

Large Scale Rapidly Deployable Communications Infrastructure

THE NEED TO PROVIDE adequate communications for resource constructors and operators around the world is just one of the challenges facing companies operating in remote environments. Major resources companies need to attract and retain highly skilled and experienced personnel and this requirement is a main factor in the management of projects.

Increasingly, potential employees are assessing the facilities that will be provided on-site, and electing to work on the projects that meet not only their financial needs, but also meet their 'soft' needs.

There are many different ways employees can stay in touch with friends and family; through the use of social media, Skype or Facetime or telephony

services as well as the provision of other entertainment such as FM broadcast radio, free-to-air TV, pay-TV and Video on Demand (VOD).

The provision of these services is highly valued in terms of the recruitment and long-term retention of site personnel as they allow their employees and contractors to maintain their chosen life-balance. More importantly, it allows them to work on-site without the social isolation or cost penalties that the long distance traditionally imposes.

ITC Global has recently delivered a state of the art satellite communications system to the Bridgeman's Services Silja Europa floating accommodation vessel deployed off the North West Coast of Australia. Floating accommodations, also known as Floatels, offer an

alternative to land-based work camps, requiring minimal time to deploy and maximum flexibility as needs change.

The Europa Floatel is a 210 metre, former sea ferry that has been converted into single-occupancy rooms. With accommodation and services on 14 decks, the Floatel features 1400 single-guest rooms each with private en-suite, a 550-seat dining room, grab and go area, a lunch room, four lounges, 2322 square metres of meeting rooms, internet lounge, first aid room, exercise facilities, theatre, laundry room and accommodation for a 220 man crew.

Bridgeman's requirement to provide a suite of communications services included a wired network, multiple Wi-Fi networks and telephony. The vessel was originally fitted with some

communications distribution facilities including wired networking and PABX wiring. The project to provide the services for the Floatel was divided into several parts including the provision of ship network infrastructure and wireless systems and the provision by ITC Global of satellite data links and Voice over IP (VoIP) services.

The fit out of the vessel was undertaken in Estonia and Finland where ITC Global supplied two 2.4m Sea Tel antennas, satellite modems and other networking equipment. Working with local partners in these locations the primary C band antenna and a secondary C/Ku band antenna were installed and commissioned.

Based on the number of Floatel guests and their anticipated usage as well as the operational needs of the crew the

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link was required to provide a minimum of 40 Mbps down and 10 Mbps up. Until now the cost of providing such a high-speed data link into a 2.4m antenna on a vessel was prohibitive, but with the advent of high powered satellites and advanced signal processing in the latest generation satellite modems, ITC Global is able to deliver affordable wide-band services to sea mobile environments. In this instance a latest generation hub system was employed to deliver the service to Bridgeman's Floatel.

Similar wideband satellite networks operating into a 16m antenna at a Perth Teleport are used to provide robust C band services to other vessels and drilling rigs throughout South East Asia as well as into land based sites in the Pilbara.

ITC Global has been at the forefront of implementing technologically advanced satellite communications networks and services. In 2013 they received an award from the WAI'TTA for a satellite network provided to a client in the Pilbara.

Commenting on this, Mr. Chris Hill ITC Global CTO said: "ITC Global has seen marked growth in its satellite communication business in recent years, with its satellite installations now numbering in excess of 1,400 sites located throughout the world, primarily servicing remote mining,

oil and gas and maritime sites. Our satellite network offers users seamless and reliable coverage, no matter where they are in the world. More and more, we are being called on for both primary communications solutions and real-time, remote operations control systems; as part of a systemically diverse system that incorporates high availability satellite networks and terrestrial fibre-optic systems to achieve the demanding reliability that modern extractive industries require in order to safeguard production and general operations."

The past decade has seen rapid innovation in technologies related to the extractive industries, and ITC Global are very pleased to be able to design and deliver innovative satellite communications systems that enable the implementation of these technologies, and contribute towards the continuing advancement of the sector.

With that in mind ITC Global are planning to use NewSat's Jabiru-2 satellite, which was launched in September 2014. It was specifically designed for the resources sector and will help ITC Global to provide highly targeted Ku-band capacity services across Australia, Papua New Guinea, Timor Leste and the Solomon Islands. The unique design of the Jabiru platform and the advantageous location of the Perth teleport, will be a strategic benefit when serving the Asia Pacific.

"What we like about what we see on the Jabiru platform is that the EIRP and the G/T has been optimised not just for where there are population centres, but rather where there are mining projects and energy or oil and gas projects."

