Module IS5117

Electronic Government

2012

Outline

- About the Lecturer
- About the Course
- Introduction to e-Government

About Me

Dr. Hing-Yan Lee

Qualifications

- PhD in Computer Science, University of Illinois at Urbana-Champaign
- MS in Computer Science, University of Illinois at Urbana-Champaign
- MSc in Management Science, Imperial College, University of London
- BSc (Eng), 1st Class Honours in Computing, Imperial College, University of London

Career

- Program Director, National Grid Office, IDA (since 2007)
- Deputy Director, National Grid Office, A*STAR (2003 – 2007)
- Principal Scientist, Institute for Infocomm Research, A*STAR (2003 – 2007)

- Managing Director & Founder, eXage Pte Ltd (1999 - 2002)
- Founder, Language Tapestry Pte Ltd (1999)

- Director & Senior Member of Research Staff, Knowledge Lab, Kent Ridge Digital L abs (1998 – 1999)
- Deputy Director, Japan-Singapore Artificial Intelligence Center, ITI & KRDL (1995 - 2000)
- Deputy Director, Publishing Sector, Information Technology Institute (1995 - 1997)
- Programme Manager, Information Analysis, ITI (1995)
- Programme Manager, National & Special Projects, ITI (1994 - 1995)
- Deputy Programme Manager, Process Engineering, ITI (1992 - 1004)
- Information System Officer, National Computer Board (1982 – 1987)

