

## THE BUILDING OF AN UBIQUITOUS GOVERNMENT IN THE UNIVERSITY OF MURCIA

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Nowadays, the electronic services have a great impact on people's way of life. We can find some examples in scenarios where different enterprises make electronic banking transactions, in the downloading of multimedia files through Internet for leisure time or in the instant messaging for real-time communications between two or more people. All of them have the common objective of providing add-value services to the final users when they could need them, and they have also changed the way of understanding the human relationships in the last years. A special group of electronic services is the mobile ones. This kind of applications facilitates the use of electronic services in whatever place and whatever time.

Increasing the functionality of electronic services and applications, there exists a diversity of governments in countries, regions, cities and public organizations that have been developing electronic government services to their citizens since the beginning of the new century. The University of Murcia has been working to achieve this objective for the last ten years, building the technological and strategic infrastructures that support the different kinds of services offered to the university community.

In this paper we are going to describe the experience of the University of Murcia in the development of these infrastructures that make use of electronic government services from different environments available. The students, teachers and staff of the University of Murcia can use the government services face-to-face, through a desktop computer or from a mobile device with the same efficiency and security characteristics. These services are developed in order to improve the internal management, offer add-value services to the university community and interoperate with other governments.

In the first sections of the paper we review the most basic infrastructures for securing the electronic transactions and handling the electronic documents. These infrastructures are based on the Service Oriented Architecture (SOA) concept and are developed using web-services technologies and cryptographic standards like PKI, WS-Security, XMLSig and PKCS#7. We will also describe the use of the student smart card of the University of Murcia as the main security element to perform electronic authentication and signature inside the university. Then we will underline the results of the FACTO project in collaboration with "Telefónica Móviles España" as the infrastructure that provides security in mobile transaction.

Next, in the last sections of the paper, we show the most important electronic government services developed in the University of Murcia. Some of them are for internal management, like the validation of financial electronic documents. Other applications are offered to teachers and students, like the electronic registry or the electronic signature of marks certificates. Finally, we are working in some interoperable services that provide the sending of marks certificates or large family certificates to other electronic governments.