
Securing Electronic Transactions

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at

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The Online Trends

Rapid expansion –

- Worldwide Internet population has doubled from 360M in 2000 to currently over 720M
- Volume of Internet traffic is predicted to nearly double annually over the coming few years
- By 2004, worldwide B2B e-commerce revenues are expected to total US\$2.4 trillion, up from US\$1.4 trillion in 2003

Benefits of Using the Online Mode

Unlimited Opportunities for –

- Reduction of operating costs
- More responsive services
- Personalised customer services
- Round the clock and anywhere
- Collaborative business partnership

The Dark Side of the Cyber World

Cyber attacks

- Computer viruses and worms
- Hacking
- Spam-emails and fraudulent web-sites
- Internet thefts
- Internal loopholes

The Importance of Information Security

Financial loss due to computer crime cases in Hong Kong are shown below:

Year	Financial Loss (HK\$)
2001	19.1M
2002	4.5M
2003	7.6M
2004 (Jan – July)	6.8M

- Businesses and individuals must be vigilant at all times to guard against potential cyber attacks.

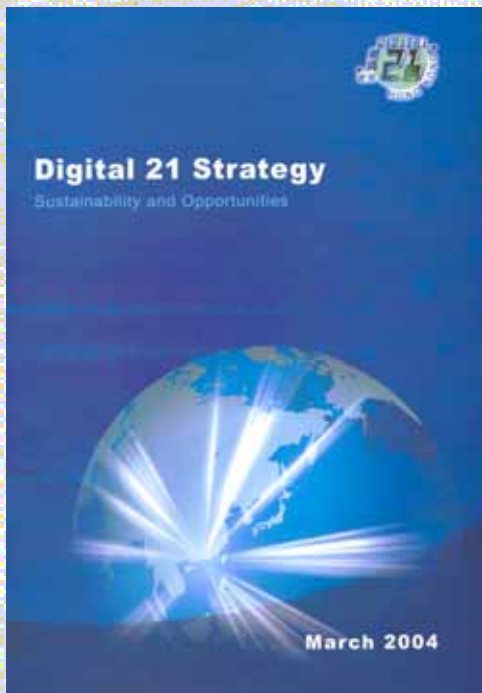
Information Security Protection

Tips:

- Develop and enforce an IT security policy and practice guidelines for the whole business
- Be vigilant at all times to guard against potential cyber attacks.
- Implement an effective security protection system with fire-walls, intrusion detection, security alerts, software vulnerability patch management, etc.
- Proactively exploit and fix your own vulnerabilities before the attackers find out
- Information security is everybody's business - disciplines

Information Security under the Digital 21 Strategy 2004

Infrastructure and Business Environment (One of the 8 main areas of the 2004 Digital 21 Strategy)



IT infrastructure and security



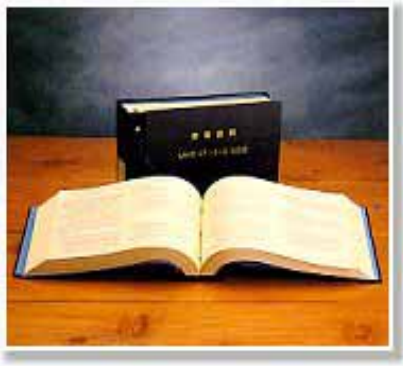
- Legal framework conducive to the conduct of e-business
- Initiatives to enhance information security

Legal Framework for e-Business Protection

Hong Kong has a clear and conducive legal framework for e-business

1. Electronic Transactions Ordinance (Cap. 553) ("ETO")

- enhances certainty and security for the conduct of e-transactions
- Provides legal recognition of electronic records and signatures
- voluntary recognition scheme for certification authorities ("CA")



Trustworthiness of Recognised CAs

- Recognition is only granted if the CA satisfy the trustworthiness standard set out in the Code of Practice and some other relevant requirements
- Electronic records and transactions are secured by digital certificates issued by Recognised Certification Authorities (RCA)
- At present, Postmaster General and 2 private CAs (Digi-Sign and HiTRUST) are recognized under the ETO



(list of recognized CAs available on
<https://secure1.info.gov.hk/ogcio/eng/caro/esub4.htm>)

Benefits of Using Digital Certificates in Electronic Transactions

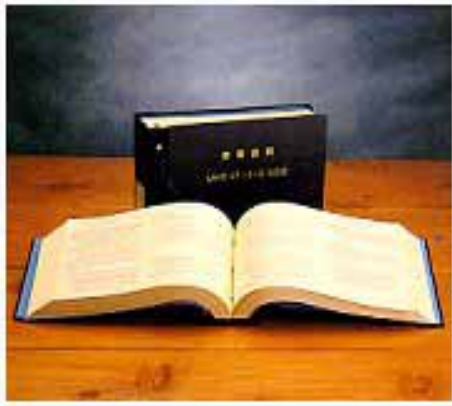
- A digital certificate supports digital signature and protects e-transactions in respect of:
 - *authenticity*
 - *integrity*
 - *non-repudiation*
 - *Confidentiality*
- An RCA has additionally been assessed on its trustworthiness under law
- Recognized digital certificates are being used in banking, securities trading, e-government services, submission of trade documents, etc.



Other Relevant Ordinances for e-Business

2. The laws of Hong Kong protect us against various kinds of cyber crimes through:

- Crimes Ordinance
- Telecommunications Ordinance
- Theft Ordinance
- Personal Data (Privacy) Ordinance
- Patents Ordinance
- Trade Marks Ordinance



IT Security Initiatives for Internal

- Government operates central and departmental security incidents response centres/mechanisms to deal with cyber attacks
- Best practices, proper patch management, preventive measures and security reviews are implemented



IT Security Initiatives for the Public

1. **Hong Kong Computer Emergency Response Team/Coordination Centre (HKCERT/CC)**
 - Established in February 2001
 - A centralised contact and coordination centre in the reporting, response and handling of information security-related incidents in the community
 - For local enterprises as well as individual computer users



IT Security Initiatives for the Public

2. Promotion & public education on IT security

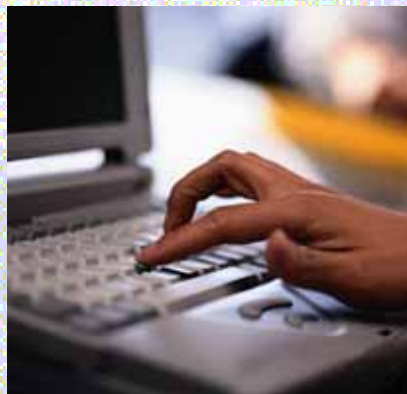
- Established the INFOSEC website as a one-stop portal for public to access resources and updates related to information security (www.infosec.gov.hk)
- Public education programmes are being broadcast on radio and television
- Information dissemination by means of posters and leaflets



IT Security Initiatives for the Public

3. Anti-spamming

- People reported that about 75% of e-mail traffic were spam e-mails
- Government has issued a consultation paper in June 2004 to invite public views on a range of possible measures to combat the problem
- Government is closely monitoring the situation regarding e-mail spamming in Hong Kong



Information Security Resources

Relevant guidelines

- Government has published IT security policies and guidelines for the protection of government information systems. They are available to the public for reference (www.ogcio.gov.hk/eng/prodev/eseccpol.htm)
- HK Monetary Authority (HKMA) has issued a number of guidelines in relation to electronic banking
 - In June 2004, HKMA recommends two-factor authentication for high-risk retail Internet banking transactions as an option



Information Security is Everyone's Business

- **Be responsible**
- **Be vigilant at all times**
- **Be careful**
- **Be disciplined**



Thank You

