



Specification

Windows OS

Ionospheric models

Klobuchar

NeQuick (with Galileo signal license)

NAVIC grid model (with NAVIC signal license)

scintillation simulation (optional)

TEC depletion simulation (optional)

fault scenarios (FAA CAT-1 LAAS) (optional)

Tropospheric models

Saastamoinen

Hopfield

Black

Miscellaneous models

step, ramp, acceleration code and carrier errors

orbital parameters (true and broadcast)

navigation message parameters and bits

antenna pattern editor (optional)

multipath simulation (optional)

Dynamic user simulation

GNSS network simulation (optional)

Features

- Real-time simulation of single or dual frequency GPS, Galileo, GLONASS, BeiDou.

- Off-line simulation of digitized GNSS signal, similar to those recorded from life satellites by our RF signal recorders. The signal can be played back as RF at later time or analysed by MATLAB receiver.

References

1. I.Petrovski, T.Tsujii, Digital Satellite Navigation and Geophysics, Cambridge University Press, 2012.
2. I.Petrovski, GPS, GLONASS, Galileo and BeiDou for Mobile Devices . From Instant to Precise positioning. Cambridge University Press, 2014.
3. 1. T. Tsujii, T. Fujiwara and T. Kubota, Improvement of INS-Aided GPS Tracking Performance under Strong Ionospheric Scintillation, The 45th ISICIE International Symposium on Stochastic Systems. November 1-2, 2013, Ryukyus University, Okinawa, Japan.
2. 辻井利昭、藤原健、久保田鉄也 (宇宙航空研究開発機構) , 電離圏シンチレーション環境におけるINS補強GPS追尾ループの飛行評価, 辻井利昭、藤原健、久保田鉄也 (宇宙航空研究開発機構) 第51回飛行機シンポジウム、香川県高松市、2013.11.20-22.

Additional software

ANSI C API allows to modify existing or implement custom models for signal simulation .

Single channel simulator with custom Doppler profile simulation.

Reference Station Receiver Data Generator allows to generate raw data and signals for up to six locations with spatially correlated models. The signals can be played back as RF signals. This option is useful for RTK, VRS, LAAS or CRPA simulation.

INS and 6-DOF aircraft trajectory generator