

SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM (B2)
Fixed and Broadcast Communications (6)

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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 code/decode, 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, scramble/descramble, modulation/demodulation, channel code/decode, up/down converters, radio frequency transfer channel are simulated in software. Satellite communication system is more efficiently evaluated.