

E-service Adoption in Australia Government Agencies

Xuetao Guo¹, Jie Lu²

Faculty of Information Technology, University of Technology, Sydney
POBox 123, Broadway, NSW 2007, Australia

¹xguo@it.uts.edu.au, ²jielu@it.uts.edu.au

Abstract: Government electronic service (E-service) allows government to reach out and delivery various services to individuals, communities and businesses in Internet environments. The Australia government is building on its leadership role in E-service delivery through using online technologies to provide better service and improve its own practices. This paper describes the state, roles, and strategies of Australia government E-service, and discusses the differences between traditional service channels and E-service in the new economy society. Finally, this paper explores the categories and classifications of Australia government E-service.

Keywords: E-business; E-commerce; E-service; E-government, Government Agency

1. Introduction

Electronic business (E-business) creates a powerful capacity to open up new markets and provide unprecedented efficiencies with the Internet access of rapid growth. The number of Internet access users is expected to rise from 275 million in 2000 to 840 million in 2005 in the world. Australia will continue to be amongst the leaders in term of the proportion of its population online. Research by American Express reported that by October 2001, 69% of Australians use the Internet. Following Sweden (nearly 80%) and US (approximately 74%). Australia has the third highest Internet usage in the world (DFAT, 2001).

The two most important long-term trends in the business world are the shifting of the economy from goods to services and the rapid expansion of the information economy and electronic networks. The two trends converge in the concept of electronic service (E-service), which is the provision of service over electronic networks, such as the Internet. The decline of the NASDAQ (Rust, 2001) stock market in early 2001 actually accelerates this trend because investors no longer tolerate the "gold rush" mentality that focused on the engineering capabilities rather than customer needs. New phase of the Internet business is the E-service phase. This phase focuses on

the actually making money, and that means satisfying customers (Rust, 2001).

The number and type of E-services increase day by day, and this trend is likely to continue at an even faster pace in the immediate future. Many information technology organizations have been making E-service as their marketing strategy in order to move away from a product-centered focus to a service-centered focus, instead of viewing it narrowly as information service. Fast accurate and timely access to information is vital for our future in the information economy. The ability to locate the most appropriate information will determine our level of economic competitiveness into the next millennium (DCITA, 2001).

While face-to-face and telephone services have some limitations on availability, E-service approaches offer the potential of around the clock access to government from any suitable device and from any location. In some government agencies, E-service is viewing as a means of delivering government information to its citizens. It can break down the barrier of distance or mobility that some citizens face. Online service delivery can complement and enhance existing traditional service channels for such clients, and provide around the clock access to government from almost anywhere. Communities have needed to understand government structures to access information. However, businesses often have to deal with more than one government agency or jurisdiction to resolve a business issue. They in particular need navigate the complex structure of government to gain the necessary information or service.

Current trend of Australia government E-service indicates an exponential growth in online ability by agencies. Government E-service has been extraordinarily affected by the development of E-business rapid growth. The ABS estimated that at 30 June 2000, approximately A\$5.1 billion in sales was generated via Internet E-commerce by 38,000 E-commerce active businesses (ABS, 2000).

This paper discusses several aspects of government E-service in effectively interacting with consumers in Internet environments. It also examines the state, roles,

strategies, and functionalities of Australia government E-service and explores the different classification approaches for government E-service. The further research will show how E-service affects the government quality of service delivery and how to measure the quality of government E-service in delivering service to citizens, communities and businesses.

2. E-commerce, E-business and E-service

There are many names to identify doing business electronically, such as E-commerce, E-business, Internet commerce and digital commerce. Based on literature review the concepts of E-commerce, E-business, E-service and government E-service are summarized.

The most restrictive definition limit E-commerce to the buying and selling of information, products and services via computer networks today and in the future (Lawrence et al., 2002; DFAT, 1999; Fellenstein and Wood, 2000). However, there are wider definitions of E-commerce which include more aspects than only buying and selling activities. E-commerce is not only concerned with the buying and selling via electronic means, but it also involves all the other activities that support the business process (Applegate et al. 1996; Lu et al., 2001). Kalakota and Whinston (1996) pointed out that E-commerce has many definitions depending on the perspective from which you view it. From communication perspective: to deliver information, products/services and payments over the telephone, communication networks or other means; from business perspective: to automate business transactions and work flow; from service perspective: to cut service costs while improving the quality of goods and increasing the speed of service delivery; from online perspective: to provide the capability of buying and selling products and information over the Internet and other online services.

In recent years, another term called E-business has emerged. E-business encompasses all the activities that a firm performs for selling and buying services and products using computers and communication technologies. E-business includes not only online shopping, but also all human business transactions, whether the transactions between suppliers and retailers, sellers and buyers, citizens and administrations, teachers and students, hospitals, practitioners, health insurers and patients, or partners in a virtual enterprise (Daum and Scheller, 2001). E-business also includes a host of related activities not only online shopping, such as sales force automation, supply chain management, electronic payment system, and order management.

