

THE CASE OF THE ERRANT NETWORK: A GVF AUDIT

In a unique audit, professionals representing the Global VSAT Forum (GVF) audited a satellite-based installation spread over more than 25 countries in Africa and brought the client and the service provider to arrive at a mutually-agreed solution. Riaz Lamak, consultant with GVF and president, Mahdi Bagh Computers Pvt Ltd, India, gives us a first-person account of this unique case-study



What was the satcom problem and how did the GVF get involved?

Both the satellite capacity provider and the network operator or service provider are GVF members. The connectivity was offered to a customer whose operations are spread across more than 25 nations in Africa with a head office in a city in Africa. The teleport was located in a different continent and the Network Operations Centre (NOC) was in a third continent.

The client approached the GVF requesting for an assessment, saying that the network was not performing and needed advice, to ensure optimum performance and utilisation. I cited my own auditing experience in the state of Gujarat, India, where we assessed a network and recommended changes to the service provider – the approach being collaborative rather than confrontational.

Describe the initial groundwork carried out by your team.

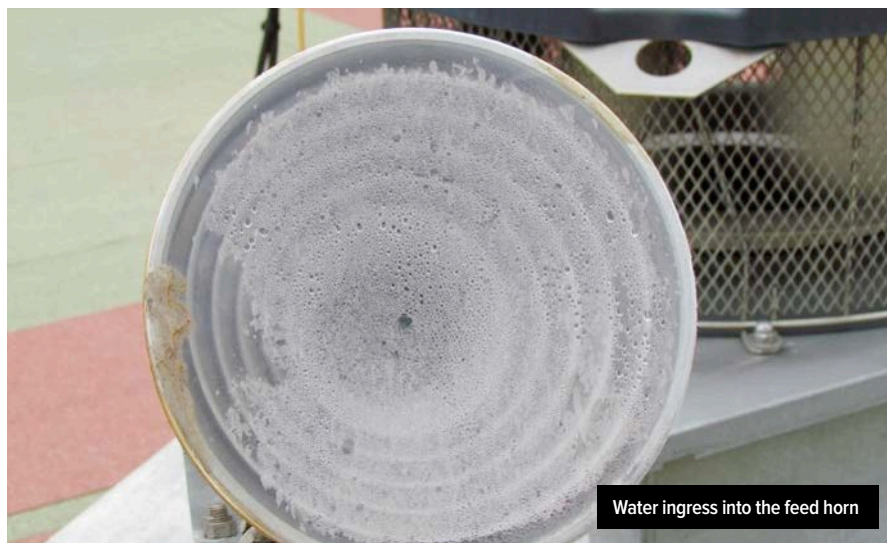
As a pilot project, we decided to evaluate the network. The three-member GVF team won the bid. Other than me for field and project coordination, along with field engineers, we had an RF specialist and an expert on that particular platform. The overall assignment was spearheaded by the secretary general of the GVF.

In October 2011, we met with the client and studied the problem from their point of view. We asked them for the original RFP that was floated to the service provider, the offer made by the provider, the order that was released and what was delivered. We also delved into how the demand for applications from the client's side has evolved over the five-year period of the contract. After the three-day meeting, we embarked on the gap analysis. We tested the network, the ping response and studied the spectrum analyser at different places, among other tasks.

We then approached the service provider, checked the Network Management System (NMS) logs and got their overall assessment of the problem at hand.

How exhaustive was the physical evaluation of the network and what interference-causing problems did you encounter?

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We travelled to 10 countries out of the all the countries the client was operating from. These sites were selected by the client as the ones that posed the most problems in terms of frequent outages. I had a team of four engineers from my office – each of them being well experienced and GVF certified. We physically checked each of the sites, took photographs, and tested all the parameters including time delays, ping response, peaking, quality of installation, quality of material used, connectors (whether they are properly installed and maintained), whether the local service provider has the skill-sets to do the job and the availability of power.

Availability of power was crucial because in many countries across the African continent, the irregular nature of the power supply can

cause problems in service. Also considering the interference issues, the satellite operator in turn was losing revenue as well.

Describe some of the causes of the interference issues that your team detected.

In some sites, we found the power supply unreliable. In one site, the feed horn and air conditioning duct were just one feet apart. The electric disturbances were creating interferences and disrupting the link. There was a cell site located near one of the VSATs – the moment it started transmission there was interference. One of the places, the IFL-RF cable was cut and joined as if it was an electrical cable, so there was a lot of interference.

In one place, birds had damaged the feed horn, so moisture had entered, causing problems. In one place, we discovered a generator that was causing the interference – the generator had apparently been installed long after the antenna had been installed – so when we physically inspected the site, we discovered the cause of interference.

