Precise Point Positioning

TerraPos is a software for Precise Point Positioning (PPP) with the Global Positioning System (GPS). The availability of precise orbits and satellite clock corrections makes sub-decimeter kinematic positioning possible with a single GPS receiver.
PPP with TerraPos is an attractive alternative to traditional methods, without the need to deploy local reference stations. A single GPS receiver provides the user with increased operational flexibility and simplified logistics.
Post-processing ensures statistically optimal estimation using a filter/smoother combination.

Dynamics	Duration	Horizontal RMS	Vertical RMS
Static	24 h	0.01 m	0.02 m
Kinematic	≥6 h	0.03 m *	0.04 m *
	1 h	0.15 m	0.20 m

Obtainable accuracy with TerraPos. Typical RMS of true errors using default settings. New results.

Survey vessel from The Norwegian Hydrographic Service. NHS is an important partner for the development of TerraPos.

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TerraPos

one step further

TERRAPOS

Precise positioning without reference stations

– TerraPos is an effective and easy-to-use interface to the high-quality products of the International GNSS Service (IGS).

– When using orbits from IGS, TerraPos will compute positions in the International Terrestrial Reference Frame (ITRF). The use of ITRF is a guarantee for long-term stability and global consistence of the solutions.

– TerraPos is implemented to be fully compatible with conventions and models recommended and used by the IGS and the International Earth Rotation and Reference System Service (IERS).

– TerraPos has been designed and implemented with emphasis on kinematic positioning.

– TerraPos contains advanced and fully automated tools for data checks and editing. Only a minimum of user intervention is required.

– TerraPos uses internationally accepted file formats.

– TerraPos contains unique and world-leading stochastic models.

– Robust quality assessment is facilitated by advanced algorithms including reliability computations. Position quality is reported using easy-to-comprehend overall quality codes.

– The amount of generated documentation can be easily tuned.

– Several export formats are supported, more will be implemented upon request.

– TerraPos is developed in close cooperation with university researchers and demanding customers.

TerraTec survey aircraft.

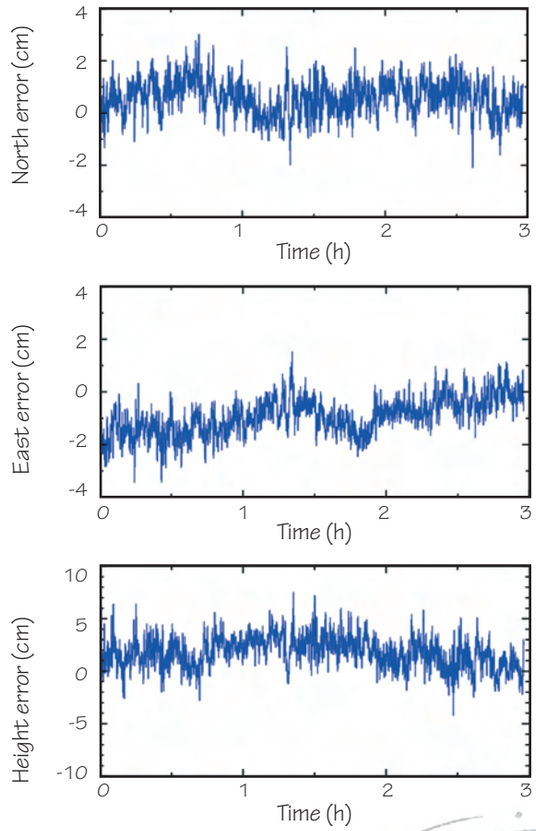
TERRAPOS

The ideal solution for positioning of any moving platform

- Airborne data acquisition
  - aerial photography
  - lidar operations
  - SLAR / SAR
  - magnetic surveys
  - etc.
- Marine surveying
  - seabed mapping
  - seismic measurements
  - etc.

	GPS standard service	RTK GPS	Commercial DGPS	TerraPos
Operational flexibility	yes	no	yes	yes
Sub-decimeter accuracy	no	yes	no	yes
Low cost	yes	yes	no	yes

TerraPos constitutes an uncomprimising combination of high performance and flexible operation.



Excerpts of a 24 hours solution using precise orbits and 30s sattelite clock corrections from Center of Orbit Determination in Europe (CODE).