SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM (B2)
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ADVANCED MODELING AND SIMULATION OF SATELLITE COMMUNICATION SYSTEM

Abstract

A new method of satellite communication system modeling and simulation are presented in this paper. The traditional modeling and simulation techniques, only focus on the baseband signal model, such as codedecode, modulation, demodulation, etc. Because radio frequency channel not be calculated in simulation, the performance of satellite communication system can't be exactly evaluated. To enhance satellite communication design, such as source code/decode, scrambel/descrambel, modulation/demodulation, channel code/decode, up/down converters, radio frequency transfer channel are simulated in software. Satellite communication system is more efficiently evaluated.