

OPTICAL FIBRE TRENDS | LIGHT TO THE END OF THE TUNNEL

CORPORATION MAIN STATEMENT

In the fast growing field of fibre optics and networking it is sometimes difficult and very costly to negotiate this minefield. Many new companies come to light offering a wide spectrum of new technologies and solutions.

Optical Fibre Trends aims to get the end customer in touch with the right supplier for the right solution to the customer's fibre optic needs.

Optical Fibre Trends aims to do this in a professional and cost effective manner to ensure that the customer finds the acquaintance to OFT a pleasurable experience.

OFT is positioned in the market as a system Integrator & installer looking at projects. Thus we can assist with projects from the tender phase to handover and support. For these reasons OFT are not biased to a specific product but will source and supply whatever is the best solution for the problem at hand. OFT also prides itself in the quality of equipment that it will propose. Supplying the best allows the customer peace of mind due to very little down time and break downs. This also keeps the cost off maintenance to a minimum.

VALUE ADDED SERVICES OFFERED

- Consulting
- Conceptual System Design
- Detail System design
- Engineering
- Product Supply
- Installation
- Commissioning
- Quality Management
- Training
- System Support
- Project Management
- Maintenance & Service

MARKET SEGMENTS

- Mining
- Petrochemical
- Telecommunications
- Toll Roads
- Airports
- Metros
- Ports
- Energy

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EQUIPMENT

At OFT, we believe in using only the best equipment to provide optimal service to our clients. Lambda Test Equipment services our equipment regularly to ensure accurate functioning.

THE FOLLOWING EQUIPMENT IS CURRENTLY IN USE:

- Fiber optic cleaning kit, with the necessary fiber strippers, compressed air, alcohol (99.70%) and Kim wipes.
- Cleaver max, precision cleaver.
- FSU 975 fusion splicer. Features include a hot core alignment process to adjust to the type of fibre and the specific climatic conditions, to offer the lowest possible splice loss. The machine uses an extremely accurate splice loss estimation technique based on a mode coupling theory (micro- bending) and hot imaging processing
- EXFO FTB 100 OTDR (Optical Time Domain Reflectometer). This piece of equipment provides an inside view of the fiber. It calculates the length of the fiber, attenuations, fiber breaks, total return loss, splice loss, connector loss and total loss. It consists of a monochrome touch screen for on site analyzing.
- OTDR testing for multimode cables includes 850nm and 1300nm, and single mode cables 1310nm and 1550nm.

CONSULTING

With seven years off experience in the field OFT is equipped to design networks not only with cost saving in mind but also simplicity and ease of installation.

Many projects are heading for failure while still in the design phase. OFT avoid this by knowing its equipment customers and the environment it will work in. These designs stay the intellectual property off OFT and are valid only for the problem at hand! These services are available to potential customers on a consulting basis or part off an ongoing project. Once the deal is done all off OFT's resources are available to the customer.

NETWORK DESIGN

The design off the network is the fun part. The following shows the different possible options for fibre networks and the equipment.



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NETWORK EQUIPMENT

- Korenix Network Equipment
- ADD & BFR Video Equipment
- OTN Equipment

OFT PRODUCT LIST

- OTN – Open Transport Network – Backbone Systems
- Transition – Media Conversion
- Media Converters
- Korenix- Industrial Network Switches
- Operational & Video Surveillance Equipment
- BFR & Optic Solutions
- Cameras – Security & Thermal Applications
- Fibre Optic Cable

SPLICE & TEST

Termination of fibre cable is a very specialized field; OFT supply this service in the market at good prices and excellent quality of workmanship. The use of fusion splicers and OTDR are the preferred way off termination. Double ended test provide a database to refer back to.

CHARACTERISTICS

- Dual Fiber Optic Ring
- 150/600 Mbps (2.5 Gbps)
- Modular Nodes
- 4 or 8 Universal Interface Slots
- Hardware Concept
- Distributed Architecture
- Time Division Multiplexing (TDM)
- Flexible Bandwidth Allocation
- One Step Multiplexer

APPLICATIONS

- Voice
- Data / Control
- LAN
- Video

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PRODUCT RANGE

- Optical Fibre Cables
 - Indoor - Tails, Breakout & Distribution
 - Outdoor - Underground (e.g. Duct types & Direct Buried / CST) & Aerial (e.g. Rural, Short Span & Long Span)
 - Specialized - Industrial (e.g. Instrumentation & Data), Harsh Environments (Mineshaft, Field Deployable) & Composite
- Heavy Duty Duct
 - Fibre - Primary coated or tight buffered
 - Construction - Up to 24 concentric tight buffered fibres or Up to 30 concentric loose tubes each containing up to 12 fibres.
 - Strength member - Central GRP strength member or steel strand and aramid yarn
 - Sheath - Polyethylene or APL polyethylene. The cable can also be armored with corrugated, longitudinal steel tape; or have a steel wire armored (SWA) PVC outer sheath; or a low smoke, zero halogen sheath. Water blocking materials (PJ or dry) can be incorporated to resist water penetration.
- Cable Accessories
 - Cable Joint Closures
 - Reels
 - Cable Accessories
 - Optical Fibre Cable Assemblies
 - Splice Management Products
 - Optical Fibre Splicing Machines
 - Optical Fibre Test Equipment

