

Northern Emirates Ultra Low Loss Optical Backbone Network – ‘du’ Emirates Integrated Telecommunication Company PJSC



On 16th of February, 2010, GBI – Gulf Bridge International – announced the signing of an agreement with UAE’s integrated telecom service provider - ‘du’. As part of this agreement du’ has landed GBI’s new submarine cable at its newly built Fujairah Cable Landing Station.

‘du’ (Emirates Integrated Telecommunications Company) is rapidly-growing enterprise. They offer fixed mobile telephony, broadband connectivity and IPTV services to individuals, homes and businesses, and carrier services for businesses and have 3.5 million customers.

THE PROJECT

The contract awarded to FOSS via a competitive tendering process included the installation and commissioning of an ultra-low loss optical backbone network in a resilient ring spanning over 570 km. The first phase of the project involved installing 120km of cable within a critical 6 week period.

This was the primary route between Academic City Dubai and the Fujairah Cable Landing Station. The cable route covered mountainous terrain and some parts of the installation involved aerial cable being strung between telegraph poles. This was due to the fact that the rocky ground prevented the installation of underground ducts.

The fibre optic cable route had to be installed along the service corridors of the Northern Emirates area (Masafi, Kalba, Al Fujairah, Khorfakkan, Dibba, Al Tuwayyain Rd., Al Manama Rd., Ras Al Khaimah, Emirates Rd., Umm Al Quwain, Ajman and Sharjah). The Backbone’s start and end points were in Dubai.

OVERVIEW

‘du’ Northern Emirates backbone project was a part of a cable system installation program, which will interconnect in the near future all the countries of the Gulf Region to the Europe India Gateway (EIG) which is the first direct, high-bandwidth optical-fibre undersea cable system from the United Kingdom to India. The EIG cable system is a 15,000 km international fibre optic submarine cable system that links 13 countries across Europe, Africa and Asia.

REQUIREMENTS

- Installation of 570km high fibre count (144 Fibres) telecom backbone ring.
- 70km of self-supporting aerial cable
- Singlemode ITU.G652D Fibre
- Interconnection of UAE fibre backbone to international networks
- Fast track 6 week installation of first phase
- Long distances requiring ultra low loss fibre and minimal splice loss

SOLUTION

- Detailed project planning and resource allocation to ensure achievement of critical installation timescales.
- Multiple installation teams working in parallel.
- High performance splicing ensuring minimal optical losses at splice and tap points.
- Mountainous terrain involving aerial installation of specific cable routes.

BENEFITS

- On time delivery of all critical project milestones.
- Backbone network provides connectivity into international carrier networks
- Enhanced resilience in du network and access to better international bandwidth.



GBI Regional Connectivity map

“It is a great pleasure to land and operate the GBI cable system in such an important country as UAE. The opportunity to partner with du will enable GBI to address the increased demand for international connectivity that is forecast for the UAE, as it continues to grow and diversify its business base”

Mr. Hamad Al Mannai

THE SOLUTION

The **first phase** had to be completed within six weeks and thus involved over 120 km of both duct and self-supporting aerial cable (144 fibres). The installation was particularly challenging due to the mountainous terrain that the cable route took. All local government and end user regulations had to be followed at all times.

THE RESULT

The period for the completion of the whole of the works (570 km ring) was 540 days from the commencement day. It provides connectivity to the ‘du’ Fujairah Landing Station, which acts as a ready access to international connectivity of UAE to other telecommunication operators networks. ‘du’ customers receive connectivity to global destinations. ‘du’ can serve their clients, and offer the full range of voice, data and internet services.

The new network will have the capability to meet the rapid growth in demand that has been forecast for traffic originating and terminating in Gulf.

‘du’ Northern Emirates Project adds strength to the existing facilities of ‘du’ and reinforces their position as a provider for international traffic into within and out of Middle East. Gulf Bridge International’s cable in its turn will add further resilience and diversity to their existing services, allowing them to offer better quality of service to ‘du’ customers and increase their reach in key market. As a result, UAE will benefit from greater connectivity and access to more capacity, that will further stimulate demand for newer bandwidth hungry services like cloud computing and outsourced services.

