

Consultation Paper on the Review of the Electronic Transactions Ordinance

The Information Technology and Broadcasting Bureau (ITBB) is conducting a review of the Electronic Transactions Ordinance (ETO) (Cap. 553), with a view to ensuring that Hong Kong has the most up-to-date legislative framework for the conduct of e-business.

Background

2. The ETO was enacted on 5 January 2000. All the provisions of the Ordinance came into operation by April 2000. The Ordinance mainly aims to provide a clear legal framework so that electronic records and digital signatures have the same legal recognition as that of their paper-based counterparts, thereby promoting and facilitating the development of e-business in Hong Kong. It also establishes a voluntary framework for recognition of certification authorities (CAs) operating in Hong Kong.

3. Since the enactment of the ETO, we have witnessed various e-business developments in Hong Kong. The Government has taken the lead to accept electronic submissions under law for the bulk of the legislation in Hong Kong. Various e-business applications have been developed in both the public and private sectors, e.g. the Electronic Service Delivery Scheme has been introduced to provide Government services online. A local public key infrastructure has been established. The Hongkong Post Certification Authority, which is a recognised CA under the ETO, has been set up and it issues digital certificates on a community-wide basis for the conduct of secure electronic transactions. A commercial CA has also been recognised under the ETO.

Review

4. We are committed to review the ETO 18 months after its enactment to ensure that Hong Kong has the most up-to-date legislative framework for the

conduct of e-business. In the course of the review, we will take into account the experience gained since the operation of the ETO, technological advancement, social changes and international e-business development.

5. Government, as one of the major users of IT in the community, should take the lead and contribute to how the existing e-business legislative framework should be updated and improved. Therefore, as a first step, we started in the summer last year an internal consultation exercise to seek the views of all Government bureaux and departments on the implementation of the ETO. Taking into account the views received in the internal consultation exercise, the experience gained in the implementation of the ETO and international e-business development, we have formulated a set of preliminary proposals to update and improve the ETO. They are set out in the ensuing paragraphs. Our next step is to consult the public.

Proposals

Legal recognition of other forms of electronic signatures

6. The ETO addresses the concerns in electronic transactions by giving legal recognition to electronic records and digital signatures¹ supported by recognized certificates. We encourage Government bureaux and departments to review whether signature requirement in law under their portfolio can be removed in order to facilitate electronic transactions. But for those cases where the signature requirement has to be maintained, it is timely now to consider whether legal recognition should be extended to cover other forms of electronic signatures², in addition to digital signature, in order to stimulate e-business development.

7. Different electronic authentication technologies and means have been developed and adopted by governments and business communities around

¹ Under the ETO, a “digital signature” means an electronic signature of the signer generated by the transformation of the electronic record using an asymmetric cryptosystem and a hash function such that a person having the initial untransformed electronic record and the signer’s public key can determine whether the transformation was generated using the private key that corresponds to the signer’s public key, and whether the initial electronic record has been altered since the transformation was generated.

² Under the ETO, an “electronic signature” means 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 signature is one form of electronic signatures.

the world. To give the public a wider choice and to facilitate e-business and E-government development, we should examine whether legal recognition should be given to other means of electronic authentication.

8. The use of personal identification number (PIN) is an authentication means which should be examined for recognition under the ETO. It is commonly used in banking transactions nowadays as well as in some E-government transactions overseas, e.g. filing of tax return in Australia, Singapore, the UK and the USA, renewal of driving licences in some states in the USA, etc. It is convenient to users as they do not have to rely on other tools or devices to identify themselves electronically. The use of PIN for authentication has been widely tested in various types of market applications. With proper management, it can be considered for acceptance as a form of electronic signatures for satisfying the signature requirement under law in specified cases³ where the level of security offered by it is commensurate with the risk of the service involved, e.g. where there is already established relationship between the parties involved so that the PIN could be securely issued, used and verified; and where a secure system like the Electronic Service Delivery Scheme which provides strong encryption services for data transmission is used for making the electronic transaction. The use of PIN should be provided as an option in addition to the use of digital signature and hand-written signature. It should be up to individual users to opt for the means which suits them best. **We, therefore, consider that there is a case for the ETO to be amended and a new schedule added so that the Secretary for Information Technology and Broadcasting (the Secretary) may, by subsidiary legislation, specify in the new schedule legal provisions under which the use of PIN will be accepted for satisfying the signature requirement.** What provisions will eventually be included in the schedule will be subject to normal legislative procedure.

