

Title: **Global PPP with Ambiguity Resolution Providing Improved Accuracy and Instant Position Convergence**

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Abstract

This paper will provide an overview of a new global high accuracy GNSS positioning service developed by Veripos enabling Precise Point Positioning with Ambiguity Resolution (PPP-AR). This new technique is an extension to the existing PPP technique and by resolving the ambiguities, a user can achieve an accuracy of just a few centimetres in real-time, globally and independent from their location relative to the GNSS reference station network.

In order to resolve carrier phase ambiguities, orbit, clock and observation bias information with an optimum data quality and data latency is broadcast to the user via geo-stationary satellites. The paper will explain the global GNSS tracking and communication infrastructure, the correction generation processes and the service data delivery to the end users.

Two of the key benefits of PPP with ambiguity resolution over regular PPP are (a) fast recovery after GNSS data gaps and (b) higher accuracy. The paper will present results demonstrating these benefits and how they benefit DP users.