TRAINING

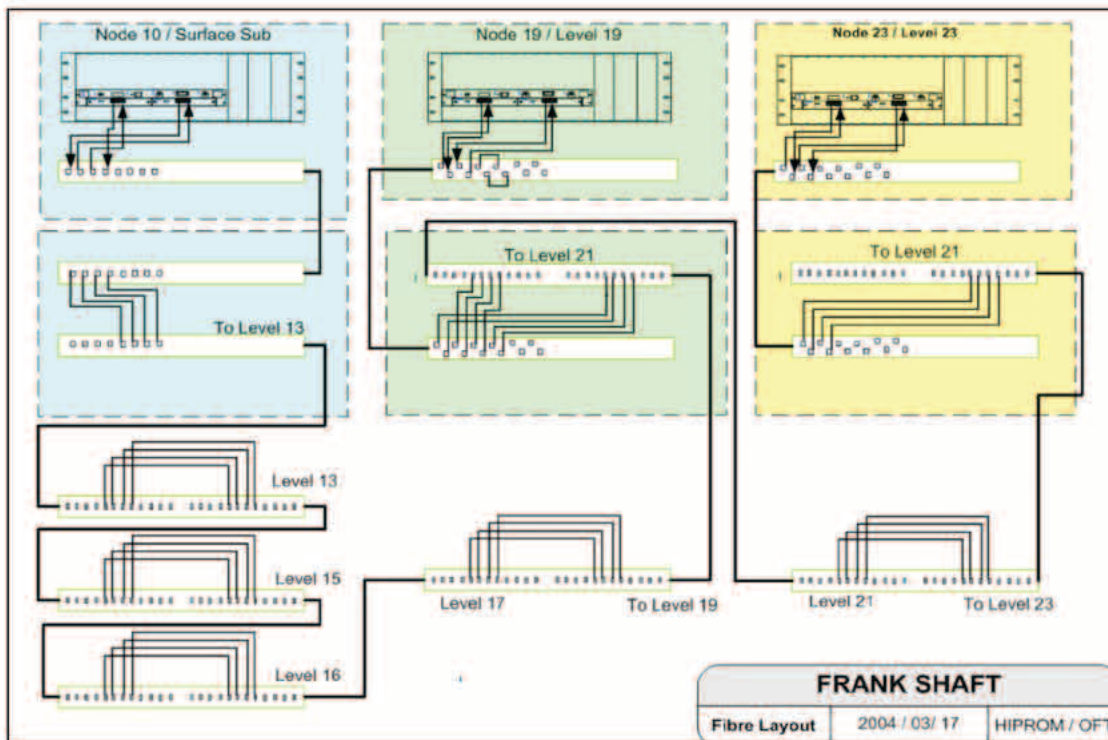
OFT also offers training to it's customers on the fields of Fibre and the OTN product.

The fibre training consist of various modules that will take a beginner in the field of fibre and familiarize him with this medium of communication. This is week long course covering the whole fibre spectrum. OTN is a big part of the OFT business, the training thus will be structured in such a way that it suite the customers needs and install base. All training could be done on site or on request at other venues. Training will be scheduled as need arise. Practical and hands-on training will form part of all training. Training completed: ATNS (JHB,CPT,DBN) Dwarsrivier mine, Southdeep mine.