E-service is the provision of service over electronic networks. It involves factors such as ease of doing business, trust, responsiveness, Web site navigability,

problem resolution, and all those other elements of good E-business that do not fit quite so neatly into a purely binary world, but that nonetheless, as we will demonstrate, have high value to customers (Zemke and Connellan, 2001).

In this paper, the government E-service is considered as the service delivery in an online environment by the government. The main contents of government E-service include: delivery of all appropriate government services electronically, complement (not replacement) of exiting written, telephone, fax and counter services; access to information about government services; electronic payment and a government-wide intranet for secure online communication. Government E-service is an important part of Electronic government (E-government). With E-commerce having achieved striking success, E-government is presenting another challenge, especially in the fields of E-service.

3. Australia Government E-service

3.1. Strategies of Government E-service

The Australia commonwealth government considers government as a natural and important step in the development of government and the community interaction. In September 1997, the Australia government established the National Office of the Information Economy (NOIE), which sits within the Communications, Information Technology and the Arts portfolio, and develops and coordinates broad policy: governing the regulatory, legal and physical infrastructure environment for online activities, including facilitating E-commerce, and ensuring consistency of commonwealth positions in international forums (DFAT, 1999). Coordinating online service across three tiers of government encourages collaboration and avoids costly duplication.

Australia government online strategy provides a framework to fulfil the Prime Minister's commitment to ensure all appropriate government services are available online by 2001, and leads the way forward with a seamless national approach (NOIE, 2001). The strategy's key goal is the development of more integrated, cross-agency and cross-jurisdictional services. The government online strategy contains eight strategic priority areas (NOIE government online, 2001):

- (1) agencies to take full advantage of the opportunities the Internet provides;
- (2) facilitation of enablers such as authentication, metadata standards, electronic publishing and record keeping guidelines, accessibility, privacy and security;
- (3) enhancement of government online services in regional Australia;
- (4) enhancement of the impact of the Government Online initiatives on development in the Australia IT industry;

- (5) government business operations to go online;
- (6) monitor best practice and progress;
- (7) facilitate cross agency service;
- (8) communicate with Stakeholders.

The service charters developed by agencies in recent years seek to improve the quality of E-service to clients. However, government can still seem remote to many people. The online environment allows government to reach out to individuals, communities and businesses by providing a direct channel, and make its service more useful, convenient and transparent to citizens. Meantime, people will have more opportunities to customise their online channel with government. As a result, this will lead the Australian community to have a greater familiarity with government policy and programs (NOIE government online, 2001).

3.2. The State of Australia E-business and Government E-service

The quality of a country's telecommunication infrastructure almost predetermines its level of Internet use and sophistication of E-commerce applications (DFAT, 1999). International benchmarks consistently place Australia among the top ten countries in the world in the terms of adoption and use of E-business. Based on the six criteria: connectivity, business environment, E-commerce consumer and business adoption, legal and regulatory environment, supporting E-service, and social and cultural infrastructure, in May 2001, the US based Economist Intelligence Unit (EIU, 2001) published its second set of "E-business Readiness Rankings" for over 60 countries. Australia was placed 2nd to the US, up from its 16th place ranking in May 2000 (NOIE, 2001). The top 13 countries were identified as "E-business Leaders" as shown in Table 1.

Table 1: E-business Ranking

E-business Leaders	E-business Ranking (out of 60)	E-readiness Score (out of 10)
US	1	8.73
Australia	2	8.29
UK	3	8.10
Canada	4	8.09
Norway	5	8.07
Sweden	6	7.98
Singapore	7	7.87
Finland	8	7.83
Denmark	9	7.70
Netherlands	10	7.69
Switzerland	11	7.67
Germany	12	7.51
Hong Kong	13	7.45

Resource: <http://www.ebusinessforum.com> (EIU, 2001)

The Australia government is an enthusiastic adopter of E-service. The results of the Australia government

online survey in March 2001 indicated that 1315 current online services have been identified and 622 future services would be delivered online by the end of 2001 (NOIE government online, 2001). This presents a figure of around 60% of government service currently available online, which compares favourably to the UK, which recently reported having 40% of government service now online (NOIE, 2001). The Australia government is building on its leadership role in E-service delivery through using online technologies to provide better service and improve its own practices. The three tiers of government (commonwealth government, state and territory government, and local government) are also offering a range of E-service. More Australia government agencies have had some appropriate services online (up from 9% to 17%). Of the agencies surveyed, the majority of agencies (93%) expected to have all appropriate services online by December 2001 (NOIE government online, 2001). At June 2000, 25% of employing businesses in Australia accessed the Internet to use government services. In the 12 months to November 2000, 12% of Australian adults accessed government services via the Internet (NOIE, 2001).

3.3. The Emergence of Government E-service

According to ACNielsen's 4th quarter 2000 GNETT survey of 20 countries, Australia performed well against a number of performance indicators (ACNielsen, 2001; NOIE, 2001). This survey was based on the factors: population online, household online, online population 16 years and over, and mobile phone penetration, etc.. The result indicates that 46% of Australian population 2 years and over had Internet access at home via a PC, placing Australia 9th out of the 20 countries surveyed. With 40% of households with access to the Internet via a home PC, Australia was ranked 9th out of 20 countries and regions surveyed (NOIE, 2001).