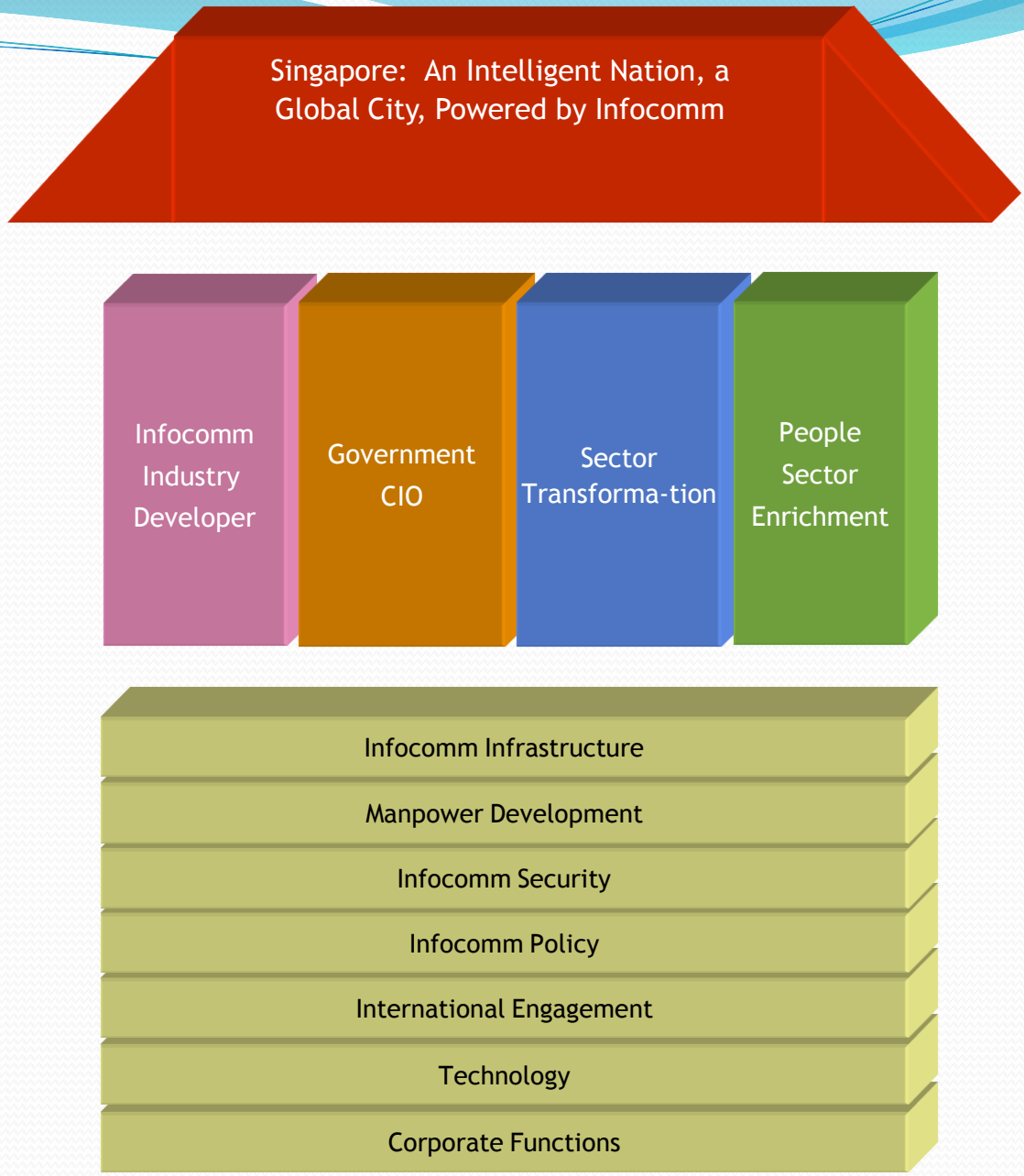
Other Appointments

- Adjunct Associate Professor, NUS (since Oct 2011)
- Member, Infocomm Technology Standards Committee (ITSC) Cloud Computing Standards Coordinating Task Force (since 2011)
- Co-chair, IDA-WDA National Infocomm Competency Framework (NICF) Technical Committee on Cloud Computing (2010 – 2011)
- Member, IDA-WDA NICF Technical Committee (2007 – 2008)
- Member, IDA Network Infrastructure Resource Panel (2007)
- Advisor, National Archives Board Sub-Committee on Records & Information Management (2006 - 2007)
- Member, Resource Team for A*STAR Technology Scan Panel on "Advancing Science through the Grid" (2004 – 2005)
- Member, IDA Adaptive Enterprise @ Singapore R&D Committee (2004 - 2007)
- Director, Imperial College (Singapore) Pte Ltd (2003 - 2011)
- Advisor, National Archives Board of Singapore (2003 – 2007)
- Member, Australia-Singapore Joint Information Communication & Technology Council (1999 - 2000)
- Member, School of Media & Infocomm Advisory Panel, Singapore Polytechnic (since 1998)
- Member, Archives & Oral History Board, National Archives of Singapore (1997 - 2003)
- Member, NatSteel Corporate R&D Advisory Panel (1996 - 2002)

ECA

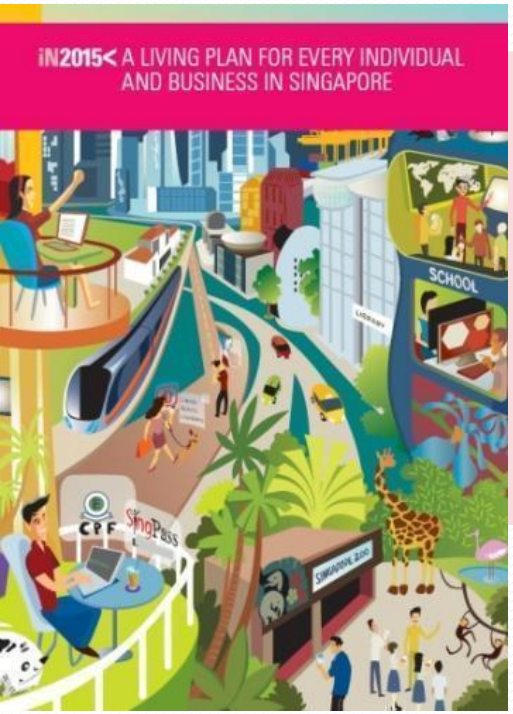
- Singapore Computer Society
  - Founding Editor, Information Technology – Journal of SCS (1985 – 1987)
  - Senior Member (since 1999)
- Imperial College Alumni Association of Singapore
  - President (2005 – 2009)
- University of Illinois Alumni Association (Singapore Chapter)
  - Founding President (2006 – 2009)
- Gymnastics Support Group (Singapore)
  - Founding Executive Committee Member (2001 - 2005)
- Singapore Gymnastics (National Sports Association for Gymnastics)
  - Founding Honorary Secretary, Executive Committee (2003 – 2005)
- South East Asian Gymnastics Confederation
  - Committee Member (2004 – 2005)

Infocomm Development Authority of Singapore



iDA SINGAPORE

iN2015 < An Intelligent Nation, a Global City, Powered by Infocomm



iN2015 Goals

#1 in the world in harnessing infocomm to add value to the economy and society

2-fold increase in value-added of infocomm industry to S$26 billion

3-fold increase in infocomm export revenue to S$60 billion

80,000 additional jobs

90% broadband usage in all homes

100% computer ownership in homes with school-going children

Cloud Computing Programme

About the Course

Approach

- Students will have to read recommended papers that cover general landscape & efforts undertaken in other countries
- Where possible, a guest speaker will be invited to speak about Singapore context & local initiatives