9. We have also considered other means of authentication like using biometrics. While these means may be sound technologically and have been deployed in internal applications of some organisations, there is currently no institutional arrangement in place which can support their application on a community-wide basis. It is not anticipated that an independent and trusted

³ The Inland Revenue (Amendment)(No. 2) Bill 2001 has been introduced into the Legislative Council which, inter alia, provides that a password can be used for authentication and fulfillment of signature requirement for tax returns filed to the Inland Revenue Department under the Inland Revenue Ordinance (Cap. 112).

third party which collects the biometrics of subscribers on a community-wide basis for the purpose of authenticating the identity of the subscribers in electronic transactions would emerge in the short future. Nor would this be a situation which has already gained wide acceptance in the community. Moreover, few parties in the community (including Government departments) may now have the technical capability to deal with biometrics of outside parties for the purpose of authentication in electronic transactions on a community-wide basis. **We, therefore, consider that other means of authentication including biometrics should be examined at a later stage when they become more mature, and when related institutional support emerges in the market.**

The legal requirement of “delivery by post or in person”

10. Various legislation at present contain express requirements that the document to be submitted under the relevant legal provision shall be delivered to the party concerned either by post or in person. These legal provisions were drafted and enacted at the time when electronic transactions were not prevalent. Now electronic transactions have become more and more popular and these legal provisions have become an impediment to the adoption of electronic means and the implementation of E-government. For example, many Government departments are prepared to accept electronic submission apart from mail and delivery in person. However, they will have to amend their respective legislation before they can do so and it is not efficient to carry out such amendments separately by individual departments. To simplify and streamline the process, **we consider that there is a case for the ETO to be amended and a new schedule added so that the Secretary may, by subsidiary legislation, specify in the new schedule legal provisions under which the requirement of “delivery by post or in person” will be automatically construed as covering “delivery by electronic means” as well.** Provisions which can benefit from this proposal include the servicing of notices, requisitions and other documents to the Commissioner of Rating and Valuation under the Rating Ordinance (Cap. 116), the Government Rent (Assessment and Collection) Ordinance (Cap. 515) and the Landlord and Tenant (Consolidation) Ordinance (Cap. 7), etc. This will facilitate the departments and the community to adopt electronic submissions. What provisions will eventually be included in the schedule will be subject to normal legislative procedure.

Exemptions under the ETO

11. Schedule 1 to the ETO sets out matters which are exempt from the electronic means on a generic basis, e.g. will, trust, power of attorney, oath, affidavit, statutory declaration, etc. We have reviewed the needs of these exemptions. Notwithstanding technological advancement and social changes, there is still a practical need to retain these exemptions because of the solemnity and complexity involved. **We, therefore, do not consider that Schedule 1 to the ETO should be amended for the time being.**

12. Schedule 2 to the ETO sets out court and quasi-judicial proceedings which are exempt from the electronic submission process. As electronic filing has yet to become mature and a common practice in the legal profession, **we, therefore, do not consider that Schedule 2 to the ETO should be amended for the time being.**

13. The Government has taken the lead in setting a good example by accepting electronic submissions under the bulk of the statutory provisions in the laws of Hong Kong since the ETO came into operation. However, for some specific statutory provisions concerning the operation of individual Government departments, there is a genuine and practical need to exclude them from the electronic process. To ensure that the Government departments concerned would continue to operate smoothly, the Secretary made an exclusion order (subsidiary legislation subject to negative vetting by the Legislative Council) in April 2000 under the ETO to exclude 195 statutory provisions in respect of 39 Ordinances and one Order (out of a total of around 650 Ordinances in the laws of Hong Kong) from the application of the electronic process when the ETO was first enacted. The Secretary subsequently made four other amendment orders to provide for new exclusions with the enactment of new legislation and to withdraw exclusions already made that had become no longer necessary.

14. The exclusions so far made can be classified into the following five categories –

- (a) provisions which have to be excluded due to the solemnity of the matter or document involved, e.g. provisions concerning the electoral process;

- (b) provisions which have to be excluded on operational grounds, e.g. provisions concerning the production of documents to Government authorities on the spot;
- (c) provisions which have to be excluded due to the involvement of voluminous submissions and complex plans which would be difficult to handle electronically, e.g. provisions concerning submission of documents and plans to the works departments;
- (d) provisions which have to be excluded because of international practices, e.g. provisions concerning documents to be kept by the flight crew for air navigation purposes; and
- (e) provisions which have to be excluded to ensure that the Government would be able to meet its contractual obligations, e.g. provisions on the submission of trade-related documents which concern the franchise of the Tradelink.

We have reviewed these principles for making exclusions. Notwithstanding technological advancement and social changes, these principles remain valid today and should continue to be adopted. We have critically examined existing statutory provisions excluded by virtue of the ETO against these principles. While most of the exclusions should be retained, there are some which are or will soon become no longer necessary and thus can be withdrawn, e.g. production of documents for examination and inspection to the Commissioner of Labour under the Employment Ordinance (Cap. 57) and the Employees' Compensation Ordinance (Cap. 282), production of document required under the Immigration Ordinance (Cap. 115) by employer to the Labour Department, etc. **We consider that the ETO should be amended to remove these provisions from the exclusion list.**

The operation of the voluntary recognition scheme for certification authorities

15. Under the ETO, we have established a voluntary recognition scheme for CAs. Under the scheme, the Director of Information Technology Services (the Director) will grant recognition to CAs which provide a

trustworthy service. The applying CA needs to engage an independent assessor to prepare and submit an assessment report to the Director on its compliance with the relevant requirements set out in the ETO and in the Code of Practice for Recognised Certification Authorities (Code of Practice) published by the Director under the ETO.

