SkyMon

VSAT

Fully integrated VSAT monitoring and geolocation solution that closes the last gap to resolve satellite interference.

The satellite communication industry aims to provide internet connectivity in areas where terrestrial communication infrastructure is too weak or not available at all. New mega-constellations such as OneWeb are poised to provide global internet coverage, even over polar regions.

The number of users will grow, along with the number of satellites in orbit, as Very Small Aperture Terminal (VSAT) technology becomes 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 accounts for 40% of all interference cases – a very serious issue.

Several hundreds of these events are recorded every year — a number that is 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 will grow as VSAT equipment and technological information become more widely available.

SkyMon VSAT allows satellite operators **to monitor, identify** and **resolve** satellite interference 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 VSAT networks. It provides an overview of the hierarchy in a VSAT network, showing all active terminals identified by their terminal-ID. SkyMon VSAT Monitoring provides a list of VSAT terminals that are causing interference, either by cross-polarization or due to adjacent satellite interference (ASI).

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

Atos

Automated geolocation

Geolocation is not an easy task and requires experienced operators to achieve accurate results.

SkyMon VSAT has automated the entire process, which includes:

· Selecting an appropriate adjacent satellite
· Selecting the right reference carriers
· Correctly adjusting acquisition time, search ranges and more

Several use cases are supported, such as:

· Geolocation of one or multiple gateways
· Geolocation of one or multiple VSAT terminals
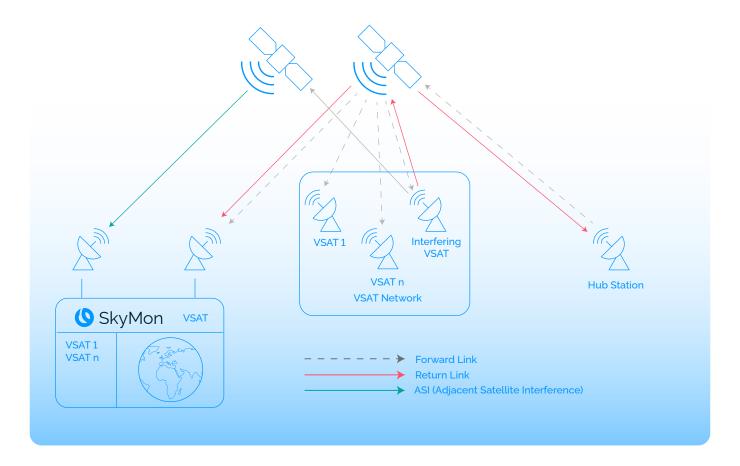· Geolocation of targets in a given geographical area

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 polarization and adjacent satellite interference for each active terminal
· Creation of a list of terminal-IDs causing interference
· Geolocation of VSAT terminals on a map

Supported standards and technologies

SkyMon VSAT **supports the most common VSAT technologies,** such as from **iDirect, Hughes, Inmarsat, Advantech, Gilat** and others.

A detailed list can be provided on request.

- - - - → Forward Link
———→ Return Link
———→ ASI (Adjacent Satellite Interference)