

OmniSTAR leads CORS Network High Performance Positioning Study for Greater Accuracy

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INTRODUCTION

OmniSTAR, the market leaders in providing Differential GPS solutions via satellites continue to strive to bring greater accuracy and quality of services to their customers. To achieve this goal, OmniSTAR are currently undertaking a Cooperative Research Centre for Spatial information (CRCSI) managed and funded study to determine whether having greater 'reference station density' will improve the accuracy and reliability of OmniSTAR's HP position solution.

What do we mean by reference station density? To facilitate OmniSTAR's DGPS services there are twelve GPS reference stations located around Australia. The stations are located to provide optimum coverage for the agricultural user. However, as Australia is such a large continent it is not unusual for a user to be located between 400 - 800 kilometres in distance from a reference station. In this scenario, the reference station density can be said to be sparse.

In recent years, State agencies have introduced their own networks of GPS reference stations in order to better map and manage land and state infrastructure. Collectively these types of networks are often referred to as CORS (Continuous Operation Reference Stations). Victoria has installed the VicPOS / MelbPOS networks, New South Wales have installed the SydNET network, and Queensland the SunPOZ network. These networks are designed so the maximum distance the user will be from a number of reference stations is 200 kilometres. Other participants in this project include the Victoria Dept Sustainability and Environment, New South Wales Dept of Lands, Queensland Dept Natural Resources and Water and Geoscience Australia.

With this study, it is hoped that the OmniSTAR solution can demonstrate 2 - 5 centimetre accuracy, as a result of the higher density networks of reference stations. Currently, the greatest accuracy that is available via satellite transmission is 10cm (OmniSTAR-HP).

So... What does this mean for the user? If successful, the next stage is to investigate how private and public organisation can work together to deliver high accuracy services.

Further information on OmniSTAR is a www.omnistar.com.au. OmniSTAR is a member of 43 Pty Ltd, the SME consortium of the CRCSI.