Chapter VII

Deployment of E-Government Municipal Services: Enforcement of Security Policies

Nikolaos Oikonomidis, University of Siegen, Germany
Sergiu Tcaciuc, University of Siegen, Germany
Christoph Ruland, University of Siegen, Germany

ABSTRACT

This chapter presents the research results on reliable enforcement of security policies for electronic services deployment in small- and medium-sized governmental organisations (SMGOs). Motivation for this research has been the fact that SMGOs interact frequently with citizens and/or businesses, to offer paper-based and electronic services, which utilize a limited number of resources, such as employees and funds. SMGOs also interact with each other in local or cross-border transactions, exchanging information on behalf of citizens, businesses or the organisation itself. There is an obvious need for a secure, interoperable, and cost-effective e-government platform that addresses the requirements of SMGOs, improves the quality of the citizens’ involvement, and strengthens the fundamental structure of these organisations.

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INTRODUCTION

Citizens interact regularly with the municipalities or the municipal organisations. Public administrations offer a variety of services like requests/processing of certificates, (local) tax payment, and promotion of city information. An effective and efficient service provision brings benefits to both municipalities and the involved citizens/customers of the particular services. Electronic services provide a unique opportunity to enhance and expand the offered services by making them more flexible, since they may provide location and time independent access for the citizens, enhancing their mobility. Rapid execution of services that might otherwise require a considerable amount of time and effort and a one-stop service provision are one of the main scopes of SMGOs. These benefits are not realisable where there is a lack of the proper infrastructure to serve citizens, such as in small municipalities with limited resources and/or large areas of responsibilities. Provision of such electronic services can be achieved with the use of multimodal access mechanisms (e-mayor Consortium, 2004). Due to the fact that exchanged data in forms and documents may contain private or sensitive data, it is imperative to introduce security mechanisms that guarantee to citizens and businesses a trustworthy means of communication via a network that may be insecure, such as the Internet. Trust is also a strong requirement in such an environment. It can be achieved through the use of cryptographic mechanisms (e.g., through the use of electronic signatures and timestamps) that assure the security requirements of confidentiality, authentication of data and users, integrity of content, and non-repudiation by the receiver. Appliance of such security mechanisms affords secure exchange of documents and identification between citizens/businesses and SMGOs. It is the base for trust toward the whole system (e-mayor Consortium, 2004). This chapter presents a subset of the mentioned security requirements, namely authentication and authorisation under the scope of access control policies.

Next, the e-mayor project is introduced as well a high-level description of the system architecture. The main chapter addresses the aspects of policy enforcement for local and cross-border municipal e-government services. At the end, conclusion, lessons learned and an outlook are given.

EMAYOR PROJECT

E-Mayor (IST-2003-507217) addresses the specific audience of SMGOs across Europe. This project looks especially at transactions that are performed on a European level. Such services typically handle the secure exchange of documents, forms, and other information across national borders. The terms of “SMGO” and “cross-border service” has been defined by the e-mayor consortium. All participating municipalities fall into the category of SMGOs. The target group for e-mayor comprises municipalities up to half a million citizens normally located in urban or metropolitan areas. e-mayor aims to contribute toward the provision of secure and
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