Centimetre-level Offshore Positioning Service

Fugro, headquartered in The Netherlands, has introduced a further advance in the field of GNSS augmentation with its high-accuracy G2+ service, designed to benefit offshore operators around the globe who require positioning and measurement accuracy at centimetre level. G2+ is an enhancement of Fugro’s G2 service (based on GPS and GLONASS) and utilises highly advanced GNSS augmentation algorithms developed in-house by its leading GNSS augmentation experts.

The code and carrier-phase signals transmitted by GPS and GLONASS satellites are monitored globally by Fugro’s worldwide network of reference stations. These observations are processed centrally in real-time using the company’s proprietary algorithms to generate precise corrections which are used to augment the standard signals broadcast by GPS and GLONASS satellites. Customers receive corrections via seven high-powered communications satellites, providing at least two independent G2+ data sources.

Fugro’s new satellite positioning service will be particularly beneficial when seeking to measure latitude, longitude, elevation and speed with high accuracy in real-time. Applications include offshore construction, survey services, vessel monitoring and structural monitoring. Its ultra-high accuracy enables the real-time correction of tidal changes - which impact the accuracy of seabed mapping - as well as the real-time monitoring of the motion of floating and fixed structures. The 3D accuracies of the system approach those of GNSS RTK (Real Time Kinematic) systems whilst avoiding the need for an RTK base station or local transmission link, overcoming the logistical challenges and range limitations associated with coastal RTK systems.

The launch of G2+ follows the recent launch of Fugro’s G4 satellite correction service, which is the first to take advantage of all four global navigation satellite systems: GPS, GLONASS, BeiDou and Galileo.

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