

A web base online GPS processing service for rural cadastral applications

Mauricio GENDE, Romina de los Angeles GALVAN & Claudio BRUNINI, Argentina

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SUMMARY

This paper presents a full operational web-based online GPS processing service. Similar services already exist but they are not focused on single frequency observation, and most of them require dual frequency receivers. In contrast, our system was planned to provide a solution for rural cadastral applications where a decimetric accuracy is required. The core of the system uses RTKLIB, an open source program package for GNSS positioning. This makes our implementation, also developed under the open source philosophy, easy to be implemented and replicated by others. For the time being, processing is done in differential mode and the entire SIRGAS-CON network (the CORS network from the SIRGAS project) is used as the database that provides the base stations. Options include; processing code or carrier phase data, using broadcast or precise ephemerides, in static or kinematic mode. The user will obtain not only the coordinates of his observation but also the location via an embedded web page that uses the Google Map service.