Estimation and Mitigation of Unmodeled Errors for a Pseudolite Based Reference System

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Biblioscholar Sep 2012, 2012. Taschenbuch. Book Condition: Neu. 246x189x8 mm. This item is printed on demand - Print on Demand Neuware - Current flight reference systems rely heavily on the Global Positioning System (GPS), causing susceptibility to GPS jamming. Additionally, an increasing number of tests involve jamming the GPS signal. A need exists to develop a system capable of GPS-level accuracy during these outages. One promising solution is a ground-based pseudolite system capable of delivering sub-centimeter level accuracy, yet operating at non-GPS frequencies. This thesis attempts to determine the unknown errors in the Locata system, one such pseudolite-based system, to achieve the accuracy required. The development of a measurement simulation tool along with a Kalman filter algorithm provides confirmation of filter performance as well as the ability to process real data measurements and evaluate simulated versus real data comparatively. The simulation tool creates various types of measurements with induced noise, tropospheric delays, pseudolite position errors, and tropospheric scale-factor errors. In turn, the Kalman filter resolves these errors, along with position, velocity, and acceleration for both simulated and real data measurements, enabling error analysis to pinpoint both expected and unexpected error sources. Simulated results con rmed the ability to render centimeter...

Reviews

Without doubt, this is actually the best operate by any article writer. Indeed, it can be perform, nonetheless an interesting and amazing literature. Its been written in an exceedingly straightforward way in fact it is only soon after i finished reading through this book through which in fact changed me, modify the way in my opinion.
-- Miss Elissa Kutch V

A superior quality publication and the font employed was exciting to read through. It is among the most awesome book i have read. I am effortlessly could get a enjoyment of reading a created publication.
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