RF Channel Simulator – COTS Product

Test realistically - Impart channel effects onto existing RF signals, creating operational RF environments in the lab.
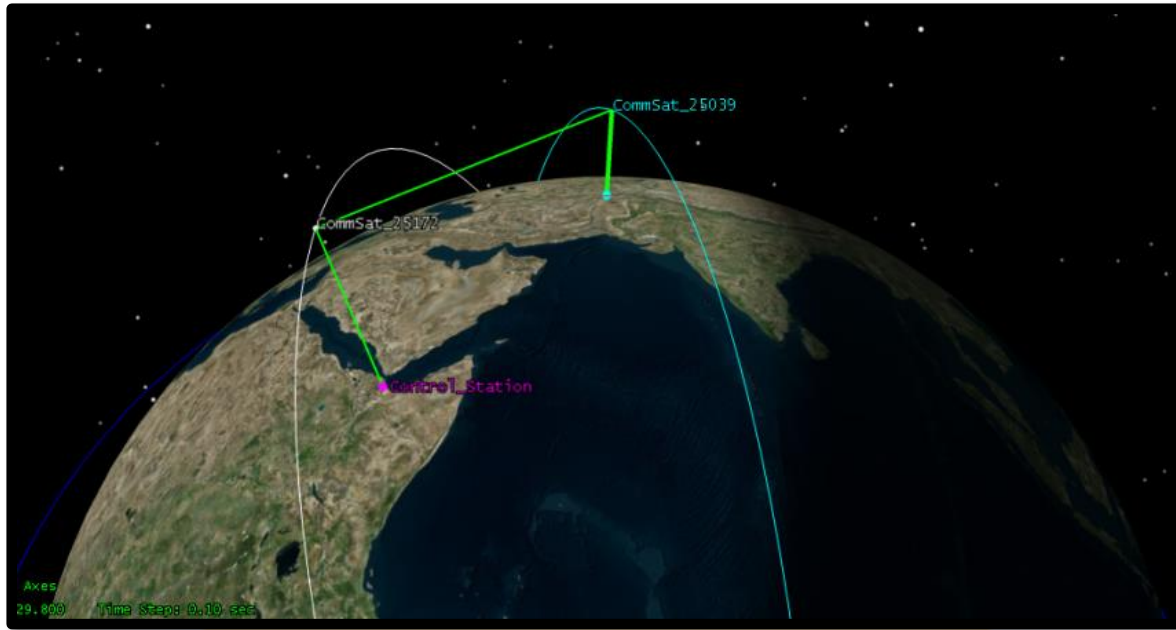
Simulation Features:

- Doppler shift
- Time delay
- Path loss
- AWGN
- Multipath fading
- Phase Noise
- Programmable Filtering
- AM/AM, AM/PM
- Interference

Key Benefits

1. Recreates <u>any</u> RF environment
2. Saves money and time on live flights
3. Reduces program risk by assuring reliable comms
4. Answers the key question: "Will it work?"

Transmit Systems → *Original RF* → **Receive Systems** → *Modified RF*

Channel Simulator – COTS Developments

Available Today:

- **Bandwidth**: up to 250 MHz
- **Frequency**: UHF, L, S, and other individual bands using integrated converters
- **Fidelity**: Industry-leading 54 kHz update rate. Phase-continuous output changes.
- **Competitive pricing:** 15% price reduction in 2018

Available in Q2 2019:

- **Bandwidth**: up to 600 MHz
- **Frequency**: native 50-3000 MHz
- **Pricing:** Lower cost per MHz
- **Control:** Simplified web GUI
- **Expandability:** Massive FPGA processing power, can add features
- **Fidelity:** Same proven features and high fidelity