

# Chapter 1.40

## Virtual Government in Singapore

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### INTRODUCTION

Governments are a strategic necessity, as they provide the overarching administrative machinery to ensure that national (and citizens') needs are taken care of. The need for the civil service to be more cognizant of citizens' concerns has been reiterated in several recent studies (e.g., Tarabanis, Peristeras, & Koumpic, 2000; Janssen, Wagener, & Beerens, 2003). People interact with the government for a variety of needs, for example, payment of bills for utilities, seeking approvals for licenses, and so on. While this has served citizens well, there is a general perception that governments are generally lackadaisical in terms of response times. Citizens and businesses in today's society have high expectations and demand that their governments be more responsive to their needs. Though upping of civil service head count and decentralizing of official machinery have met with a good degree of suc-

cess, it has been at the expense of a cost factor which may not be that easy to justify or sustain in the future, especially when there are so many pressing sectors of the economy needing fiscal injections. Any productivity increments achieved in maximizing use of government manpower and resources through various enabling tools means that the savings realized can be deployed back into the economy. The emergence of the Internet has given governments an opportunity to act in this regard. This has given rise to what is known as e-government.

### BACKGROUND

The term e-government refers to the use of the Internet to improve work processes in the public sector. It started in the United States in 1995 (Heeks, 2000; Prins, 2001; Ronagan, 2002; Jakob, 2003; Holden, Norris, & Fletcher, 2003).

An e-government allows people to be connected to the bureaucracy at all times. Owing to various factors—basic telecommunications infrastructure is not yet pervasive, presence of vested interests, best practices in e-government are still evolving, and so on—the “off-line” public sector is still firmly entrenched, especially in many developing countries.

In Singapore, a developing country, the e-government has matured tremendously over the past few years (Tan & Subramaniam, 2005). This article describes the infrastructure and standards supporting the e-government in Singapore, provides information on some of the key services that have been “virtualized”, and offers a commentary on the efforts of putting in place an e-government. As Singapore was among the pioneers of the e-government movement, its experience would be of relevance to other countries. The Singapore e-government Web site is located at <http://www.egov.gov.sg>.

## **INFRASTRUCTURE FOR E-GOVERNMENT**

### **Modern Telecommunications Network**

A modern telecommunications network is a must for the smooth transition to e-government. An

e-government by itself has little effectiveness if efforts are not translated into promoting connectivity for the citizenry. A technology-neutral approach was taken to deploy a modern telecommunications network in the 1990s. Major telcos were encouraged to roll out different platforms for access. To ensure a level playing field for all operators and to promote the spirit of competition, an independent regulator was appointed.

Five principal telecommunication platforms are now in place:

- Public Switched Telecommunications Network (PSTN)
- Asymmetric Digital Subscriber Line (ADSL): For broadband access
- Hybrid Fiber Coaxial (HFC) Cable Modem service: For broadband access
- Asynchronous Transfer Mode (ATM): For broadband access as well as for linking ADSL and HFC cable modem service to the ordinary telecommunications network
- Wireless access

These have been addressed in detail by Tan and Subramaniam (2000, 2001, 2003).

With the telecommunications network operating on a plurality of platforms which are interoperable, a competitive landscape has emerged for the cost-effective delivery of services. Table 1 shows

*Table 1. Timeline showing growth of fixed-line telephony, mobile phone, and Internet market in Singapore (Source: <http://www.ida.gov.sg>)*

Sector	1997	1998	1999	2000	2001	2002
Fixed line	-	1 751 500	1 850 700	1 935 900	1 948 900	1 993 700
Mobile phone	743 000	1 020 000	1 471 300	2 442 100	2 858 800	3 244 800
Internet dial-up	267 400	393 600	582 600	1 940 300	1 917 900	2 000 700

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