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SisGeo: Support System for the Research of Georeferenced Comparisons Applied to Professional and Academic Devices

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Abstract : Devices and applications that use satellite-based positioning are becoming more popular day-by-day. Thus, evolution and improvement in this technology are mandatory. Accordingly, satellite georeferenced systems need to accomplish the same evolution rhythm. Either GPS (Global Positioning System) or its similar Russian GLONASS (Global Navigation Satellite System) are system samples that offer us powerful tools to plot coordinates on the earth surface. The development of this research aims the study of several aspects related to use of GPS and GLONASS technologies, given its application and collected data improvement during geodetic data acquisition. So, both relevant theoretic and practical aspects are considered. In this context, at the theoretical part, the main systems' characteristics are shown, observing its similarities and differences. At the practical part, a series of experiences are performed and obtained data packages are compared in order to demonstrate equivalence or differences among them. The evaluation methodology targets both quantitative and qualitative analysis provided by GPS and GPS/GLONASS receptors. Meanwhile, a specific collected data storage system was developed to better compare and analyze them (SisGeo - Georeferenced Research Comparison Support System).

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