16. For a recognised CA, such assessment has to be conducted once every 12 months to ensure its trustworthiness and that it operates in accordance with the provisions of the ETO and the Code of Practice. The recognised CA has to furnish the assessment report to the Director who will publish material information in the report for public inspection. The Director may renew, suspend or revoke the recognition granted to a CA. There is an appeal mechanism under the ETO in respect of the recognition of CAs by the Director. So far, no appeal has been filed under the ETO.

17. The Code of Practice sets out the standards and procedures to be adopted by recognised CAs. Any amendment to the Code of Practice would be made in consultation with the Advisory Committee on Code of Practice for Recognised Certification Authorities (Advisory Committee), which comprises representatives from the information technology industry, CA sector, professional bodies, academic institutions and related organisations. This is to ensure that the views of all relevant parties are considered in the process. The Advisory Committee has been functioning smoothly and effectively.

18. The voluntary recognition scheme has generally worked well for CA established by the Government as well as for commercial CA. **We, therefore, do not consider that any substantial changes should be made to the provisions in the ETO relating to the CA recognition scheme for the time being.**

19. However, in respect of the preparation of the assessment report on the recognition of CA for furnishing to the Director, the ETO at present requires the report to be prepared by a person approved by the Director as being qualified for making such a report. The qualified person has to make an assessment on whether the CA concerned complies with the relevant provisions in the ETO and the Code of Practice. These provisions generally fall into two categories: those related to the trustworthiness (e.g. system security, procedural safeguard, financial viability, etc.) of the certification service and those which

are not related to trustworthiness but other aspects of the CA operation, e.g. adoption of any discriminatory practices in the procedures of the CA.

20. We note that there is concern about the need for a qualified person to assess whether a CA is in compliance with those provisions which are not related to the trustworthiness of the certification service. The main question is that the qualified person may not practically be able to make such an assessment. The CA itself should be in the best position to deal with this matter. To address this concern, **we consider that there is a case to amend the ETO and split the assessment into two parts: the first part concerns trustworthiness of the certification service that has to be prepared by a qualified and independent person approved by the Director; and the second part concerns provisions which are not related to trustworthiness of the certification service that can be dealt with through a declaration made by an authorised person of the CA concerned.** It will also be set out clearly for public information as to which provisions under the ETO regime are related to trustworthiness of the certification service and which are not. This should not compromise the integrity of the CA regime as any false representation made to the Director would be subject to a penalty under the ETO. A deterrent is already in place.

21. At present, there is no provision in the ETO, apart from application for recognition and the annual assessment, which allows the Director to ask a recognised CA to furnish an assessment report prepared by a qualified person. There can be crucial changes in the operation of the CA in between two annual assessments which may affect its trustworthiness, e.g. major changes to the elements which determine whether a CA is suitable for recognition, such as -

- (a) the financial status of the CA;
- (b) the arrangements to cover the liability of the CA; or
- (c) the system, procedure, security arrangements and standards used by the CA to issue certificates to its subscribers.

To enhance the trustworthiness of the CA recognition scheme, **we consider that there is a case to amend the ETO so that the Director has the authority to ask the recognised CA to furnish an assessment report to be prepared by a**

qualified person approved by the Director when there are or will be major changes in such elements. The assessment report so required to be furnished should focus only on the concerns raised by the Director. This should help strengthen the recognition scheme but without imposing undue burden on the CA.

Public Consultation

22. The above preliminary proposals aim to update our legal framework to facilitate e-business development in Hong Kong. We now invite public views on these proposals as well as comments on any other aspects of the ETO. We will examine the views and comments received in the consultation exercise and formulate legislative proposals to amend the ETO accordingly.

23. The soft copy of the ETO, its subsidiary legislation and the Code of Practice can be accessed for easy reference at the web site of the ITBB (www.info.gov.hk/itbb).

Comments on the Review

24. Please send your comments on the review to us by **30 April 2002** through any of the following means:

By Post: Information Technology and Broadcasting Bureau
2/F, Murray Building
Garden Road
Hong Kong

By Fax : 2511 1458

By E-mail: etoreview@itbb.gov.hk

25. We shall assume that all the submissions made in response to this review are not intended to be confidential and may be inspected by the public on request, unless there is a specific request to treat all or part of a submission in confidence.

26. For enquiries on the review, please contact Miss Susanne Ho, Assistant Secretary of this Bureau, at 2189 2291.

Information Technology and Broadcasting Bureau
March 2002