

Tracer™

Correctionless Precise Positioning

Overview

This document provides a brief overview on Hemisphere GNSS' *Tracer* feature.

What is *Tracer*?

Most accurate positioning techniques such as RTK (real-time kinematic) and Atlas® (Hemisphere's L-band global correction service) operate by using a correction data stream source. One of the limitations with these positioning methods is the need for constant connectivity with the correction source. In most cases, the user's receiver needs to obtain correction data with very low data interruption in order to maintain reasonable position accuracy. For instance, certain systems in the GNSS market only allow as much as 10 to 20 seconds of signal interruption before RTK level accuracy completely stops being provided to the user.

Tracer is a core feature used in Hemisphere products to sustain positioning in the absence of corrections. With the use of specialized algorithms, Tracer greatly mitigates the impact of correction loss on the system's positioning accuracy. Tracer is of fundamental importance in environments where connectivity over satellite, radio, or internet is not stable, as it will for the most part allow users to operate with negligible loss of accuracy during outage periods. The length of the outage and associate performance loss will vary with the positioning technique used, as well as satellite geometry and interference environment.