

Implementation and Performance Analysis of DGPS & RTK Error Correction Data Real-Time Transmission System for Long-Distance in Mobile Environments

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Abstract

DGPS(Differential Global Positioning System) and RTK(RealTime Kinematic) is in one of today's most widely used surveying techniques. But It's use is restricted by the distance between reference station and rover station and it is difficult to process data in realtime by it's own orgnizational limitation in precise measurement of positioning. To meet these new demands, In This paper, new DGPS and RTK correction data services through Internet and PSTN(Public Switched Telephony Network) have been proposed. For this purpose, we implemented performance a DGPS and RTK error correction data transmission system for long-distance using the internet and PSTN network which allows a mobile user to increase the distance at which the rover receiver is located from the reference in realtime. and we analyzed and compared DGPS and RTK performance by experiments through the Internet and PSTN network with the distance and the time.

Keywords : DGPS, RTK, Precise mesurement, Error Correction Signal