

MEESE

MILSATCOM End-to-End Simulation Environment

MILSATCOM End-to-End Simulation Environment (MEESE) is a hardware and software-based simulation platform that models the various components of end-to-end satellite communications systems. MEESE, initially developed for Milstar, has now been expanded to include next generation satellite systems including AEHF and future concepts. Its open architecture and modular approach permits quick expansion to include other satellite communications systems. This modular architecture also allows us to quickly integrate component models supplied by developers for evaluation or comparison to other solutions.

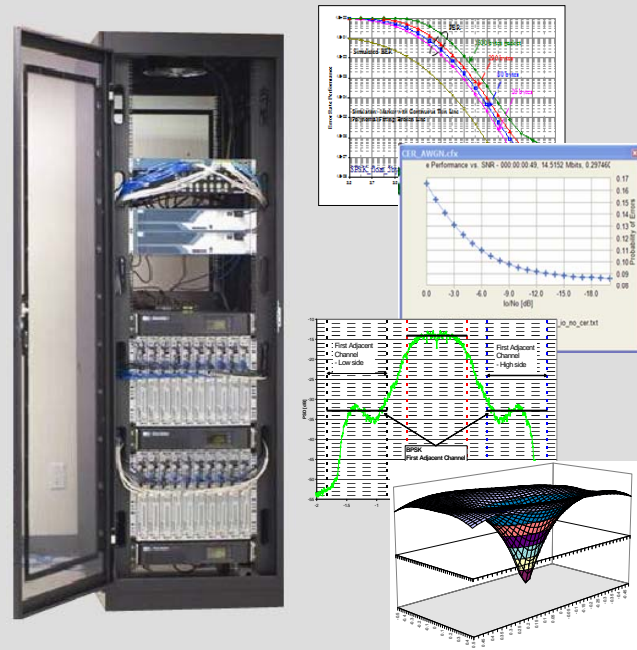
Features

- Waveform definition and modeling: modulation, interleaver, and coding selection
- Bit-error-rate and performance analysis
- Effects of channel fading, jamming, and scintillation
- Nuller configuration (anti-jamming performance)
- Interference performance analysis
- Non-linear effects
- Phase noise degradation
- Link performance
- Synchronization
- Dynamic bandwidth resource allocation evaluation

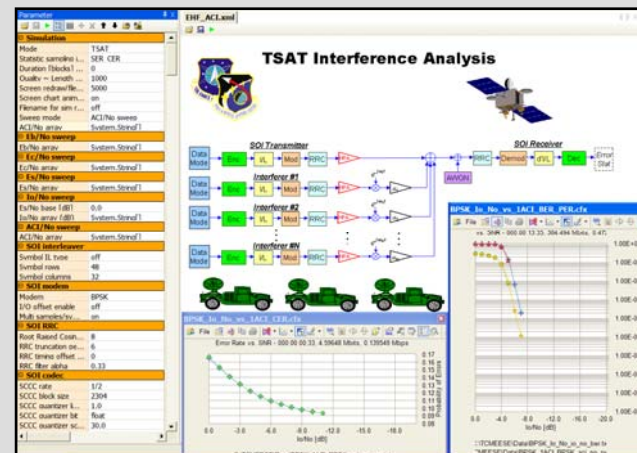
Applications

MEESE provides high fidelity Layer 1 and 2 modeling, simulating real-life effects of the communications chain. With system and segment performance data generated, design decisions and issues resolution can be made with higher confidence throughout architecture concept, development, and operational phases:

- Architecture and requirement development
- Segment requirement allocations
- System performance and trade analysis
- Requirement verification process
- Baseband testing prior to launch
- On-orbit test and operational support
- Anomaly duplication and resolution
- Planning tool development



MEESE Platform and Analysis



High Fidelity Satellite Simulation