

SpeedCast

Wherever You Are



Case Study: PNG LNG

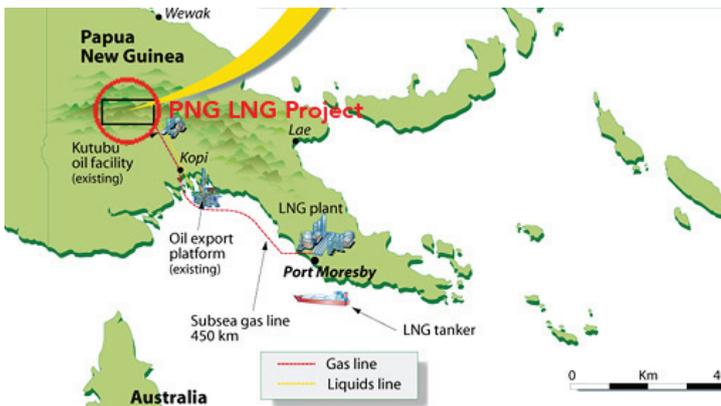
**Wireless Worker welfare
solution for a 9000 man
accommodation camp**

Background

The PNG LNG Project is an integrated development that includes gas production and processing facilities in the Southern Highlands and Western Provinces of Papua New Guinea, including liquefaction and storage facilities with capacity of 6.9 million tons per year.

With over 700 kilometres (450 miles) of pipelines connecting the facilities, PNG LNG will provide a long-term supply of Liquefied Natural Gas to four major LNG customers in the Asia region including: China Petroleum and Chemical Corporation (Sinopec), Osaka Gas Company Limited, The Tokyo Electric Power Company Inc., and Chinese Petroleum Corporation.

Esso Highlands Limited (Company), a subsidiary of ExxonMobil Corporation, is constructing and will operate the Project on behalf of the co-venturers – Oil Search Limited, NPCP, Santos, JX Nippon Oil & Gas Exploration, Mineral Resources Development Company and Petromin PNG Holdings Limited.



Challenge

Accommodation Camp B (pictured above) required a new communication system to respond to the welfare needs of 9000 workers residing at the premises of the LNG Plant. The staff needed fast internet connectivity for recreational purposes and reliable voice services to be able to communicate with their families.

The link had to be optimized in order to cope with the high-volume recreational traffic as well as allow bandwidth demanding applications such as Video Streaming and File Sharing to perform seamlessly across all user-owned devices.

Finally, the network design had to be rigid and simple with minimal hardware and maintenance costs and simple administration management.

Snapshot

Customer: PNG LNG Project

Industry: Liquefied Natural Gas

Requirements

New communication system to respond to the welfare needs of 9000 workers residing at the premises of the LNG Plant. The staff needed fast internet and reliable voice services to be able to communicate with their families.

Solution

Rural Tech developed and implemented a wireless solution which support voice calls via secure VoIP Payphones and internet services via the workers' personal devices and the internet cafe.

Utilising multiple bandwidth reserves and a carrier-grade platform, SpeedCast provided a 10Mb satellite link, while Rural Tech managed the complete systems installation and layout onsite.

Results

An efficient welfare network, optimised to be able to cope with bandwidth-demanding welfare traffic, leading to increased worker satisfaction and quality of life on site.

To address these unique requirements, a collaborative partnership was formed between a local communications supplier, Rural Tech Development and global satellite services provider, SpeedCast. The partnership combined local presence and expertise of Rural Tech Development who have already performed the majority of fibre optic splice and termination as well as OTDR tests and end-to-end certification at the PNG LNG plant site with the satellite expertise and global reach of SpeedCast, who operate seven welfare networks globally and has over thirty corporate-grade satellite links into remote PNG.

Solution

In late 2012, Rural Tech developed and implemented a wireless solution capable of providing uniform coverage across 1.2km² camp accommodation quarters. The solution was designed to support voice calls via secure VoIP Payphones and internet services via the workers' personal devices and the internet cafe.

Utilising multiple bandwidth reserves and a carrier-grade, cost efficient Newtec platform, SpeedCast provided a 10Mb satellite link, while Rural Tech managed the complete systems installation and layout onsite.

“Coverage penetration was and still is particularly challenging due to the geographical spread of the camp”, said Shahram Honarзад (Shaz), Technical Director at Rural Tech Development. “We didn't want to risk having poor and uneven coverage in certain areas, so we had to reconsider the original P2P system layout and add additional access points, where the coverage was particular poor – a system layout comparable to a multi-story hotel building”, added Mr Honarзад.



Unified Performance Management by Exinda

Exinda provide users with the best network experience possible by maximizing the speed and efficiency of applications over the network.

Exinda's unified performance management (UPM) solution brings together a suite of advanced, best-of-breed, visibility, traffic-shaping and WAN optimization technologies into a single, easy to-use appliance designed to improve network productivity.

Extending on the hotel network analogy, Rural Tech have developed a centralised management and billing system: every worker can purchase a pre-paid internet and VoIP card.

To ensure maximum efficiency and seamless operation, SpeedCast completed the project by integrating its value-adding services:

Bandwidth Acceleration: required due to the high-bandwidth nature of recreational traffic.

QoS: rules were applied to prioritise voice over data traffic and manage video and other application allowances.

Application filtering to limit video usage (as the highest bandwidth-consuming application) as well as DNS to block any offensive web pages.

Network Monitoring: an online portal provides scheduled and on-demand reporting on all aspects of the satellite network, including bandwidth usage and voice performance.

NX2700 Acceleration platform by Silver Peak

Silver-Peak Systems helps Companies 'Do More for Less' with their IT Infrastructure achieving better business outcomes. Widely installed in the world's most remote and unforgiving environments, Silver-Peak is first choice when it has to work and just keep working. Its widely used in Oil and Gas, Mining, Telco and ISP, Military, etc.

SpeedCast are fully certified Silver-Peak Engineers.



The NX-2700 is a 2U appliance that supports 10 Mbps of WAN bandwidth and includes 1TB of secure local data store in a resilient configuration. The NX-2700 is ideal for remote and branch offices.

Results

Complementing each other's assets, SpeedCast and Rural Tech Development met all customer expectations in designing a reliable, efficient and simple to operate welfare network. As a result, PNG LNG workers can now communicate with their families via various platforms including VoIP Phone, Skype, and Messenger and Social Media.

As for the PNG LNG project as a whole – it shall enjoy the following benefits:

- Increased worker quality of life
- Significant time savings in managing the new network due to centralised management
- Improved worker retention
- Improved overall business efficiency due to satisfied and therefore productive personnel

“Retaining quality personnel whilst sustaining costs are the two primary challenges our customers in the resource industry are faced with. The PNG LNG project was another opportunity for us to provide a responsive welfare network to address these challenges as well as strengthen our market position in PNG by providing a large-scale link into a remote location of the country”, said Nick Miller, Sales Manager of SpeedCast.

“I thank Rural Tech Development for their responsiveness and professionalism throughout. It was their expertise in the PNG LNG venture and local presence that made this project possible”, added Mr Miller.



Moving Forward

Throughout the multi-year deal SpeedCast will continue monitoring the existing network and provide recommendations and adjustments to the QoS rules and Acceleration technology to ensure link efficiency, maximize throughput and network uptime.