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<u>BY MAIL & FAX (2102-2525)</u>

13 June, 2008

Dr. York CHOW
Secretary for Food and Health
Food and Health Bureau
19/F Murray Building
Garden Road
Central, Hong Kong

Dear Dr. Chow,

RE: <u>Healthcare Reform Consultation</u>

I am writing in response to Chapter 4 *"Develop Electronic Health Record Sharing"* of the Consultation Document on Healthcare Reform.

By way of introduction, I represent a group that has been awarded a 4-year contract to manage all of the digital certificate operations and services of the Hongkong Post Certification Authority ("HKPCA"). With an in-depth software development background, we bid on the HKPCA out-sourcing contract because we are firm believers in Government's Digital 21 vision: that advancements in information and communications technology will support and propel the growth of Hong Kong. The Government has invested a significant amount in hardware, software and documentation/process development in building HKPCA into an internationally-recognized certification authority ("CA"), a status not yet attained by any CA currently licensed on the Mainland. Furthermore, the <u>Electronic Transactions Ordinance</u> ("ETO") gives electronic signatures deployed from digital certificates issued by Government-authorized CAs (such as HKPCA) the same legally-binding status as signatures signed by hand.

Given the importance of establishing a territory-wide electronic health record (eHR) infrastructure to the reforms being proposed, we believe digital certificates supplied by HKPCA ("e-Certs") together with software that we have developed can enable such eHR system to strike a proper balance between (a) enabling those duly authorized to view and update with ease virtually anywhere and at any time appropriate patient records and (b) safe-guarding the privacy of such personal and very confidential information against unauthorized access.

When used in conjunction with e-Certs, our software can regulate what information on a particular Internet or intranet site a specific person can gain access to, view and/or make changes to, based on criteria pre-determined by the site owner. In addition, such software can (a) track what permitted changes such a person may have made on that site for future record purposes and (b) enable any downloaded information to remain protected by encryption.

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This can all be done because of the unique capabilities of e-Certs. These HKPCA digital certificates enable the identities of Internet (and intranet) users to be authenticated electronically and so, based on knowing who they are at the time of their access, different persons can have pre-designated different levels of access rights etc. to a protected web-site. In addition, e-Certs possess the ability to protect electronic files through use of strong encryption algorithms.

By hosting the eHR platform on the Internet enables it to be accessed quickly and effectively by healthcare professionals in both the public and private sectors. And e-Certs can protect such patient data from being accessed by unauthorized third parties: this additional security measure, commonly known as second factor authentication, is recommended or required practice when conducting high-security online communications or transactions, such as Internet banking.

In addition to access control/access tracking on the eHR platform, e-Certs can also help to offer patients an additional, and very simple, online means of giving consent for their records to be viewed/amended by healthcare professionals approved of by them. Some 1.2 million Hong Kong residents were issued with e-Certs during the smart ID card replacement scheme between 2003 and 2006, and many had such digital certificates embedded into their new smart ID cards. Given the electronic authentication capability of e-Certs, patients with such digital certificates can give consent for their records to be reviewed etc. when they visit their doctors' offices. This should speed up diagnosis as well as treatment because doctors would be able to view their patients' records on the eHR platform on the first consultation, rather than having to ask patients to return for a second visit to allow time for their records to be accessed and reviewed.

Given the very significant benefit of enabling patients to give consent and doctors to access appropriate records on an immediate/"real-time" basis, we believe it may be appropriate to extend such a capability to non e-Cert subscribers by, for example, issuing to other members (or a defined segment) of the general public with medical cards that have e-Certs embedded. Such medical cards can have additional features that cannot be printed on smart ID cards, like the cardholder's blood type and/or drug allergies.

Lastly, I wish to address the issue of implementation. Under the existing Public-Private Interface (PPI) project initiated by the Hospital Authority for the sharing – with approximately 500 private doctors – of electronic patient records, one-time password tokens were issued as the authentication device. In order to scale up such a pilot into a territory-wide eHR system, the workload required to issue, fulfill and support password tokens will need to be multiplied by at least 40 times, in addition to developing a cost-effective solution for patient authentication covering the entire population of some 7 million. All of this would involve the need to build (and thereafter maintain) new or additional "infrastructure" – in terms of personnel, hardware and processes – the costs of which may reduce amounts available to be spent on medical equipment, patient care, etc.

In contrast, the HKPCA "infrastructure" is already in place, proven, governed by legislation/regulations, and the subject of constant Government monitoring as well as of a

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semi-annual third-party assessment (currently undertaken by a Big Four accounting firm). In addition, individual applications can apply for their e-Certs at any one of 130 post offices across the territory while we can provide an "on-site" service (e.g., at hospitals) for bulk applications or renewals.

My colleagues and I hope that what has been outlined above is of interest, and that it may be possible for us to follow-up further on our proposal with representatives of your Bureau in the not too distant future.

Thank you.

Yours sincerely,

Winston Leong
Chairman

cc: Dr. N. T. Cheung, Chief Medical Informatics Officer, Hospital Authority
        Mr. Bruno Luk, Principal Assistant Secretary (Health), Food and Health Bureau