use of other forms of electronic signature such as personal identification number (PIN) which is less secure than digital signature as satisfying the signature requirement in law for certain transactions such as filing tax returns.
- (c) The Administration should step up public education on the security and risk levels associated with different forms of electronic signature including PIN.
- (d) The Administration should actively explore measures to promote wider use of digital certificates among members of the public and to enhance competition in the CA market.
- (e) There should be greater consistency in the use and interpretation of e-terminology such as "online" or "the Internet" in law drafting.

9. On the relationship between the Ordinance and other legislation in giving recognition to different types of electronic signature, the Administration has maintained that the Ordinance provides a generic framework for conducting electronic transactions. It does not preclude individual government departments from introducing specific statutory provisions for the conduct of specific transactions under their respective purview. Where the use of other forms of electronic signature, such as PIN, was considered appropriate, specific legislative provisions would need to be introduced in order that the implications can be fully studied.

10. Regarding overseas experience in the use of PIN and its security level, the Administration has informed members that notwithstanding the temporary suspension of the PIN-based electronic tax return service of the UK Government on 27 May 2002, subsequent reports have confirmed that the incident was due to certain technical problems and was unrelated to the use of PIN/password as the authentication/signing token.

11. The Administration acknowledges members' concern about the need to disseminate the necessary information to guide users, particularly those who have opted to use a less secure form of electronic signature, in understanding and accepting the corresponding levels of security and risks. On the use of digital signature, the Administration is hopeful that the installation of a free

digital certificate by Hong Kong Post in the new Smart Identity Card will encourage more users to opt in and use digital signature.

12. As regards the use and interpretation of e-terminology in law drafting, members have been informed that the Department of Justice has undertaken to draw up internal guidelines to achieve consistency in the use of terms like "online" and "the Internet" in drafting legislation.

Council Business Division 1  
Legislative Council Secretariat  
20 February 2004

**立法會**  
***Legislative Council***

LC Paper No. CB(1)1414/01-02

(These minutes have been  
seen by the Administration)

Ref : CB1/PL/ITB/1

**Legislative Council**  
**Panel on Information Technology and Broadcasting**

**Minutes of meeting**  
**held on Monday, 11 March 2002, at 2:30 pm**  
**in Conference Room A of the Legislative Council Building**

**Members present** : Hon SIN Chung-kai (Chairman)  
Hon Howard YOUNG, JP (Deputy Chairman)  
Hon Kenneth TING Woo-shou, JP  
Dr Hon David CHU Yu-lin, JP  
Hon Eric LI Ka-cheung, JP  
Hon CHAN Kwok-keung  
Hon Emily LAU Wai-hing, JP  
Hon LAW Chi-kwong, JP  
Hon MA Fung-kwok

**Members absent** : Dr Hon Philip WONG Yu-hong  
Hon YEUNG Yiu-chung, BBS  
Hon Albert CHAN Wai-yip  
Hon Timothy FOK Tsun-ting, SBS, JP

**Public officers attending** : Agenda Items IV, V and VI

Mr Alan SIU  
Deputy Secretary for  
Information Technology and Broadcasting

Agenda Items IV and V

Miss Adeline WONG  
Principal Assistant Secretary for  
Information Technology and Broadcasting

Agenda Item IV

Mr Gary K W LAI  
Senior Systems Manager of  
Information Technology Services Department

Agenda Item V

Mr Joseph LEUNG  
Executive Director,  
Hong Kong Computer Society

Agenda Item VI

Ms Lydia LAM  
Assistant Secretary for  
Information Technology and Broadcasting

**Clerk in attendance** : Miss Polly YEUNG  
Chief Assistant Secretary (1)3

**Staff in attendance** : Ms Debbie YAU  
Senior Assistant Secretary (1)1

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**IV      Review of the Electronic Transactions Ordinance**  
(LC Paper Nos. CB(1)1251/01-02(01) and CB(1)1239/01-02)

4.      Members noted that an information note on issues related to the review of the Electronic Transactions Ordinance (ETO) had been prepared by the Secretariat for members' reference.

