



## Statistical Observations of Positioning, Navigation, and Timing in a Combat Simulation (Paperback)

By Air Force Institute of Technology

Createspace Independent Publishing Platform, United States, 2016. Paperback. Condition: New. Language: English . Brand New Book \*\*\*\*\*\* Print on Demand \*\*\*\*\*\*. In satellite constellation design, performance and cost of the system drive the design process. The Global Positioning System (GPS) constellation is currently used to provide positioning and timing worldwide. As satellite technology has improved over the years, the cost to develop and maintain the satellites has increased. Using a constellation design tool, it is possible to analyze the tradeoffs of new navigation constellation designs (Pareto fronts) that illustrate the tradeoffs between position dilution of precision (PDOP) and system cost. This book utilized Satellite Tool Kit (STK) to calculate PDOP values of navigation constellations, and the Unmanned Spacecraft Cost Model (USCM) along with the Small Spacecraft Cost Model (SSCM) to determine system cost. The design parameters used include Walker constellation parameters, orbital elements, and transmit power. The results show that the constellation design tool produces realistic solutions. Using the generated solutions, an analysis of the navigation constellation designs was presented.



## Reviews

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