

Shared Use of DGPS for DP and Survey Operations

Authors: Dr. David Russell, Tony Leary and Kevin Gaffney; *Subsea 7, Aberdeen*

Abstract

Differential Global Navigation Satellite Systems (DGNSS) such as Differential GPS (DGPS) and GLONASS (DGLONASS) are acknowledged as global standards for precise positioning and navigation and are used extensively within dynamic positioning (DP) systems to guide vessels involved in offshore survey and construction operations. Before this, DP vessels would typically use radio-navigation systems provided and operated by a survey-positioning company. These were normally installed for the duration of a particular contract or project. The survey-positioning company retained full responsibility for the system, which would be used for both survey and DP requirements. The operational straightforwardness of DGNSS has led to its permanent installation and widespread use aboard DP vessels without input from surveyors. This has given vessel operators significant autonomy regarding the positioning of their vessels. When survey services are required on board, the survey contractor is often asked to make use of the DGNSS system permanently installed on the vessel. Whilst usually convenient this can present potential operational problems relating to the control and performance of the system. There is also potential for contractual disputes to arise in any situation where the survey user and the DP user are different companies and where installation, manipulation or reconfiguration of the positioning system for either survey or DP use may impact on the performance of the system for the other party. It is therefore critical from both safety and operational perspectives that full co-operation is exercised between these two users. To ascertain how this might be facilitated it is first important to understand some basic definitions along with the requirements of both the surveyor and DP operator, which can be quite different. A number of industry guidelines have been produced covering the use of DGNSS for offshore survey applications [1] and also DP operations.

Click below to:

[**Review the complete paper**](#)

[**Review the presentation**](#)

[**Return to the Session Directory**](#)