5.      With the aid of power-point presentation, the Principal Assistant Secretary for Information Technology and Broadcasting (PAS/ITB) took members through the Administration's paper. She outlined the proposals in the consultation paper on the review of the ETO as follows:

- a) specifying (by way of subsidiary legislation) in the proposed schedule to be added to the ETO legal provisions under which the use of personal identification number (PIN) would be accepted for satisfying the signature requirement, and legal provisions under which the requirement of "delivery by post or in person" would be automatically construed as covering "delivery by electronic means" as well;
- b) removing those provisions which were or would soon become no longer necessary from the exclusion list (e.g. production of documents to the Commissioner of Labour for examination and inspection under the Employment Ordinance (Cap 57) and the Employees' Compensation Ordinance (Cap 282));
- c) splitting the assessment under the voluntary recognition scheme for certification authorities (CAs) into two parts: the first part concerned trustworthiness of the certification service that had to be prepared by a qualified and independent person approved by the Director of Information Technology Services (the Director); and the second part concerned provisions which were not related to trustworthiness of the certification service that could be dealt with through a declaration made by an authorized person of the CA concerned; and
- d) specifying that the Director had the authority to ask the recognized CA to furnish an assessment report to be prepared by a qualified person approved by the Director when there were or would be major changes which affect a CA's suitability for recognition. The assessment report so required to be furnished should focus only on the concerns raised by the Director.

*(Post-meeting note:* The presentation notes were tabled at the meeting and issued to members after the meeting vide LC Paper No. CB(1)1287/01-02(01).)

#### *Certification Authorities (CAs)*

6. In relation to the recognition of CAs, Mr MA Fung-kwok enquired about the criteria adopted by the Director in approving a qualified and independent person as assessor for the first part of the report; the authenticity of the declaration made by an authorized person of the CA concerned; and whether the assessment report would be available for public scrutiny.

7. In reply, the Senior Systems Manager of Information Technology Services Department advised that according to the Code of Practice for Recognized Certification Authorities, in order to be considered as being qualified for preparing the assessment report, the person should be independent of the recognized CA under assessment, accredited by a recognized

professional organization or association, and proficient in related technologies. The Deputy Secretary for Information Technology and Broadcasting (DS/ITB) confirmed that, as regards the declaration made by the authorized person of the CA, a deterrent was already in place as making false declarations under the ETO was an offence and subject to penalty. The Director might also assess the validity of the declaration with references to any complaints received. Material information in the assessment report would be published for public inspection.

8. On the scope of the matters to be declared, DS/ITB informed members that the declaration mainly dealt with the CA's capability of complying with the provisions that were not related to trustworthiness of the certification service. These provisions would be set out clearly in the ETO and the Code of Practice once the proposed legislative amendments were enacted.

#### *The role of the Hong Kong Post*

9. Mr Eric LI recalled that when examining the Electronic Transaction Bill, members had agreed that the Hongkong Post (HKP) be exempted from Part VII of the Bill on "Recognition of Certification Authorities and Certificates by Director" so as to provide an impetus for wider adoption of digital certification within the Government. However, the prevalent practice among Government departments seemed to indicate the adoption of a security level lower than digital certification. The proposed use of PIN in the Inland Revenue (Amendment) (No. 2) Bill 2001 was a case in point. As such, Mr LI questioned the efficacy of HKP's role as a CA in promoting digital certification and cast doubt on the cost-effectiveness for departments to develop individual security infrastructure instead of using the certification system provided by the HKP.

10. In this regard, DS/ITB confirmed that the HKP provided certification services within the Government as well as to the public. All Government departments currently used digital certificates to ensure trust and security in confidential electronic communications. He further explained that the proposed use of PIN in relation to the Inland Revenue (Amendment) (No. 2) Bill 2001 was to provide a further option to the use of digital certificate or the conventional physical method of filing tax returns. The aforesaid Bill, which aimed at encouraging the public to file tax return via electronic means, was in line with international practice as many other countries also accepted PIN for filing tax return. The suggestion to amend the ETO to provide for the acceptance of PIN for satisfying the signature requirement in law would serve to facilitate the general public.

11. Mr Eric LI pointed out that the voluntary recognition scheme for CAs was to promote the growth of a free and open market for CAs to help facilitate the development of e-business in Hong Kong. However, he noted with



disappointment that so far, only one other CA in the market had launched service to compete with the HKP. Mr LI expressed grave concern about the absence of competition in the certification market and enquired whether this was due to cumbersome application procedures for recognition.

