



REAL-TIME THREAT PROTECTION FOR INCREASED NETWORK RESILIENCE

DYNAMIC OPTIMIZER FOR RESILIENT SATCOM (DORS)

- ✓ Detects, characterizes, and mitigates SATCOM threats: Weather; Interference
- ✓ Operational controls to maximize capacity, and reliability
- ✓ Dynamic resource planning
- ✓ Detects, characterizes, and suppresses jammers and other interferers
- ✓ Real-time rain/atmospheric fade detection & mitigation
- ✓ Live feedback to Kythera Operating System (KOS) to improve performance

DYNAMIC INTERFERER/JAMMER MITIGATION & SUPPRESSION	INTERFERER/JAMMER GEOLOCATION	INTERFERENCE NULLING
SPECTRAL REPLANNING	WEATHER CHARACTERIZATION & MITIGATION	COORDINATE GATEWAY HANDOVERS
DYNAMIC DOWNLINK POWER CONTROL	ADAPTIVE DBS BEAM SHAPING	INTEGRATES WITH PROS & KOS

AUTONOMOUS THREAT MANAGEMENT

- ✓ Continuously monitors and mitigates environmental threats
- ✓ Automated Interference Mitigation System (AIMS)
- ✓ Dynamic Rain Protection System (DRPS)
- ✓ Interfaces with PROS and KOS

3 STEP PROCESS

- ✓ Step 1: Detect Threat
 - Weather, Interference
- ✓ Step 2: Characterize Threat
 - Where: Probable locations
 - When: Now, next minute / hour / day
 - How Severe: Impact
- ✓ Step 3: Neutralize Threat
 - Maximize performance & capacity
 - Optimize beam/power/frequency plan
 - Orchestrate satellite & ground systems
 - Direct gateway handovers

ADVANCED CAPABILITIES FOR BEAMFORMING SATELLITES

- ✓ Dynamically shape DBS beam
 - Respond to changing weather
 - Save power
 - Improve DBS performance
- ✓ Automated nulling of interferers/jammers
 - Create beam nulls over jammers to suppress interference