Outline

- About the Course
- Part 1 - Introduction
- Part 2 – Soft Infrastructure
- Part 3 – Hard Infrastructure
- Part 4 – New Engagement Approaches

Part 1 - Introduction

a) Government in Different Countries

b) Singapore eGov Masterplan

c) Guest speaker: Mr. Seah Chin Siong (CEO, IDA International)

Part 2 – Soft Infrastructure

Legal Issues in Managing Information

a) Data Protection Policy
b) Guest speaker: tbc

Issues in Info Security Management

a) Information Classification
b) Singapore Infocomm Security Masterplan
c) Guest speaker:
   Mr. John Yong (Director, Infocomm Security, IDA)

Part 3 – Hard Infrastructure (1/2)

Secure Online Transactions

a) SingPass
b) National Authentication Framework
c) Guest speaker: tbc

Providing Universal Access

a) Next Gen National Broadband Network
b) Guest speaker: Mr. Khoong Hock Yun (ACE, INFS, IDA)

Part 3 – Hard Infrastructure (2/2)

Government Use of Cloud Computing

a) Why Cloud Computing for eGovernment
b) G-Cloud in Singapore
c) Guest speaker:

Mr. Lee Kee Siang (Director, Infocomm, NLB)

Part 4 – New Engagement Approaches (1/2)

Government & Generation Y

a) Expectations of the new generation
b) Guest speaker: tbc

Open Data

a) Compelling reasons for Open Data
b) Issues & challenges in adoption
c) Guest speaker: tbc

Part 4 – New Engagement Approaches (2/2)

Crowdsourcing

a) Why crowdsourcing
b) Challenges in adopting crowdsourcing for eGovernment
c) Guest speaker: Mr. Gene Tan (D, Engage, NLB)

Social Media

a) Why social media
b) Challenges in adopting social media in eGovernment
c) Guest speaker: tbc

Assignments

- Term paper
  - Choose 1 out of 3 topics
- Student presentations (over 2 weeks)
  - 5 Apr & 12 Apr 2012

Example Topic 1

- According to UNESCO, “e-Governance is the public sector’s use of information and communication technologies with the aim of improving information and service delivery, encouraging citizen participation in the decision-making process and making government more accountable, transparent and effective”. To what extend do you agree that the Singapore Government has succeeded in achieving these goals? Where are gaps and areas of improvement?

Example Topic 2

- Refer to the document on “Proposed Consumer Data Protection Regime for Singapore” issued by MICA on 13 September 2011.
- Prepare a response to MICA to provide your comments on the proposed regime. Share your views on why and where the proposal fell short of your expectations. Provide suggestions and propose changes.

Example Topic 3

- Prepare a study of eGovernment's new modes of engagement (choose one: open data, crowdsourcing, or social media) in Singapore. Comment on existing initiatives (e.g., REACH). Identify areas where more can be done. Discuss the challenges and propose recommendations to address them.

Exam

- Date: 24 Apr 2012

- MCQs and/or short questions (tbc)

What is e-government?

What is e-government?

- Use of ICT to enhance access to & delivery of government services to benefit citizens, businesses, employees, agencies & other governments
- Goals
  - Creating a better business environment
  - Customers online, not in line
  - Strengthening good governance & broadcasting public participation
  - Improving productivity & efficiency of government agencies
  - Improving quality of life for disadvantaged communities

New Public Management (NPM)

- A management theory about how to reform government by replacing rigid hierarchical organisational structures with more dynamic networks of small organisational units
- Seeks to replace authoritarian, top-down decision- & policy making
- Introduces a more consensual, bottom-up approach that involves participation of stakeholders (e.g., citizens)
- Adopts customer oriented attitude to public service
- Applies market principles to enhance efficiency & productivity

NPM & e-Government

- E-Government gives NPM fresh blood
- A loosely couples network of governmental units can collaborate effectively
  - Facilitated by infrastructure & software tools enabled by ICT
  - Infiltration of ICT into government agencies tends to lead naturally to institutional reform

Some Desired Outcomes

- Efficient & swift delivery of goods & services
- Equality of access to government information & services
- Convenience & friendly
- Inexpensive & effective
- Effective governance
- Increased transparency
- Better cross-agency coordination & collaboration
  - Appropriate & timely decision-making

Efficient & Swift Delivery of Goods & Services

- Simplification of procedures
- Streamlining of approval process

Equality of Access to Government Info & Services

- Facilitates citizen participation by increasing access channels to government
- Broadens opportunities for citizen participation
- Opens new channels of communications between constituents & their reps
- Brings marginal groups (e.g., women, physically challenged, indigenous peoples) into mainstream participatory channels
- BUT may also create 'divide'
  - Increase distance citizens from government
  - Deepen existing existing disenfranchisement

