

Interference still poses the biggest threat

Interference is one the biggest threats posed to satellite operators and service providers today, however, technology companies like VeriSat are taking an active role to reduce its impact. Founded in 2002, VeriSat only recently began to optimise its solutions for the satellite industry, yet now it offers a market-leading solution for VSAT interference. Amy Saunders spoke with Petter Amundsen, Founder and Managing Director of VeriSat, to find out more about the company’s products and services, and the threat that interference poses to the satellite industry as a whole.

Question: Can you provide a brief overview of the founding and development of VeriSat to where it stands today?

Petter Amundsen: VeriSat was founded in 2002 and has been active in the satellite industry for a number of years, initially providing leading DVB-RCS test solutions which later evolved to include solutions for proprietary VSAT technologies. In 2014 we were approached by SES to help solve VSAT interference, a problem we were until that discussion unfamiliar with. We then realised quickly that our technology was well suited and could be evolved to solve the challenges of VSAT interference. In the autumn of 2015 we launched a prototype of SatGuard, which since then has become a

recognised, proven solution for combatting VSAT interference.

Question: What products and services does VeriSat provide, and how do these complement the satellite sector?

Petter Amundsen: VeriSat started with a focus on interactive open standard VSAT technology and has developed a full portfolio of solutions for analysis, emulation, and monitoring of DVB-RCS, DVB-RCS2 and DVB-S/S2 forward and return links. VeriSat provided the test bed that was used by the SatLabs group to certify interoperable DVB-RCS terminals.

SatGuard was launched as a commercial product in 2015. SatGuard is a novel, patent-pending solution for

identifying VSAT terminals causing crosspolar or adjacent satellite interference. It detects the individual bursts from terminals causing interference, and determines the unique terminal identifier (terminal ID), enabling the satellite operator to take the necessary actions to resolve the interference. SatGuard has reduced the time to resolve VSAT interference from hours, days, weeks, or even months, to a matter of minutes. SatGuard has been verified by several satellite operators as a very useful tool, and we believe it is changing how the industry deals with VSAT interference.

We have also developed a user-friendly solution to determine GSM base station location by decoding the GSM interference and extracting the country ID and unique cell ID. The VeriSat solution can perform this extraction down to an SNR level of 2 dB, which is significantly lower than offered by more traditional solutions.

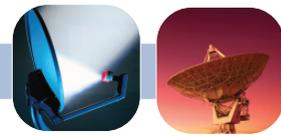
DiCE is a cost-effective digital satellite propagation delay emulator. It introduces the configured propagation delay in the RF channel, supporting up to 40 MHz bandwidth with multicarrier configuration of continuous and burst (TDMA) channels.

Question: How big a part does collaboration with satellite operators or organisations like the IRG have to play in VeriSat’s business?

Petter Amundsen: VeriSat has since it was started been actively involved in industry organisations. VeriSat participated actively in the SatLabs Group working with interoperability of DVB-RCS terminals.

After being approached by SES, and learning about the challenges of VSAT interference, it was a natural choice to join IRG as the organisation founded by the industry to work on resolving and reducing satellite interference. SES and IRG have been crucial in helping us reach and interact with the right target audience and allowing us to understand the challenges faced by the industry. Providing an environment and meeting place where experience and knowledge about interference can be shared, is helping manufacturers such as VeriSat to understand the challenges and interact with customers allowing us to better understand the challenges and find solutions to issues being faced.

Collaboration is vital in any industry. Working closely with SES the past two years, and also doing demonstrations



Petter Amundsen, Founder and Managing Director of VeriSat

and tests with several other satellite operators, we have been able to understand the challenges they are facing on a day-to-day basis, which has enabled us to improve SatGuard to meet those challenges. It gives us great satisfaction to see how SatGuard enables the users to quickly solve VSAT interference problems.

Question: In 2016, VeriSat was named 'Technology Company of the Year' at the Via Satellite Excellence awards. Care to comment?

Petter Amundsen: We were extremely honoured to get that recognition earlier this year. It has been an exceptional year and the industry response to our new solutions has been overwhelming. The judges were extremely complimentary about the development of SatGuard and the difference it is already having in the fight against satellite interference. We are really proud of what we have achieved so far.

Question: Later in 2016, VeriSat launched its new Satellite Software Radio PCIe board. How does this improve upon other products on the market?

Petter Amundsen: Our motivation has been to develop a solution suitable for integration in a server that is cost-effective. There are a number of RF digitizer solutions in the market, but in our opinion, none of these suited our needs with respect to either cost or functionality.

Question: What is the biggest challenge faced by the satellite industry today in terms of

interference, and how might it be resolved?

Petter Amundsen: VSAT interference has for many years been reported as the most challenging type of satellite interference. VSATs are responsible for the largest amount of downtime due to interference. SatGuard is the key to resolving it as it speeds up identification drastically, enabling operators to resolve interference in a matter of minutes. SatGuard changes this. It is a paradigm shift in combatting VSAT interference. We believe that SatGuard will change operator's view on VSAT interference. We will evolve the SatGuard technology from being currently mainly a troubleshooting tool to become a monitoring tool for policing TDMA space segment the same way that other services are policed by satellite operators. Another very interesting feature of this technology is that it enables geolocation of VSAT terminals also of large VSAT networks which previously has not been possible.

This has several interesting application areas.

Question: What's on the horizon for VeriSat in 2017 and beyond?

Petter Amundsen: VeriSat plans to continue developing SatGuard as a troubleshooting tool for VSAT interference, as well as evolving SatGuard to also be a useful tool to monitor and police TDMA space segment in general. It is well suited to assist verification of the antenna pointing and installation. We believe SatGuard will become a useful, everyday tool for most satellite operators to manage and monitor their TDMA space segment. I think we have only seen the beginning, and that the ability to now police and monitor TDMA space segment will result in a strong reduction of VSAT interference as a cause of service interruption. By proactive monitoring, VSAT interference can be stopped very quickly after it occurs. ■