12. In this connection, DS/ITB informed members that in addition to the HKP, Digi-sign, a subsidiary of Tradelink, had been given recognition as a CA. Several companies had also applied to the Director for CA recognition. This indicated that the industry considered that there were business opportunities in information security services. Mr Eric LI was pleased to note the progress and urged the Administration to expedite the processing of applications for recognition so that more recognized CAs would launch service to bring about a truly competitive market.

#### *Smart Identity (ID) Card*

13. Noting that only the digital certificates issued by HKP would be embedded into the new Smart ID Card, Mr Eric LI considered that the infrastructure should be open to all recognized CAs on an equal footing. In response, DS/ITB advised that in order to increase the take-up rate of digital certificates which would in turn facilitate the development of e-business in Hong Kong, the HKP would offer to provide a digital certificate, to be embedded on the new Smart ID Card, free of charge for one year to each citizen free. While it was technically feasible to allow other recognized CAs to load the digital certificates issued by them onto the Card, previous public consultation revealed that the public had reservation at this stage about allowing a commercial entity to operate on the Card and put data into the chip. However, in the longer term when the community was more ready, consideration could be given to opening the smart ID Card platform for the digital certificates issued by other recognized CAs.

14. The Chairman noted that the smart ID Card would capture the template of the cardholder's thumbprints and asked if the Administration would consider using them as a form of electronic signatures for identity authentication purpose. In reply, DS/ITB reaffirmed the Administration's view, which was also shared by Members, that it was not appropriate to use thumbprints, which were immigration related data, for non-immigration purposes.

#### *Utilization and security of e-transactions*

15. In reply to Mr Howard YOUNG's enquiry, DS/ITB confirmed that the Administration had not come across any disputes or litigation arising from the use of electronic records in transactions since the enactment of ETO. The Administration's major task ahead was to encourage the wider use of electronic transactions.

16. In this connection, Miss Emily LAU further enquired on the current utilization rate of electronic transactions as compared to the originally projected rate. In reply, DS/ITB recapped the figures reported at the January Panel meeting that according to an international survey, 31% of the population in Hong Kong had used online government services, of which the majority was for information browsing and only a small percentage was for electronic transactions. However, the use of electronic transactions in the commercial and business sectors was encouraging. For example, 100% of the returns from banks and financial institutions to the Hong Kong Monetary Authority under the Banking Ordinance were submitted via electronic means while the majority of returns/reports submitted from relevant organizations to the Mandatory Provident Fund Schemes Authority under law were also in digital form. Organizations required to submit regular reports to various authorities would find the electronic means a very convenient tool. Notwithstanding, the Administration would continue its work in promoting the use of electronic transactions in the community at large, particularly at the level of individual users.

17. Miss Emily LAU was concerned about the existing legal requirement of "delivery by post or in person" and asked if such legal requirement had become obsolete and impeded the development of electronic transactions. In response, DS/ITB pointed out that some departments such as the Rating and Valuation Department could not accept electronic submissions because the relevant legislation (namely, the Rating Ordinance, the Government Rent (Assessment and Collection) Ordinance as well as the Landlord and Tenant (Consolidation) Ordinance) required the relevant documents to be delivered either by post or in person. These legal provisions were drafted and enacted at the time when electronic transactions were not prevalent. To resolve this problem, the Information Technology and Broadcasting Bureau had therefore suggested in the consultation paper that the ETO should be amended to the effect that the Secretary for Information Technology and Broadcasting might, by subsidiary legislation, specify that the legal provisions relating to "delivery by post or in person" be automatically construed as covering "delivery by electronic means" as well.

18. Mr Howard YOUNG noted that certain electronic transactions such as payment for City-line could be executed by inputting the visa credit card numbers without any authentication. He cautioned that a third party might effect electronic payment simply by inputting the payer's credit card number without the consent or even the knowledge of the payer. He therefore urged the Government to consider providing users with a further option of making payment only after authentication.

19. In this regard, DS/ITB pointed out that pursuant to the Personal Data (Privacy) Ordinance, the payees were obliged to keep the payers' information including their credit card numbers in strict confidence. In certain electronic

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transactions involving credit card payments such as the Electronic Services Delivery Scheme, the Government received payment confirmation directly from the related banks without obtaining the detailed information of the credit cards concerned. As the ETO was not targeted at electronic payment, the Chairman suggested and DS/ITB agreed that members' concern about the security of effecting e-payments should be referred to the Hong Kong Monetary Association and the Financial Services Bureau for further consideration.

