Improved Precision Point Positioning (PPP) method for Global Navigation Satellite System (GNSS) receivers able to provide accuracy up to 1 cm

Technological benefits

Innovative technology
- Centimeter accuracy, ten times greater than the standard PPP methods
- Requires low bandwidth, comparable to that used by Satellite-based augmentation systems (SBAS)

An efficient and sustainable system
- Open source, flexible architecture compatible with BNC & RTKLIB
- Open communication standard (RTCM)
- Language C++ compatible with the majority of GNSS receivers
- Compatible with SBAS
- Does not require reference station
- Compatible with double frequency and potentially triple frequency systems

Potential applications

Geolocation systems
Agriculture (agricultural robot), autonomous vehicle, rail, etc.

Invention overview

This invention deals with a calculation software providing high-accuracy positioning to GNSS receivers through an improved Precise Point Positioning method using real-time signals of the IGS (International GNSS Service). The functional model of this invention is based on the concept of undifferentiated and non-combined measures of signals.

http://ppp-wizard.net
http://www.esa-tec.eu/space-technologies/from-space/high-precision-geolocation-to-1cm-accuracy

Commercial benefits

Improved and sustainable performance
- Global application, usable even in isolated sites
- Allows sub-meter accuracy for smartphone
- Allows sale service offering centimeter accuracy
- Usable by low power receivers
- Supports all constellations: GPS, Glonass, Galileo & Beidou

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Patented invention, available under license