



Eutelsat to replace the automatic base band monitoring of their satellite communication systems

Maintaining excellent QoS levels

With an ambitious quality assurance project, Eutelsat, the world's third largest satellite operator, is going to replace the existing monitoring system and document the quality of their services around the clock, 24x7. „The SQA platform will supply us with solid and dependable QoS data for internal purposes and also for the use by our clients“, says project manager Georgios Anagnostou. Important parts of the project, the L-band signal distribution components, will be delivered by the German RF specialists DEV Systemtechnik, some of them developed specifically for the SQA project.

„SQA“ stands for „Service Quality Assurance“. Primarily, it is a software platform for controlling and monitoring measurement hardware as well as displaying and storing the measurement results, explains Anagnostou. Moreover, the SQA platform acts as an interface between the systems in operation and Eutelsat's network management system, delivered by Skyline Communications of Belgium. Main purpose of the platform is to measure and provide trend graphs based on the data returned by Professional Decoders (IRD), and DVB analyzers. As a result, at any given time the SQA platform can provide all the needed information concerning Bit Error Ratio (BER) Eb/No, bandwidth usage of the carrier, and service oriented data (encryption, Transport Stream ID, etc).

Up to now the project stands for eight months work of five experts from Eutelsat und Skyline, i.e. 40 man-months.

DEV Systemtechnik's role in the SQA project is to deliver components for the RF signal distribution.

Large cable head-ends and satellite ground stations need to receive and forward signals from multiple satellites. The receivers require either only one of the four L-band signals per satellite or any combination of them.

Within 4RU, the Signal Distribution System DEV 2180 accommodates up to 3 power supplies and 16 amplifiers at the front side. The splitters and/or matrix switches are at the rear side. Each Chassis allows for 16, 32, 48 or 64 outputs– if desired with mixed impedances (50 or 75 Ohm) for inputs and outputs. Optical inputs are available as an option.



Switching and routing signal streams

Only a short time ago, DEV Systemtechnik thoroughly re-designed its L-band Signal Distribution System DEV 2180, equipping the next appliance generation with a controller and SNMP/Ethernet interface as well as hot-pluggable amplifiers as a standard which can be upgraded without interruption of operations. The new architecture is space-saving: 16 amplifiers (instead of 12 before) can be housed in one chassis.



The new DEV 2180 allows for easy adjustment of variable gain and RF thresholds as well as LNB-bias current via SNMP or Web Interface. The variable tilt functionality for extended L-Band ensures a constant signal level within the entire frequency range – an essential feature for high-availability applications such as the SQA project with its 24x7, 100 per cent availability, stresses Anagnostou.

Specifically for the Eutelsat SQA project, DEV Systemtechnik developed a new family of L-band multiplexers/demultiplexers. The appliances switch multiple inputs to one output (mux), or route a signal to different destinations (demux). They fit in a very small form factor, affording significantly less rack space than competitive products. As usual with DEV products, they come off the shelf with a lot of valuable standard features like SNMP protocol, web interface, redundant power supplies, and more, that other vendors offer as an option only. Models DEV 1248 (4*8:1), DEV 12416 (4*16:1) und DEV 12232 (2*32:1) are available for 50 and 75 ohms systems. They can be monitored and controlled via the user-friendly web interface and include protocols like SNMP, Sandar Prosan, and Leitch, using the interfaces Ethernet/RJ45, RS232 (RS422/RS485 as an option)/D-Sub-9. Energy monitoring alarms if one or both power supplies fail to deliver secondary power. The mux/demuxes are housed in a form factor of 3RU rack units only.

Short Delivery time, quality products for competitive prices

Anagnostou comments the co-operation with DEV Systemtechnik very positive. „DEV was able to deliver the equipment in a very short amount of time and at competitive prices. Also, we appreciated the interest showed at the project, and the efforts made by DEV representatives. Moreover, I had the chance to test the equipment before purchasing it, assuring that the quality standards meet our demands. For SQA a 100 per cent availability is required. DEV can contribute to this by their 24x7 online support.“

Presently, the project is in transition from the test phase to the operating phase. Last modifications and bug fixes are made in Eutelsat's Rambouillet Teleport near Paris. Starting end of September 2009, the SQA platform will be deployed step by step to other Eutelsat and partner sites, until, so Anagnostou with pride, „all carriers in the Eutelsat fleet“ will use the tool.



Contact

DEV Systemtechnik GmbH & Co KG
Grüner Weg 4A
D-61169 Friedberg
Tel.: +49 (0) 6031 18999-0
Fax: +49 (0) 6031 18999-15
E-Mail: info@dev-systemtechnik.com

More Information:

www.dev-systemtechnik.com