M-GOVERNMENT SERVICES IN GREECE

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ABSTRACT

With the advances in Information Communication Technology (ICT) and the demand for more efficient and effective government, governments in various countries have implemented e-government strategies to offer more information and online services to citizens, government agencies, businesses, and others. E-government initiatives aim to benefit from the use of most innovative forms of information technologies, mainly web-based Internet applications, in improving governments' fundamental functions. It is considered the preferred tool to enhance government services among its customers and government agencies. However, an explosion in the use of wireless internet devices, including internet-ready mobile phones and Personal Digital Assistants (PDAs) in combination with the increasing mobility of people in industrial economies is forcing governments to prepare themselves to transition from e-government to m-government. This paper examines the development of m-government in Greece, which is in an early stage in comparison with other countries all over the world. More specifically, m-government services that are currently used are mentioned. In addition, recommendations are given for the further development of m-government in Greece as well as the benefits to citizens from using various m-government services are elaborated taking into account the initiatives of other countries on the application of m-government.

INTRODUCTION

Technology has created unprecedented changes in the delivery of government services. Along with these changes arise opportunities for improving government services. Improvements in communications and technology give citizens the ability to access government services easily, rapidly and engages people in ways that bolster democracy and citizen involvement. E-government refers to the use of ICTs to transform government operations so that government services are provided electronically to the citizens. Nevertheless, the last years a widespread use of mobile telephony is observed (with over 3 billion mobile users worldwide and over 70% of world's population covered by mobile networks). This fact has contributed to the development of mobile government. The emerging trend in government service delivery through the use of wireless technologies is called mobile government or m-government. Government services are expected to become more accessible to citizens thanks to the wireless technology. Mobiles can reach areas where there are infrastructure constraints for internet service or where wired phone service is not a feasible option. Moreover, the lower cost of mobile telephony enables the expansion of mobile government services to the poorer parts of population in developing countries.

In general, it is argued that m-government's main goals are the resolution of real problems and the improvement of the way that people live. M-government has a positive effect on the economy through infrastructure development, better business practices and enhancements in public sector.

Mobile government strategy seems to be the inevitable path that should be followed by the governments in all countries. Currently, many countries from all over the world have already adopted m-government strategies by implementing various m-government services. Such paradigms are indicatively mentioned in the next paragraph.

Estonia is in the forefront of the world with its e-government and m-government initiatives. This achievement of Estonia is attributed to the willingness of the Estonian government to quickly adopt new technologies (Rannu 2003). Regarding other remarkable m-government initiatives and projects, interesting developments have taken place in various countries such as Germany, Austria, the UK, Ireland, Italy, Malta, Estonia, Sweden, Norway, Denmark, Finland, Korea, Japan, New Zealand Dubai, South Africa and some of the US states such as Idaho and California to name just a few examples.

The major key success factors of the aforementioned initiatives have been political will, cooperation between mobile operators, government, regulators and business entities and dynamic planning.

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The present paper is structured in the following sections: Section 2 presents a theoretical overview of the related literature regarding electronic and mobile government deployment in Greece. Section 3 mentions the transition of e-government to m-government services in Greece while in Section 4 m-government services that are expected to contribute to the welfare of the citizens are suggested for the future. Section 5 is devoted to future works.

RELATED WORK

By studying the existing literature, we concluded that research for the field of mobile government development in Greece is in its infancy. Research for the Greek case study is mainly focused on e-government. Hahamis et al. (2005) examined the development and implementation of e-government in Greece both at national and local level. More specifically, the authors concluded that while the progress in the development of e-governement at national level is significant, the results are not so encouraging at local level. Recommendations are made for the improvement of e-government applications at local level. Markellos et al. (2007) emphasized the necessity of efficient e-government applications for the improvement of the public sector quality. They report the best Greek e-government practices and they compare the progress of Greece with other countries of European Union (EU).

Kapogiannis et al. (2006) highlighted the cooperation between e-business and m-business as a crucial factor for the development of m-government applications in Greece. In addition, the paper presents an interesting research on the current needs of the Greek companies to invest in m-business.

CURRENT E-GOVERNMENT AND M-GOVERNMENT SERVICES IN GREECE

In this section, a brief summary of the basic e-government and m-government services that are currently provided by the Greek public sector is presented.

There has been a degree of success in the development of e-Government at a national level. TAXISnet (electronic tax services); the National Printing House; IKAnet (provision of information and transaction services by the Greek Social Insurance Institution); and Syzefxis (the national public administration network) are some of the examples of progress so far (Greek Government, 2002). The Syzefxis programme is a project of the Greek Ministry of the Interior, Public Administration and Decentralization that aims to develop "an effective public administration with a modern information and telecommunications infrastructure and the easier coordination of state processes through Information Technology (IT) and Tele networking" (Informatics Development Agency, 2004).

Looking more specifically at local government, the Ministry of the Interior, Public Administration and Decentralisation implemented an Operational Program (OP) called Politeia which "is the main element of a co-ordinated effort to promote reform of the structure and activity of public administration, with the primary aim to improve services offered to the public" (OECD, 2004).

