



Execution Excellence

A DIMENSION DATA COMPANY

PLESSEY "PSA" SUCCESS STORY

Plessey becomes custodian of open access fibre for South Africa

Eleven regeneration sites along the DFA fibre optic link from Empangeni to Pretoria ensure international bandwidth availability.

Industry

Telecommunications / Private Sector

Country

South Africa

Challenge

Assist in increasing bandwidth and affordability of that bandwidth for South Africans by providing 99.95% uptime of regeneration equipment for multiple customers using the link from the Seacom cable to Johannesburg

Solution

Build, operation, and maintenance of South Africa's first secure and controlled open access infrastructure needed to house client equipment.

Results

- ▲ A new infrastructure operations and services management model for South African and African long haul fibre optic links.
- ▲ A containerised layout, including diversified fibre optic termination panels, for eight sets of client equipment.
- ▲ Remote control of security and armed response at each site.
- ▲ Triple power redundancy at each site - including mains power, a back up generator, and UPS power that provides an eight-hour window should mobile generators need to be set up.
- ▲ Redundant air conditioning that includes automatic switch-over to battery operated cooling fans.

The issue

Seacom, a privately owned and operated pan-African ICT enabler driving development of the African Internet on open access and equitable principles, financed and developed the first broadband submarine cable system along the eastern and southern African coastlines, exponentially expanding Africa's ability to connect to the rest of the world.

Dark Fibre Africa (DFA) has the same vision of not only increasing access to bandwidth but making bandwidth more affordable for South African organisations - by enabling competing telecommunications operators to benefit from the capex savings and economies of scale of sharing fibre optic installations. It therefore provides carrier-neutral dark fibre infrastructure.

The Seacom cable lands at Umtintzini, on the east coast of South Africa, and DFA has built the open access link connecting Seacom with South Africa's commercial centre, Johannesburg. Because of the long distances involved, it is necessary to have sites along the cable at which telcos can install regeneration equipment.

Given the mission critical nature of the link, DFA needed 99.95% availability of the regeneration equipment (no more than four hours of cumulative downtime per site per year) to be guaranteed.

And, given the urgent need for bandwidth in South Africa, DFA wanted the 11 regeneration sites to be built and commissioned in five months.

Why Plessey?

Plessey is Africa's only provider of end-to-end infrastructure solutions that include operations and services management. In November 2010, DFA contracted Plessey to build, operate, and maintain the regeneration sites for fifteen years.

The solution

Plessey researched suitable sites, negotiated leases, negotiated electricity supply, and built, secured and commissioned containerised facilities in Bronkhorstspuit, Middleburg, Hendrina, Ermelo, Panbult, Piet Retief, Paul Pietersberg, Vryheid, Zulu Rock, Melmoth and Empangeni - all by April 2011.

It also established a Network Operations Centre (NOC) that uses a sophisticated network management system to remotely monitor each site and trigger responses to problems, through Plessey's NOC in Midrand, from teams of specialist technicians established at locations along the link. Each team can reach a site within two hours.

Plessey's NOC is linked to the DFA NOC, ensuring that client telcos are immediately alerted to maintenance and repair situations and are kept informed of progress.



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