

Exploration of NavIC/GPS Receiver in both Static and Dynamic Way in an Open Surface/Ground Area

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Abstract

Indian Regional Navigation Satellite System (IRNSS)/NavIC operates in two frequency bands namely L5 band (1176.45 MHz) and S1 band (2492.02 MHz). To navigate over vegetated area or man-made structures or unstructured area, different methods have been used. By utilizing NavIC user receiver along with comparison with GPS leads to accurate navigation and near real time observation for this scenario. Various field surveys have been conducted by keeping one receiver as base station i.e., NavIC receiver kept constant and other receiver used as rover receivers. These base stations depend on the exact coordinates. In this study two fixed NavIC receivers and a rover receiver are used. By solving the distances between fixed points, and also by using the inverse distance weighting method, the error of rover receiver is found. It can be implemented anywhere, therefore local navigation system can be achieved easily.

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