We visited the most challenging countries. I personally travelled to five of these places along with an engineer. We did not just take the readings; we took screen shots, photographs, recorded all parameters so that later, our findings will not be disputed.

Other than site visits, what else did your audit entail?

To get a complete picture, we studied the link budget provided by the satellite capacity provider and benchmarked the actual service being offered. Service providers are often mistakenly blamed for everything that goes wrong. For example in one country, it took three months for the customs department to clear the spares. What can the service provider do? It is not possible to maintain multiple sets of equipment there. In some places, the skill sets of the local support partner of the service provider was very poor.

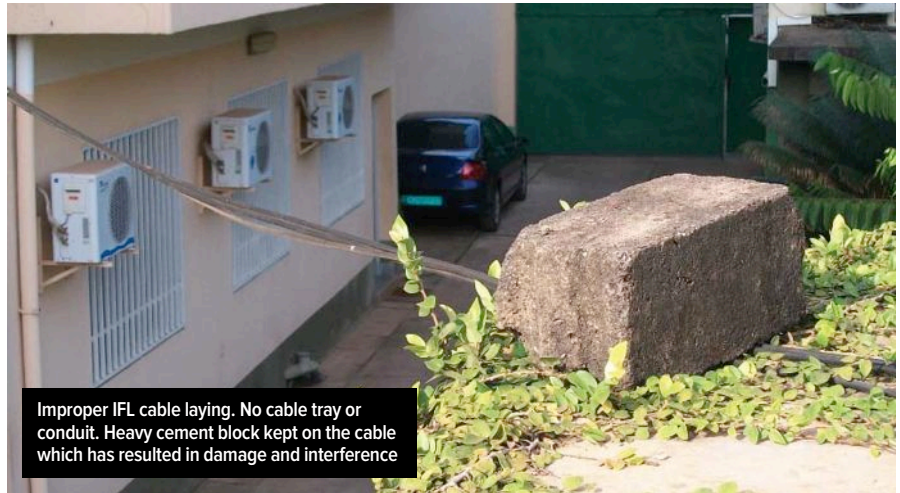
With just one link in a country, it is not viable for the service provider to station an engineer, making the provider dependent on local support. We also visited the NOC and studied the network management system and complaint resolution process.

What were the recommendations of the audit team?

While we physically studied 10 sites, we evaluated the parameters in each of the other sites and compiled a 15-page summary of findings. We requested for a meeting between the customer and service provider, along with the GVF team, we spent a whole day going over the findings.

Among our recommendations to improve the stability of the links, we suggested installing a remote pointing antenna in the site where bringing in spares was time-consuming. In places where power outages were taking places, we suggested the installing of a power conditioning and backup system.

We also encountered another disconnect between what the service provider had been contracted for five years ago and what the client wanted currently. While the client had moved from using a data link to wanting video conferencing, the piecemeal upgrades could not cope with the need for extra bandwidth. The client had the latest in terms



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of video conferencing facilities and though the bandwidth was available, prioritisation was lacking and it caused problems such as image freezing.

Among the other recommendations was prioritisation of networks, increasing the bandwidth, electrical grounding in certain places and so on. In addition, we suggested the setting up of a virtual NOC in the client’s headquarters where they could monitor the traffic and bandwidth. This was to build mutual confidence between the service provider and client.

What specific remedial steps were decided upon at the meeting?

The minutes of the meeting were taken and the senior management representing the service provider took the initiative to create a three-month timetable for remedial action. I recently spoke with the client and was told that certain sites have already started performing well. The virtual NOC is in the process of being set up.

The client has suggested that for the second phase, after six months, we would go in and check the performance of the sites. It was decided that a bimonthly conference

call would take place between the service provider and the client.

You describe the outcome as a win-win situation for the client and provider. How is that so?

The report and consequent meeting between client and service provider opened the door for upgrades – the service provider was able to propose some of their latest products that would use bandwidth efficiently. For instance, at one of the places, we suggested that they have a bigger antenna installed because the satellite footprint was weak.

During the meeting with the client and service provider, each aspect of the report was debated. The process was very helpful for all parties involved. Over the five years of the contract, the service provider had responded to the client, but the approach was problem-centric and understandably, it was piecemeal in nature. With the collaborative approach adopted by GVF, the process turned out to be a win-win situation for all parties.

Finally a detailed consolidated report of more than 150 pages comprising of the findings and recommendations along with the minutes of the meeting was submitted, which was highly appreciated. **PRO**