Effective Governance

- ICT is an enabler of effective & effective functioning of government

Types of e-Government Transactions

- Government-to-Citizen (G2C)
- Government-to-Business (G2B)
- Government-to-Employee (G2E)
- Government-to-Government (G2G)

Examples of G2C

- Info dissemination
- Basic citizen services include
  - License renewal
  - Ordering of birth/death/marriage certificates
  - Filing of income taxes
  - Citizen assistance
    - Education
    - Health care & hospital info
    - Libraries

Examples of G2B

- Info dissemination
  - Policies, memos, rules & regulations
- Basic business services include
  - Current business info
  - Application forms download
  - Licenses renewal
  - Business registration
  - Permit application
  - Tax payment
  - E-Procurement
    - Online government-supplier exchange for purchase of goods & services
    - Makes bidding process transparent & generates savings for government

Examples of G2E

- Services that cover government employees
  - Provision of HR training & development
  - Viewing one's own payroll & tax records

Examples of G2G

- Takes place at 2 levels
  - Local/domestic level
    - Transactions between central/national & local governments
    - Transactions between department-level & attached agencies & bureaus
  - International level
    - Transactions between governments
      - An instrument on international relations & diplomacy
      - A mechanism to share info to cooperate on combating organized crime & illegal trafficking activities (e.g., UN Convention Against Transnational Organized Crime)

Impacts

- New styles of leadership
- New ways of debating & deciding strategies
- New ways of transacting business
- New ways of listening to citizens & communities
- New ways of organizing & delivering info

Who Pays for e-Government?

- Cost of implementation depends on
  - Current infrastructure availability
    - Software, hardware, …
  - Supplier & user capabilities
    - Training
  - Mode of service delivery
    - Internet, radio, telephone, SMS, TV, …?
- Likely to be long-term endeavors
  - Aim to be self-financing or outsourced
  - Consider sustainable approaches
    - Minimal initial investment
    - Revenue generation strategy
    - Partnership with private sectors (e.g., Build-Transfer-Operate, Build-Own-Operate)

Impediments to using e-Government services

- Unfamiliarity with ICT
- Lack of access
- Lack of training
- Concerns about privacy & security of info
  - Security: Protection of IS assets & control of access to info
    - Security policies & strategies are context & info specific
  - Privacy: right for info attributed to an individual to be treated with an appropriate level of protection
    - Info privacy protection laws regulate this aspect

m-Government

- “The strategy, implementation & utilization of all kinds of mobile & wireless technologies, services, applications & devices to obtain benefits for citizens, businesses & all of government units.”

  - Ibrahim Kushchu (Director, Mobile Government Consortium, UK)

- “Mobile government (or mGovernment), is the extension of eGovernment to mobile platforms, as well as the strategic use of government services & applications which are only possible using cellular/mobile telephones, laptop computers, personal digital assistants (PDAs) & wireless internet infrastructure.”

  - Wikipedia

Case for m-Government

- Mobile devices each day are more varied, have more functionalities & are more affordable
- Mobile device penetration is much higher than fixed broadband, tending to become a universal channel
- Mobile devices are always on & are personal

