SkyMon

VSAT

Fully integrated VSAT monitoring and geolocation solution that closes the last gap to resolve satellite interference. Identify and manage interference with one comprehensive system.

The satellite industry is extremely successful in providing internet connectivity in areas, where terrestrial communication infrastructure is too weak or even not available at all. New mega-constellations such as OneWeb will cover the whole world with internet connectivity, including the polar regions. The number of users will grow along with the number of satellites in orbit, as VSAT (Very Small Aperture Terminal) technology is an affordable, effective alternative to terrestrial communication for remote internet access anywhere in the world.

However, satellite interference caused by poorly installed VSAT stations already account for 40% of all interference cases – a very serious issue. Several hundreds of these events are recorded every year, a number likely to grow as traffic increases and VSAT networks become more prevalent. While most of these incidents may be accidental, the risk of intentional interference is growing as VSAT equipment and technological information become more widely available.

SkyMon VSAT allows satellite operators to monitor, identify and resolve satellite interferences originating from VSAT systems. Due to the nature of the communication technology (TDMA) used by VSAT systems, identifying and localizing interference-causing VSAT stations is often very complex and time-consuming. SkyMon VSAT solves this issue with two products that are fully integrated in the SkyMon Suite:

SkyMon VSAT Monitoring analyzes and classifies the surrounding VSAT elements. It provides an overview of the hierarchy in a given VSAT network, showing all active terminals along with their metadata, including the terminal-ID. SkyMon VSAT Monitoring identifies the VSAT terminals that are causing interference. For those terminals, it provides a list of terminal-IDs (unique VSAT station identifier) along with their measured cross- polarization isolation and adjacent satellite interference.

SkyMon VSAT Geolocation determines the geographical position of a given VSAT station by building on the geolocation functionality of SkyMon ILS (Interference Localization System). It shows the physical location of VSAT terminals on a map. The display can be filtered by specific VSAT terminals, by interfering terminals, or by showing all active terminals in a given VSAT network.

SkyMon VSAT supports the most common VSAT equipment

Supported VSAT standards:
 - DVB-RCS / DVB-RCS2

Supported VSAT technologies:
 - iDirect Evolution 3.1 and 3.2
 - Hughes IPoS A and IPoS B

Other VSAT technologies will be available on demand.

Atos

SkyMon VSAT is the latest member in the market-leading Atos SkyMon product Suite, a highly comprehensive toolset to effectively mitigate satellite interference. The SkyMon product Suite consists of the following modules:

- SkyMon ILS – traditional interference localization system working with two adjacent satellites
- SkyMon ILS ONE – the world's first and only operational single-satellite geolocation system
- SkyMon TIS – terrestrial interference scanner to identify and locate interferences caused by terrestrial mobile communication networks
- SkyMon CID – identification of the DVB Carrier ID
- SkyMon VSAT – monitoring, identification and geolocation of interfering VSAT terminals
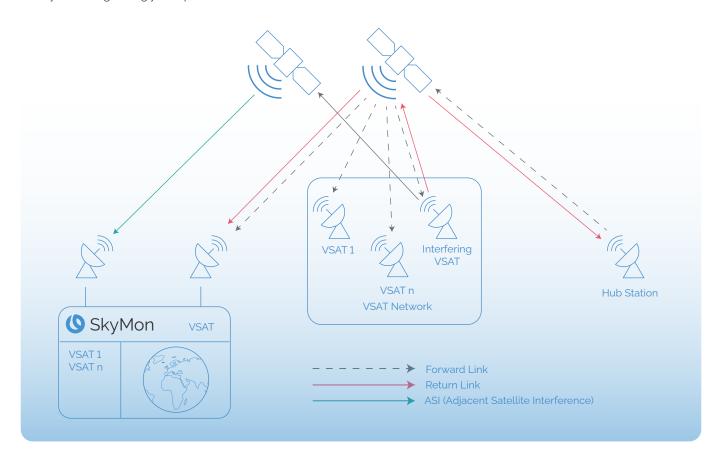- SkyMon HTS - spot beam monitoring system for high throughput satellites

With the SkyMon product Suite, you can take quick action to restore signal quality to the levels your customers have come to expect from you, saving both time and money and strengthening your reputation.

Benefits at a glance

- Classification of VSAT network
- Automatic identification of TDMA carriers
- Demodulation of TDMA carriers
- Overview of the identified VSAT networks, including all active terminals
- Monitoring of cross-pol and adjacent satellite interference for each active terminal
- Creation of a list of terminal-IDs causing interference
- Geographical location of VSAT terminals on a map

Summary

SkyMon VSAT is a comprehensive solution to combat interferences originating from VSAT networks. SkyMon VSAT classifies the VSAT network, then monitors and identifies crosspol and adjacent satellite interference for each active terminal. After the identification of a given terminal causing interference, SkyMon ILS can be used to determine its geographical position on a map.
The SkyMon VSAT supports DVB-RCS(2), iDirect, Hughes IPoS and other technologies which can be ordered on demand.

VSAT 1

Interfering VSAT

VSAT n

VSAT Network

Hub Station

SkyMon   VSAT

VSAT 1
VSAT n

- - - - - ▸ Forward Link
───────▸ Return Link
───────▸ ASI (Adjacent Satellite Interference)