IOT Systems, LLC

Antenna Measurements
Verification and Calibration

Antenna Measurements

IOT Systems offers unique expertise in characterization and measurement of L, S, C, X, and Ku-Band antenna systems for earth station and satellite applications. The antenna group at IOT Systems is well positioned to handle complex antenna design and analysis tasks, as well as support accurate measurements of antenna reflectors and feeds at Ka-band and higher frequencies, in support of future broadband communications systems. The group continues to make improvements in antenna measurements, analysis and synthesis techniques and develops state-of-the-art antenna feeds and reflector designs.

Areas of Expertise Include:

- ♦ Earth Station Antenna Retrofits
- ♦ Feed Systems Evaluations
- ♦ Antenna Characterization and Verification
- ♦ Automated Antenna Measurement Software
- ♦ Radio-star Calibration
- ♦ Small Satellite Earth Terminals
- ♦ Antenna Type Approval Technical Consulting Support
- ♦ Antenna Type Approval Testing Services

Measurement Facilities

IOT Systems' test and measurement facilities are configured to cover all commercial and military satellite frequency bands in use today. Upgrades are ongoing to keep up with the ever-increasing frequencies being allocated for future satellite communications.

Facilities and Services:

- ♦ Outdoor Farfield Range
- ♦ Earth Station Antenna Certification Testing
- ♦ Type Approval Testing

Contact Us:
IOT Systems, LLC
22300 COMSAT Drive
Clarksburg, MD 20871
Phone: (301) 428-4467
Email: contact@iotsystems.com
Web: http://www.iotsystems.com

IOT Systems, LLC is a complete satellite services company continuing the mission begun over 40 years ago with the launch of Early Bird: fostering the growth of the commercial communications satellite industry.

IOT Systems, LLC®

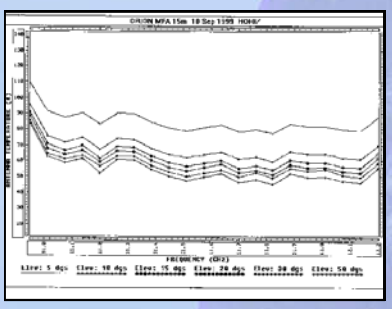
Antenna Measurements

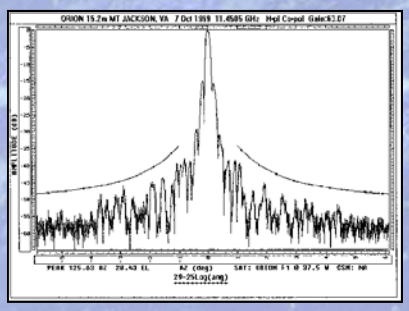
Automated Antenna Measurement Techniques

IOT Systems as the Microwave Lab at COMSAT developed automated user-friendly software driven techniques for antenna measurements that reduce the test time, facilitate more accurate and complete measurements, and lower the overall testing costs. The antenna verification systems use PCs for controlling microwave measurement equipment, performing data reduction, and immediately displaying the results. The automated measurements and built-in processing allow for more complete and accurate antenna evaluations.

Features:

- ♦ Co-Pol and Cross-Pol Antenna Radiation Patterns
- ♦ Gain by Pattern Integration
- ♦ Cross-Pol Isolation Contours
- ♦ System Noise Temperature
- ♦ G/T Calibration
- ♦ EIRP Stability Test
- ♦ Radio-Star Gain Measurement Test Routine
- ♦ Radio-Star and Satellite Ephemeris





On-Site Antenna Measurements and Retrofits

IOT Systems provides a wide variety of services for earth station facilities around the globe. These include antenna verification measurements for approval to access satellite systems such as INTELSAT, AsiaSat, Inmarsat and EUTELSAT, to on-site antenna troubleshooting and feed retrofits. IOT Systems also offers expertise in antenna type approval consulting and measurement services at our own facility or on-site for antenna manufacturers. IOT Systems has measured over 70 antennas since 2002.

Services:

- ♦ Earth Station Antenna Certification Testing
- ♦ Type-Approval Testing
- ♦ Efficient On-Site Measurements
- ♦ Feed Assembly and Component Retrofits
- ♦ Access to Precision Fabrication Facilities
- ♦ Antenna measurements made with IOT Systems' proprietary antenna measurement software.

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