*E-terminology*

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20. The Chairman observed that wordings such as 'online' or 'Internet' were increasingly used in different ordinances and called for greater consistency in the use and interpretation of these terms in drafting legislative provisions. He referred to, as an example, the recent proposal of the Security Bureau to substitute "computer" with "information system" in related legislative provisions and adopt the definition of "information system" in the ETO for the sake of consistency. DS/ITB noted his concern and agreed to look into the matter in conjunction with the Law Draftsman.

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***Legislative Council***

LC Paper No. CB(1)425/02-03

(These minutes have been  
seen by the Administration)

Ref : CB1/PL/ITB/1

**Panel on Information Technology and Broadcasting**

**Minutes of meeting**

**held on Thursday, 7 November 2002, at 10:45 am  
in the Conference Room A of the Legislative Council Building**

- Members present** : Hon SIN Chung-kai (Chairman)  
Hon Howard YOUNG, JP (Deputy Chairman)  
Hon Eric LI Ka-cheung, JP  
Hon CHAN Kwok-keung  
Hon YEUNG Yiu-chung, BBS  
Hon Emily LAU Wai-hing, JP  
Hon Albert CHAN Wai-yip  
Hon MA Fung-kwok, JP
- Members absent** : Dr Hon David CHU Yu-lin, JP  
Dr Hon Philip WONG Yu-hong  
Hon Timothy FOK Tsun-ting, SBS, JP  
Dr Hon LAW Chi-kwong, JP
- Public officers attending** : Agenda Items IV and V  
  
Mr Alan SIU  
Deputy Secretary for Commerce, Industry and Technology  
(Information Technology and Broadcasting) 2
- Agenda Item IV
- Miss Adeline WONG  
Principal Assistant Secretary for Commerce, Industry  
and Technology  
(Information Technology and Broadcasting) D

Mr John WONG  
Assistant Director  
Information Technology Services Department

Mr Gary LAI  
Senior Systems Manager  
Information Technology Services Department

Agenda Item V

Miss Helen TANG  
Principal Assistant Secretary for Commerce, Industry  
And Technology  
(Information Technology and Broadcasting) B

Agenda Item VI

Mr M V STONE, JP  
E-government Coordinator/  
Commerce, Industry and Technology Bureau

Mrs Elizabeth YEUNG  
Advisor to E-government Coordinator/  
Commerce, Industry and Technology Bureau

Mr Isaac CHUNG  
Assistant Secretary for Commerce, Industry and Technology  
(Information Technology and Broadcasting) EG5

Agenda Item VII

Mr A S K WONG, JP  
Director-General of Telecommunications

Ms Eva CHENG, JP  
Deputy Secretary for Commerce, Industry and Technology  
(Information Technology and Broadcasting) 1

**Clerk in attendance** : Miss Polly YEUNG  
Chief Assistant Secretary (1)3

**Staff in attendance** : Miss Connie FUNG  
Assistant Legal Adviser 3

Ms Debbie YAU  
Senior Assistant Secretary (1)1

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#### IV Review of Electronic Transactions Ordinance (ETO)

LC Paper No. CB(1)185/02-03(03) -- Information note on issues related to the review of the Electronic Transactions Ordinance prepared by the Legislative Secretariat

LC Paper No. CB(1)185/02-03(04) -- Information paper prepared by the Administration

(A set of power-point presentation material was circulated after the meeting vide LC Paper No. CB(1)254/02-03(01))

5. With the aid of power-point presentation, the Principal Assistant Secretary for Commerce, Industry and Technology (Information Technology and Broadcasting)D (PAS/CIT(ITB)D) briefed members on the major comments received for the proposals in the public consultation paper on the review of ETO issued in March 2002. She also highlighted the Administration's responses and certain revised proposals.

6. On the interface of the Inland Revenue (Amendment) (No.2) Bill 2001 with ETO, PAS/CIT(ITB)D highlighted that ETO provided a generic legal framework which should not prevent other Government bureaux and departments from enacting legislation to cater for their specific needs in implementing electronic services. The Inland Revenue (Amendment) (No.2) Bill 2001, which was currently examined by a Bills Committee, was an example of such legislation. The Bill, if enacted, would provide the legal framework for the use of Personal Identification Number (PIN) in filing tax return. She also briefed members on the use of PIN in overseas jurisdictions such as the United Kingdom, Singapore, and Canada. On the security of using PIN, members noted that the PIN-based electronic tax return service of the UK Inland Revenue had been temporarily suspended following reports that certain users could see the information relating to another person. The UK Inland Revenue had confirmed that the incident was the result of a combination of unusual circumstances, none of which had anything to do with using PIN as the authentication token and the UK Inland Revenue had never had any security or confidentiality problem arising from the use of PIN.

