

# Some GPS Guidelines and Recommendations for Large-Scale Applications

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## **ABSTRACT**

In Algeria Today, GPS technique is used in various applications such as cadastre, conducting road project, auscultation, bathymetry survey, and deformation monitoring. Algerian surveyors confront a major problem about transformation from GPS co-ordinates to national one, and seek about GPS guidelines to help them in their GPS operation field and processing. Generally, they used instructions given by GPS receiver manufacturer as guidelines to start and perform their own project.

In this context, a need to develop a set of specifications and recommendations to use GPS for the above specific applications is considered an urgent task. In this paper is discussed some guidelines and recommendations limited only on large-scale applications such as cadastre, and based essentially on our GPS experience.

This experience is based on several projects developed at the Geodetic Laboratory of the National Center of Spatial Techniques, about the use of GPS in cadastre, networks engineering, auscultation, road survey, and in the south of Algeria (lack of geodetic information).

These guidelines concern the following subjects: planning and conducting a GPS project for cadastral survey; conception of a new cadastral network and how to update and densify an existing cadastral network; adequate positioning mode; testing and calibration of GPS receivers; field and office procedures; results checking and presentation.

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