

## Tachyon Networks Addresses Shell's Need for Reliability and Operational Security

### SECURE SATELLITE CONNECTIVITY FOR HARSH ENVIRONMENTS



#### BACKGROUND

Shell is a global group of energy and petrochemicals companies. With around 102,000 employees in more than 100 countries and territories, Shell helps to meet the world's growing demand for energy. There are four Shell companies in Nigeria contributing to the sustainable development of Nigeria's vast energy resources. The Shell Petroleum Development Company of Nigeria (SPDC) is one of the four companies that has been mainly responsible for exploration and production of oil and gas. Most of Shell's exploration and production activities are concentrated in the land, swamp and offshore (shallow and deep) provinces of the Niger Delta. Oil production from this location alone averages 1 million barrels per day.

Since 2005 the security situation in the Niger Delta has deteriorated. Heavily armed and well-organized gangs steal large volumes of crude oil worth millions of dollars per year, and invade oil and gas facilities in the delta, shutting down operations, kidnapping staff and sabotaging equipment including pipelines. Rival gangs and ethnic factions have clashed violently in several of the delta's towns. Barges take stolen oil to tankers waiting offshore for export.

The threat to people working in oil and gas operations in the delta remains high. In the last three years (2006 – 2008), gangs have kidnapped 133 SPDC employees and contractors (19 last year). Shell's priority is to keep its staff safe while continuing to work with the communities, federal, state and local governments, and other agencies in an effort to help restore peace in the Niger Delta.

# Secure Satellite for Harsh Environments

## THE CHALLENGE

Two critical issues facing Shell's communications network were connectivity reliability and operational security. At their remote drilling locations, Shell sought to minimize the number of IT employees managing and supporting the communication network. Therefore they required a highly reliable, ruggedized communications solution capable of withstanding the harshest environmental conditions. This outdoor terminal needed to function reliably during the severe wind, rain and temperature conditions common to the Niger Delta. Another key requirement was remote management and support—once again to reduce the number of IT personnel required in the field.

In a region typically known for C-band satellite networks, Shell sought a Ku-band solution because of its smaller antenna footprint. They believed that these smaller antennas would attract less attention and therefore be less likely to be stolen. However, these smaller Ku-band antennas also had to be reliable and capable of closing high performance satellite links within Nigeria's heavy rain region.

Shell was also seeking operational security and wanted to co-locate satellite hub infrastructure at their main data center in Port Harcourt, Nigeria. This would enable Shell to protect their communication equipment investment in a secure facility as well as ensure a direct and reliable terrestrial link to their main data center.

Finally Shell needed dedicated bandwidth for private satellite links between their hub infrastructure in Port Harcourt and their remote oil drilling locations. These secure links needed to meet Shell's stringent data and operational security requirements. In summary, Shell required an extremely reliable and secure satellite solution with dedicated infrastructure and networking links.

## THE SOLUTION & RESULTS

Tachyon Networks and its Nigerian-based partner, Shell Upland Consulting, provided a satellite communications solution that closely matched the following Shell Nigeria requirements:

**Ruggedized Outdoor Remote Terminal:** Tachyon's Remote Mobile Gateway (RMG) product was an ideal solution for Shell. The RMG terminal is capable of withstanding severe temperature ranges from  $-40^{\circ}\text{C}$  to  $+75^{\circ}\text{C}$ . The product is sealed, has no internal fans and prevents external air from compromising performance.

**Reliability:** Tachyon's RMG provides a best-in-breed routing solution through its fully and seamlessly integrated Cisco router. This provided Shell with advanced IP Services and interoperability through Cisco's proven IOS Software. Shell's familiarity with Cisco equipment and operating software facilitated a quick transition to the Tachyon solution.

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Remote Management and Support: Tachyon enjoys a well-earned reputation within the satellite industry for uncompromising network management and customer support. Our 24x7x365 technical support team is comprised of level 3 and 4 Network Operations Engineers. The existence of Tachyon's team of highly trained professionals enabled Shell to reduce their number of on-site IT personnel located in dangerous remote locations.

High Security: Tachyon's solution delivered to Shell Nigeria a private communications network including dedicated and secure satellite bandwidth. In addition dedicated infrastructure was provided to meet Shell's stringent security requirements. Tachyon deployed a dedicated satellite hub gateway at Shell's Port Harcourt Data Center, which provided a secure link to Shell's private and secure terrestrial network. Finally, Tachyon successfully partitioned their remote Network Management System (NMS) from Shell's private data network to provide complete separation of highly sensitive data.

In conclusion, Tachyon Networks and its partner, Shell Upland Consulting, were able to meet and exceed Shell Nigeria's stringent requirements for a ruggedized, secure and remotely managed communications solution. This solution successfully addressed Shell's most critical objectives and provided the connectivity reliability and operational security needed.

## **ABOUT TACHYON NETWORKS**

Tachyon Networks has operated more high-end enterprise applications, with more reliability, to more Fortune 500 companies, for longer than any other satellite & wireless operator. As an end-to-end communications solutions provider, we deliver the highest quality satellite service in the industry. Specializing in the Enterprise, Industrial and Government markets, Tachyon is the expert in customized satellite networking solutions for diverse & complex customer environments and applications. Our solutions are financially backed with Service Level Agreements that guarantee the highest levels of networking performance and availability (99.9%). Tachyon is the premier satellite solution for all your complex networking requirements.

## **FOR MORE INFORMATION PLEASE CONTACT**

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