

## **VSAT Applications Delivering Broadband Services in the Sudan**

When terrestrial networks fail to cope with the growing demand for low cost communication infrastructure, searching for alternatives becomes a vital issue. The VSAT (very small aperture terminal) technology emerges as a solution to fill in gaps where other technologies can not reach due to hindrances such as long distances and time and money consuming installation processes.

A VSAT network is a group of dispersed transmit/receive earth stations that use small antenna diameters and are capable of interacting with each other via satellite. It is mainly characterized by its cost-effective distance independent reliable services.

The presentation starts by exploring the current situation of internet access in the Sudan in terms of ISPs, technologies used, number of users etc. Then introducing the VSAT technology as possible solution and as a mean of delivering broadband services. Thereafter, the presentation analyzes the problems encountered with internet delivered via satellite systems and the different methods to overcome them.

Finally the presentation suggests benefiting from VSAT technology for solving major developmental problems that faces the Sudan and most of the Arab Region, such as educational problems in both general and higher education and teachers' qualification. The idea is to converge distance learning together with the conventional education for faster promotion of education level. Through this procedure, we can ensure fair distribution of the educational opportunities, experiences and resources which are concentrated in the capitals and hence obtaining more developed and stable rural areas by bridging the digital divide.

### **References:**

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- 4- Dennis Roddy, Satellite Communications, third edition, 2001.