



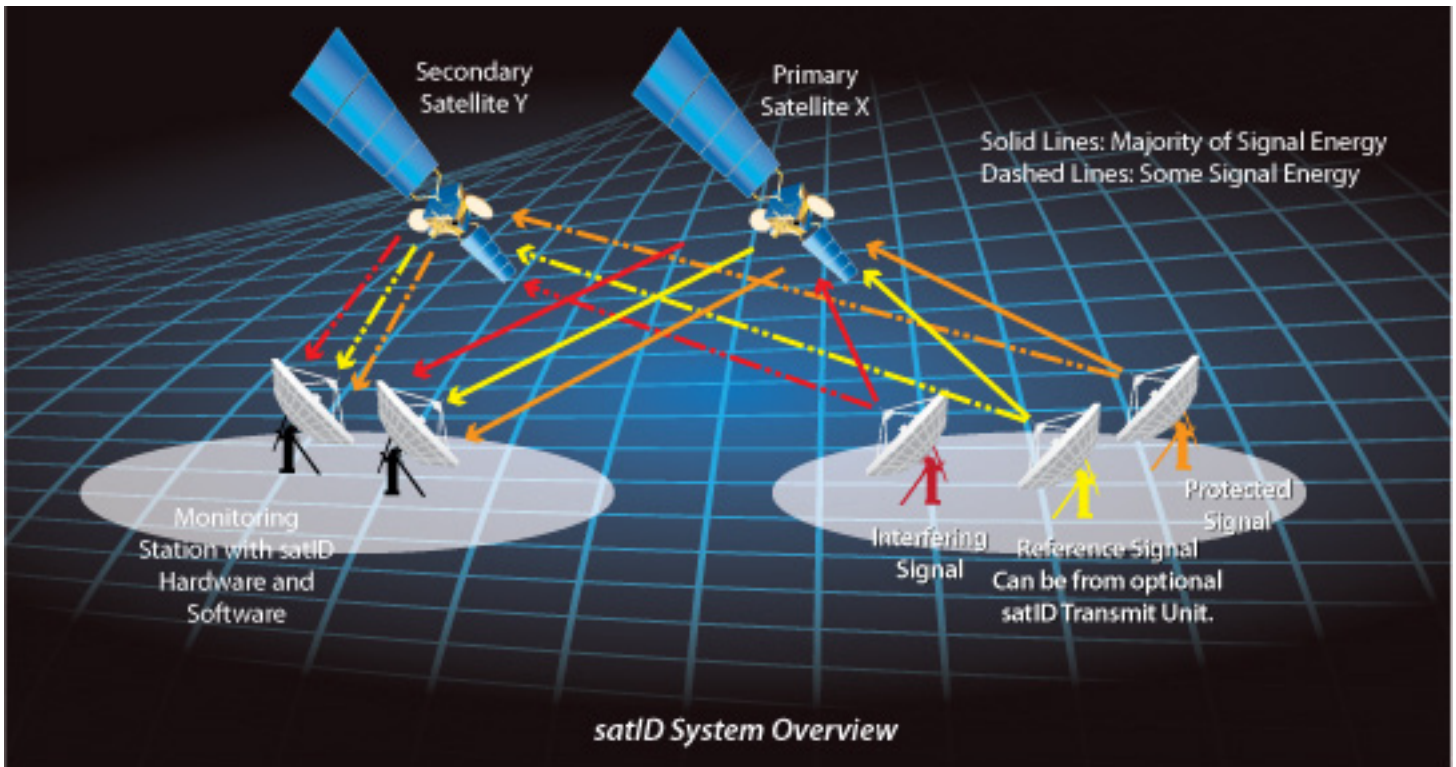
SIGNAL GEOLOCATION SYSTEM

OVERVIEW

The satID® Geolocation System is an accurate, fast, all-in-one solution for locating ground-to-satellite transmission sources. Powerful, flexible, and modular, satID uniquely blends complex science and algorithms with sophisticated hardware and DSP processing, resulting in an easy-to-use package for locating and identifying sources of interference due to equipment failure, operator error, and intentional jamming, as well as unauthorized users.

