

Process of Integrating Digital Cadastral Map and Urban Data into a GIS Application for the Development of a Municipality – Case Study

**El Hassane SEMLALI, Achraf AIT ALLA, Khalid ZAHIRI and
My Abdeslam ADAD, Morocco**

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SUMMARY

Nowadays municipalities are handling a variety of data which are provided by different organisms. Data are on paper supports, and conventional maps are used to locate information. Moreover, data are in continuous expansion, which makes their management increasingly difficult and decision making is time consuming. In addition, traditional tools do no longer respond to the daily municipality management needs.

We know that GIS technology offers very well advanced tools for data analysis, data updating and production of different kind of thematic maps. Therefore, GIS could contribute efficiently to the improvement and the management of a municipality data.

On the other hand, digital cadastral map constitutes an important and reliable support for edition and analysis of earth information. It supports data related to properties, data on land and natural resources as well. Consequently, it could serve as a common point to many users of spatial data.

The objective of this article is to take advantage of combining the digital cadastral map with other layers of data, used by the municipality, into a GIS application. In this context, we develop a process for this data integration in order to perform various treatments and thematic analyses on spatial data of a municipality.

The proposed process is based on the following points:

- Develop a procedure to integrate and treat cadastral data with other kind of data used by a municipality into a unique database.
- Contribute to the development of a municipality by setting up a GIS tool to handle municipality data such as drinking water pipelines, network of purification, and other data of the Urban Development Map (UDM).