

# **Altimetric and Tridimensional Aspects for the Updating of Cadastral Archives**

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## **SUMMARY**

The innovations made in the Italian “Pregeo 8” specifications and, particularly, the adoption of the G. P. S. system, with the introduction of altimetric information, would enable the possibility to use the cadastral data-base as basic support for the development of GIS at local scale. Some problems would arise if the uncertainty connected to coordinates of fiducial points is not overcome, with the consequent risk of invalidating all the updating process.

In a first phase, this study refers to some experiences in compliance to new realized dispositions, with the aim to contribute in using of cadastral archives, indispensable for property definition and correct territory management.

As the current cadastre systems are based on 2D parcels, the physical 3D objects cannot be defined as cadastral objects and there are limitations in representing the complex internal structure of the buildings on geometric and thematic dimensions in the 3D entity levels.

In the last phase, this paper contains some reflections on 3D cadastre, with the aims of analysing the current Italian situation and seeking to define some recommendations regarding future developments in three-dimensional and spatial cadastre, that will replace the existing two-dimensional graphical surface cadastre.