*(post-meeting note: Details on the interface of the aforesaid Bill and the ETO as well as overseas experiences were contained in the speaking notes of PAS/CIT(ITB)D issued to members after the meeting on 11 November 2002 vide LC Paper No. CB(1)270/02-03))*

7. Noting that there were now three other recognized certification authorities (CAs) under the ETO operating in the market to compete with Hongkong Post (HKP), Mr Eric LI urged the Administration to take active measures to foster the development of a more competitive CA market so as to promote electronic transactions.

8. In response, the Deputy Secretary for Commerce, Industry and Technology (Information Technology and Broadcasting)2 (DSCIT(ITB)2) pointed out that when ETO was first enacted, it had taken the CA applicants some time to familiarize themselves with the legislative requirements. At present, the Information Technology Services Department had been able to process the applications within the pledged period provided that all of the required information was submitted by the applicants. He highlighted that the number of CAs should be determined by market demand and considered that four CAs in the market could bring about effective competition.

9. On the use of PIN as proposed under the Inland Revenue (Amendment) (No.2) Bill 2001, Mr Eric LI recapped that professionals/technical experts preferred the use of digital signatures over PIN. While members understood that the Administration was not mandating the use of a less secure technology but offering an additional option which was commensurate with the risks involved in filing tax return, Mr LI advised that the Government should educate the public about the differences in the levels of security and risks involved and individual users' responsibility in the safe keeping of PIN. He also said that it would be useful if a copy of the draft minutes on this item could be made available prior to the next meeting of the Bills Committee on the Inland Revenue (Amendment) (No.2) Bill 2001 to be held on 12 November 2002.

10. In response, DSCIT(ITB)2 reiterated that the Administration would not propose to make a general amendment to the ETO on the use of PIN for satisfying a signature requirement under law. In cases where the use of PIN in certain Government services was commensurate with the risks involved, specific amendment to the relevant legislation should be made so that the implications of the amendment could be fully examined by the Legislative Council and the community. The Administration would also disseminate the necessary information to guide the users, who opted to use PIN, in particular, in understanding and accepting the corresponding levels of security and legal risks.

11. The Chairman also opined that the application of PIN should be considered case by case as some parties had reservations about its adoption.

12. On the use of digital signatures, DSCIT(ITB)2 said that while its use was not prevalent among individual members of the public, its adoption by the business sector was encouraging. For example, 100% of the returns from banks and financial institutions to the Hong Kong Monetary Authority under the Banking Ordinance were submitted via electronic means while the majority of returns/reports required to be submitted to the Mandatory Provident Fund Schemes Authority under law was also in digital form. To encourage the use of digital signatures by individual members of the community, HKP would offer to citizens one year's free use of a digital certificate to be embedded in the new Smart ID Card to be rolled out in 2003.

13. Mr Eric LI sought confirmation from the Administration on the finalized decision of embedding the digital certificate of HKP in the new Smart ID Card. He asked whether the digital certificates provided by HKP in the Smart ID Cards could only be used for Government services or whether they could be used for commercial services as well. He also enquired whether the Smart ID card platform would be open for digital certificates issued by other recognized CAs so as to facilitate competition in the CA market.

14. DSCIT(ITB)2 said that the inclusion of the digital certificate issued by HKP into the Smart ID Card was decided in the context of the exercise to replace existing ID cards with Smart ID cards. The digital certificates provided by HKP in smart ID Cards could be used for both Government and commercial services. Currently, Government services available to the public were open to all recognized CAs. Individual citizens might use the digital certificates issued by recognized CAs other than HKP when conducting electronic transactions under the Electronic Service Delivery Scheme. He also confirmed that Smart ID Card holders were free to decide whether they would continue to use the digital certificates issued by HKP after one year. Subject to operational experience and the community's readiness, the Administration would also consider opening up the Smart ID Card platform to the digital certificate issued by other CAs.

15. Summing up, the Chairman advised that the various issues relating to electronic transactions could be further examined when the relevant Bill was introduced into the Council.

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