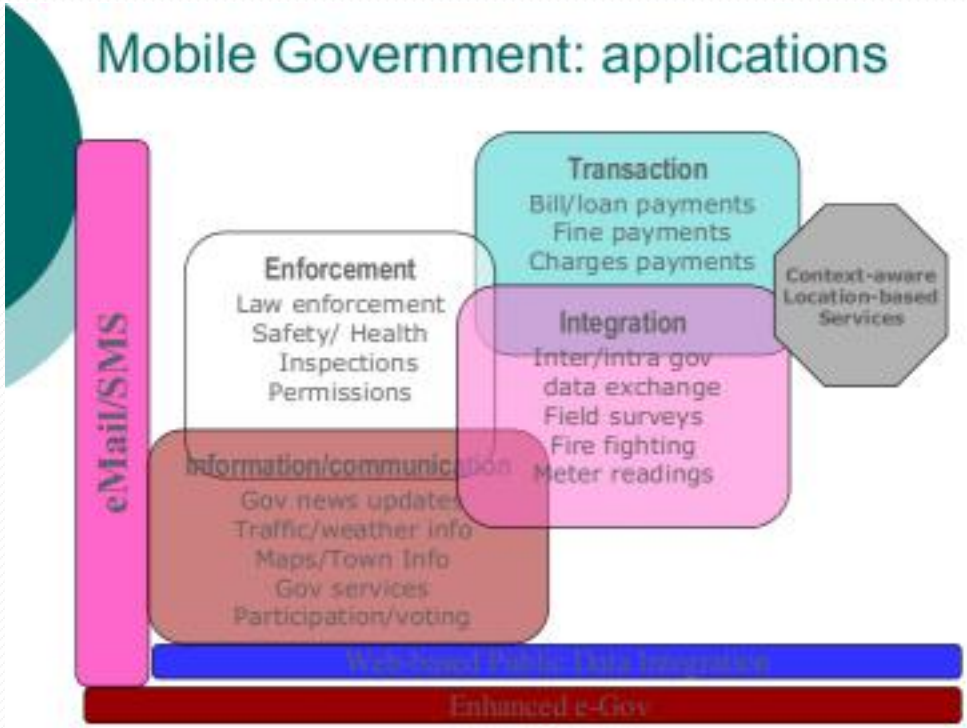
m-Government is Inevitable

Driving forces for adoption of this model

- wireless connectivity technological advances
- potential benefits can be obtained from business models based on such advances
- growing demands from citizens for better & simpler services from public administrations

M-Government Implementation

- SMS are pillars of m-government
  - Offers great innovation potential
  - Mainly unidirectional services



T-Government

- Stands for 'eGovernment' via (interactive) (internet) (digital) television
  - Reach out to non-Internet users

- Against
  - Interactive television is all about leisure & entertainment
    - Factual, dry public service programming is uninteresting
  - Non-Internet users
    - Can get online in public libraries or Internet cafes
    - If someone does not want to access Internet at all, would he want to check social security info via interactive television?

The prospects for e-government on digital television

Barrie Gunter

The author

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Keywords

Television, Government, Public services, Internet

Abstract

The UK Government has set targets for its services to be available online by 2005. It is hoped that electronic public services will improve quality and efficiency of delivery, enhance public access to essential services, and achieve cost economies. While attention initially focussed on the Internet as the key platform for online public service delivery, digital television may eventually become the platform of choice. Television's wider penetration and familiarity gives it an edge over the Internet. A number of pilot projects and initiatives have been instigated by Government to explore the potential of digital television (DTV). This paper presents a review of early evidence to emerge about DTV services and public opinion from DTV pilots. While DTV can provide wider access than the Internet in terms of demographic reach, its limited interactivity and the relearning that viewers will need to undergo may limit its initial applications and adoption. Significant problems remain with the usability of basic DTV services, resulting in certain sectors of society being excluded. This exclusion is more pronounced when considering the most complex applications of DTV, such as interactive services. Widespread acceptance of the digital switchover will require a shift in mindset of the television audience as a different

Introduction

The Prime Minister has set targets for the electronic delivery of Government services with an expectation that virtually all UK central and local Government services will be available for remote access by 2005. In this context, electronic service delivery means by telephone and fax, but most of all, via the Internet or digital interactive television. Electronic access may take a number of different forms. It may involve direct access in the form of a live transaction with a public service contact over the telephone. In addition, however, there will be a range of asynchronous forms of communication, such as e-mail or accessing of Web sites, particularly in respect of general enquiries, though also in the case of certain transactions. In addition, more adventurous uses of electronic technology may see the emergence of live two-way video links and the establishment of personalised databanks containing information about all aspects of our lives and personal history. Online government holds the promise of better and more effectively delivered public services, greater public understanding of government, and more transparency and accountability in government, in turn enhancing democracy (Norris, 2001).

Government has identified a number of platforms and delivery mechanisms for the electronic delivery of public services and the electronic enabling of internal government systems. In relation to engagement with members of the public, however, a great deal of emphasis has initially been placed on service provision via the Internet. While Internet adoption in the UK has exhibited marked growth since the mid-1990s, and most especially since the turn of the century, around half of the population do not possess a personal computer at home with Internet access. It

Looking Local in UK

WYCHAVON DISTRICT COUNCIL
good services, good value

AVON & SOMERSET CONSTABULARY

Preston City Council

southend onsea
BOROUGH COUNCIL

Twin Valley homes

Wherry Housing Association

THE ROYAL BOROUGH OF KENSINGTON AND CHELSEA

ISLINGTON

T-Government - Status

- Deployment in some countries
  - UK, Italy, …
- Jury is still out
  - IPTV may pave way for wider deployment & success …

Next Week

Part 1 - Introduction

a) e-Government in Different Countries
b) Singapore eGov Masterplan
c) Guest speaker: Mr. Seah Chin Siong (CEO, IDA-I)