
Global Differential GPS Positioning without Using a Base Station

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Abstract

Stand-alone GPS is currently capable of providing positioning solutions at accuracy from several meters up to several tens of meters. To obtain a better positioning accuracy, differential GPS techniques must be used including wide area differential GPS networks. Significant efforts are currently underway to develop new processing methods to allow stand-alone point positioning to achieve accuracy at a decimeter to centimeter level. This paper describes the concept of global DGPS positioning without the use of base stations. In addition to the conventional code-based data processing method, a carrier phase based data processing technique has been described in this paper along with test result.