As far as m-government is concerned, the deployment of m-government services is in an early stage as already mentioned in previous sections. Nevertheless, a beginning has been made. For example - the Mobile-Taxis service, which informs ratepayers regarding the settlement of their tax declaration of income. The development of this service was triggerred by the fact that there is a huge response from citizens on the telephone line that deals with tax matters, and on the corresponding e-government services. Those who are interested in filling their tax declaration by using the mobile service can send an SMS in the M-taxis service, including the number of their tax record, and sending it to 2252. The cost is 0.5 euro. This cost includes all the costs of the SMS. From this registration the citizen ensures that he will be informed regarding tax obligations, and this will happen in real time and in a very easy way - by receiving SMS messages from the M-taxis service. The service is supported by all the mobile carriers operating in Greece. This service is a new attempt by the Ministry of Economy and Public Management to improve its communication with Greek citizens.

Another service that is offered in all European Union countries is a Location Based Service (LBS) which is called 112 emergency call positioning. This service shows on emergency call center worker's computer a map with the location of the person who is making an emergency call to the number 112, which is common to all EU countries. The main benefit of the system is an ability of the emergency service to react quicker in case of emergencies. EU had made compulsory for all operators to be able to offer location-detection of emergency calls by July 2003. It is worth highlighting that the majority of Greek citizens are not aware of this service.

SUGGESTIONS FOR M-GOVERNMENT SERVICES IN GREECE

In this section, various m-government services which could be implemented in Greece as well as their benefits to the welfare of the citizens are discussed. The services that are presented in this paper are selected according to the needs of Greek citizens taking into consideration the social, economic and cultural conditions of the country. In addition, the m-government services that are mentioned in this section were successfully implemented in various countries all over the world. Therefore, the proposed m-government services are expected to be used by the vast majority of the Greek citizens.

Two possible m-government services whose acceptance was satisfactory in other countries include mobile parking and mobile transport ticketing. Mobile parking comprises an alternative, more convenient payment method for parking in big cities. The main benefits of mobile parking to the citizens are convenience since getting out of the car is not necessary anymore and accuracy of payments. The conventional parking ticket systems ask from the customer to determine the parking time in advance, and as a result the amount of time a person pays for parking is usually either bigger or smaller than the amount of time he actually parks. On the other hand, with mobile parking, the time parked and the time paid for is exactly the same. Regarding mobile transport ticketing, commuters will have an alternative option to buy bus, tram, metro and trolley-bus tickets through their mobile phone, offering more convenience and reducing the amount of paper-based tickets in circulation. SMS tickets for public means of transportation can be ordered by sending a text message and users can be charged through their regular mobile phone bills (Rannu 2003).

Another category of m-government services is the provision of time critical public information to citizens via mobile phones, more specifically via SMS; possibility to request information via mobile from government information databases; traffic information (bus, train delays for example), police information about runaway criminals and stolen cars. In addition, during natural disaster such as earthquakes and floods and in general in case of an emergency, mobile technology can be utilized to send alerts to citizens. Reminders also can be sent to the citizens according to their needs and preferences (for example doctor appointment reminders). The use of text-messaging reminders is expected to reduce the number of missed hospital appointments.

It is worthy of note that there are interesting m-government services in the field of education. One application could be sending notifications about child's absence from school notifications to parents' mobiles. Another suggestion is that the delivery of exam results, cancellation of lectures etc. can be performed through SMS-notifications. In this way, students will not have to go to their schools in order to see their results especially in summer-time and the calls to school secretaries are expected to be reduced. This can also be applied to the universities.

One very useful service for our country would be a channel to which everyone can send complaints and suggestions about the poor condition of roads, the possible disorders of public transport system and other issues. The feedback of the citizens about the above issues will be received by the competent authorities who will then take the appropriate measures to maintain and improve the situation. This application will contribute to the participation of citizens to policymaking in a convenient way and to the early detection of problems mentioned by citizens.

Last but not least, mobile voting in local and national elections would enable each citizen to participate in the elections, whatever his or her location is on polling day. This way, the democracy will be enhanced since the participation of the citizens will increase.

From the above descriptions of m-government services, we can derive that there are two kind of services: those which are called "push" type content services in which citizens receive info and "interactive" ones in which there is a "dialogue" between the citizen and the government. Regarding "push" services, the citizens are subscribed to the services of their specific preferences. The "push" services include reminders, alerts in case of an emergency, status info (the status of an application, exam results). Examples of interactive m-government services encompass m-parking, m-ticketing, m-voting.

Table 1: The two types of m-government services

Push services	Interactive services
- Reminders - Alerts (in case of an emergency) - Time critical information - Various notifications	- Mobile parking - Mobile Transport ticketing - Mobile voting - Provision of suggestions - complaints to the authority

FUTURE WORK

Success of m-government requires active engagement by both government and its citizens and so providing services is only one aspect of the m-government equation. Another, and more challenging aspect, is achieving acceptance and widespread persistent use of m-government by citizens. The acceptance of m-government services can be achieved with their proper design and implementation. Services should be delivered in ways already familiar and actively adopted by users. In addition, the mobile phone is perfect device for rapid and brief interaction. Hence, content should be short, targeted and relevant. Another significant parameter that should be taken into account while designing m-government services is the security. The applications that require security must make minimal demands on the user.

Challenges to m-government are considered those related to interoperability (roaming, variety of platforms, etc); usability (mobile devices limitations); privacy protection, etc. To sum up, m-government is inevitable and growing fast. Therefore, the parties involved must adapt to the new reality in order to have responsive public organizations and an "able society" that can benefit.

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