

GNSS Ephemeris with Graceful Degradation and Measurement Fusion

Track Code: 65440

Categories:

- Electrical Engineering

Keywords:

- Big Data
- Computer Technology
- Computing Methods
- Electrical Engineering
- GPS
- Telecommunications

In order for global positioning system (GPS) satellites to determine positioning with accuracy, it is imperative that the position of the satellites is accurately known.

Purdue University researchers have developed a new global navigation satellite system (GNSS) ephemeris that more accurately determines the exact position of satellites. Instead of uniform accuracy over the entire time interval like current technologies, this ephemeris is initially extremely accurate and exhibits "graceful degradation" with the accuracy gradually decreasing with time. This ephemeris is valid for several days before needing updating. The standard broadcast ephemeris is only valid for three hours.

Advantages:

- More accurately determines the exact position of satellites
- Valid for several days as opposed to the standard three hours

Potential Applications:

- Computer Technology
- Telecommunications

People:

- Garrison, James L (Project leader)
- Walker, Michael Allen

Intellectual Property:

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