OPERATION

Due to a variety of practical antenna and transmitter characteristics, a protected signal sent to satellite X is often received at extremely low power levels by nearby satellite Y. Similarly, reference signals from known locations and interfering signals (accidental or intentional) aimed at satellite X can also be received at satellite Y. As a result, downlinks from satellites X and Y often carry the protected, reference, and interfering signals. Utilizing sophisticated signal analysis and DSP capabilities, along with advanced Cross Ambiguity Functions (CAF), satID precisely correlates all received signals to

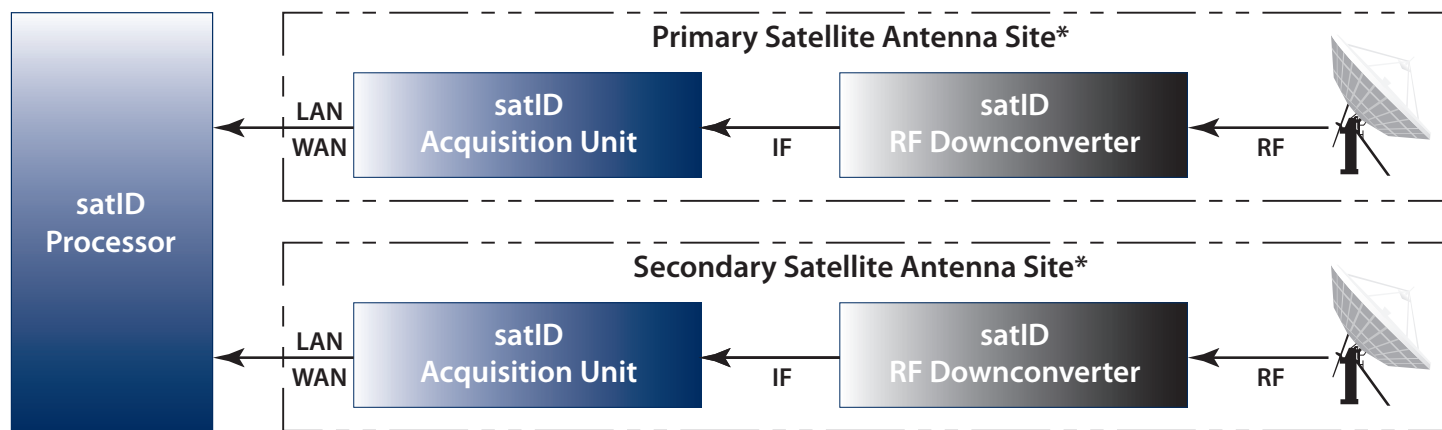


accurately determine Differential Time Offset (DTO) and Differential Frequency Offset (DFO) information for each. DTO and DFO information is then processed to determine the estimated ground location of the interfering signal, as well as a high confidence ellipse encompassing any uncertainties in the results. Geolocation uncertainties are minimized by satID's proven Precision Location, Ephemeris Error Compensation™, Phase Correction, and Satellite Motion Compensation capabilities.

The satID system requires two antennas, one aimed at a primary satellite and the other at a nearby secondary satellite. The distributed processing architecture of satID enables colocated or geographically separated antenna sites. Existing signal sources at known locations can be used as reference signals, or satID Transmit Units can generate them. Geolocation precision improves as reference signals geographically closer to the interfering signals are used.

SYSTEM ARCHITECTURE

The satID Core Software is hosted on a conventional Windows XP PC platform. This PC is connected by Ethernet to RT Logic satID Signal Acquisition and RF Downconverter hardware as shown below.



*satID supports colocated as well as split antenna sites.

OPTIONS

- Processing System (Required)
 - Core satID Software
 - Dell Server Class PC
 - GPS Receiver
 - Ethernet Switch
 - Power Distribution Unit
 - 42U Equipment Rack
 - Monitor, Keyboard, And Mouse
 - One Year Standard Warranty
- Processing System Options
 - Accuracy Package
 - Advanced Signals Package
 - Data Management And Networks Package
 - Frequency Band Package
 - Spectrum Analyzer Package
 - GPS SASSM Receiver Upgrade
 - UPS
- Acquisition Units (Required)
 - L-Band to IF, Single Antenna Site
 - L-Band to IF, Dual Antenna Site
- Downconversion Units (Optional)
 - C-Band to L-Band, Single Antenna Site
 - C-Band to L-Band, Dual Antenna Site
 - Ku-Band to L-Band, Single Antenna Site
 - Ku-Band to L-Band, Dual Antenna Site
 - X-Band to L-Band, Single Antenna Site
 - X-Band to L-Band, Dual Antenna Site
 - UHF-Band, Single Antenna Site
 - UHF-Band, Dual Antenna Site
- Transmit Unit (Optional)
 - With satID Ranging Function
 - Without satID Ranging Function

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