Business online has been grown in Australia. According the released survey result of NOIE (NOIE, 2001) at June 2000, an estimated 56% of employing businesses were connected to the Internet that had an increase of 93% since June 1998. An estimated 77% of Australian businesses employing 10 or more persons were online at June 2000.

On the other hand, 50% of Australian adults accessed the Internet in the 12 months to November 2000 and 37% of Australian households were connected to the Internet at November 2000, reaching 40% at the end of 2000. During the period August 1998 to November 2000, the number of Australian adults accessing the Internet increased by 56% (from 32% to 50%). The proportion of adults accessing the Internet from home or work grew by 128 and 79% respectively (NOIE, 2001).

As a result, the rapid growth in the use of the Internet is underpinning the emergence of Australia government E-service. It is now widely recognised

that Australia must become a nation of providers of services and goods via the Internet in order to remain economically competitive. E-service is becoming a main tool in government service because of its advantages of more accessible, flexible and responsive to everyone. It presents the multi-functionality: improving public access to a wide range of government services, especially by people who live in regional, rural and remote areas or older Australians and people with disabilities; providing access 24 hours a day, seven days a week; reducing the cost of delivery of some government services; improving the quality of certain government services; increasing efficiency-saving tax payers' funds; reducing bureaucratic and jurisdictional demarcation to provide unified services based on user requirements; encouraging growth of E-business, both business to business and business to government, and associated opportunities.

4. Classifications of Government E-service

There are different categories and approaches for classifying government E-service from different directions and points of view.

4.1. Classification 1 – by E-service Type

There is a wide range of services (current and anticipated) offered by agencies online. Based on a national survey by identifying more than 400 online service delivery initiatives, NOIE (2001) divided the categories of government E-service delivered through the Internet into six types:

- Client-service information and support: delivery of all appropriate government services electronically and supports technically;
- Procurement: being able to trade electronically with simple procurement suppliers using open standards;
- Payment to suppliers: accept direct credit and provide the necessary bank account details;
- Receipt to revenue;
- Public relation; and
- Advertising.

4.2. Classification 2 — by E-service Functionality

NOIE (2001) classified the government E-service into the following aspects according to the web site functions:

- Publication/dissemination of information;
- Feedback capacity;
- Application;
- Access to database;
- Registration;
- Sales of products & service;
- Policy consultation;
- Lodgement of return; and
- Access to personal records.

4.3. Classification 3 — by the Type of E-service Transaction

According to the differing levels of service provision and the use of electronic transactions, three broad levels are apparent (NOIE, 2001):

- Information provision: with the development of E-commerce and online services, government can provide largely service online;
- Non-payment transaction: these government E-services involve lodging forms and requests. There are two types of non-payment transactions, authentication involved, such as birth certificates, and non- authentication involved; and
- Payment transactions: all government purchasing and all payments to and by governments. For example, payroll tax payments, business licences, ticket purchases and registration etc.

4.4. Classification 4 – by the Level of E-service Complexity

The government E-service web sites can be fall into following three levels according to their functional complexity (NOIE, 2001):

- *Level 1*: publication of static information only.
- *Level 2*: providing online access to the information resources and databases of an agency, such as providing downloadable/manipulable database information.
- *Level 3*: two-way data interchange occurs between clients and an agency.

4.5. Classification 5 — by E-service Target Group

Based on a wide variety of E-service target groups, including business, community organizations, students, government, youth, and families, government E-service can be divided into three types:

- Citizen-oriented: providing E-service to the common citizen group;
- Community-oriented: viewing community organization as the target group of E-service; and
- Business-oriented: focusing on the group of business organizations.

The most E-service types of government agencies fall into these classifications outlined above. However many agencies are likely to move to provide more advanced E-services and some agencies highlight new target groups and new access of E-service, such as overseas students, weather services and improved access to consumer protection services.

5. Conclusions and Further Research

This paper addresses the government E-service in Australia and discusses the state, roles, strategies, and categories of Australia government E-service. It has been found that government E-service is making an enormous contribution to service quality beyond just the impact on individual agencies and their service charters. With the growth of online access to information and service, Australia government E-service can have a significant positive impact for regional communities, and special group of people such as elder and disabled, as E-service delivery can

complement and enhance existing service channels for such clients.

The online environment is an extension of the traditional service delivery mechanisms, and closely integrated with them. Government E-service is providing the opportunity to complement and enhance traditional service delivery, by enhancing the range and quality of service that can be obtained from an office over the telephone.

Providing perfect E-service requires identification of precisely what services are needed and at what cost, and whether the government is best placed to supply them. Does the web site meet the requirement of residents and businesses? What hardware, software, connection and security does the web site need? What if the city invests money in the site and nobody uses it and how do the E-service providers hold onto clients? The further research will address how to measure the success of government E-service web site and how to assess the quality of E-service delivery. An assessment model would be built and tested based a wide range of questionnaire-based survey.

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