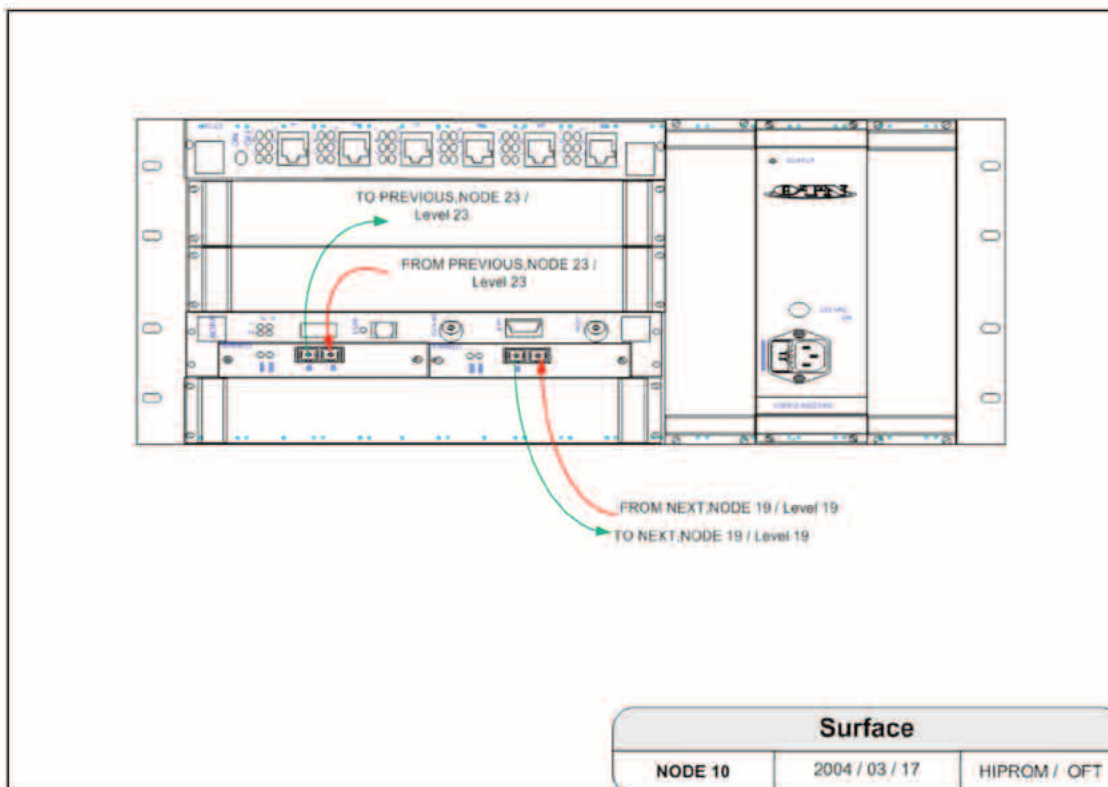
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DOCUMENTATION & DRAWINGS

Fibre Diagram



OTN Node 4 Slot



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REFERENCE LIST, SITES & PROJECTS

- 2011 – Optimum Kwagga North Expansion Project (Fibre and Splicing)
- 2011 – ATNS, Kimberley, Bloemfontein Upgrade (OTN X3M)
- 2011 – ACSA ILS OTN Upgrade
- 2011 – AWOS Network Upgrade (Korenix network Equipment and Splicing)
- 2011 – Dorstfontein Fibre Network Installation
- 2011 – Blinkwater and Botselo Mills
- 2011 – Camera Network Boschmanspoort
- 2010 – Goldfields SV1 underground camera project. The monitoring of underground events.
- 2010 – King Shaka International airport, Durban. The building of new airports is not a common occurrence. To be involved with a project of this magnitude is also a great opportunity.
- 2010 – SKA – Square kilometre array – An astronomical venture of huge proportions. The establishment of 3000 dish array that will probe the outer atmosphere and look into the far reaches of space.
- 2010 – ATNS Fibre relocation
- 2010 – Moma OTN Upgrade Mozambique (Installation and Splicing)
- 2010 – SKA Project (Network planning and Splicing)
- 2009 – Upgrading George, P.E. and East London airports and bring them to international standards.
- 2009 – Optimum Collieries, Boschmanspoort Expansion. Extending the existing Conveyor network from 15km to 25km. All managed on a single network with redundancy.

Moma – Mozambique (2007)

The mining of 13 metals from the shore line 13km inland is no mean feat. OFT again is responsible for the communications backbone, gigabit lan and VOIP network. This project is not yet completed.

City Surveillance - Libreville, Gabon (2006)

This was a 6 months city surveillance project for the Gabonese government. The installation of 40 cameras that would be scattered all over the city (distance 25km). All analogue cameras converted to digital and send via Ethernet over IP RF radios to the central control room. At the control room an IP network did all the switching, recording, playback and monitoring functions as is needed. Seeing that Gabon is on the equator rain and high humidity was factors to be taken in consideration.

Johannesburg, Cape Town & Durban International ATNS (2005)

Again the installation and commissioning of OTN networks for these site was a big project. All radar, radios, landing systems and communications are sitting on a OTN backbone. Online time over past five years, 99.9% This is an ongoing growing and changing network, that must change with the growing demand of international airports. Various new technologies are also connected to this backbone to distribute.

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Kwagga, Ingwe Coal: Optimum Collieries (2002)

Installation and Commissioning of OTN equipment for the control of the conveyer. The 12km conveyer works through various sections and conveys coal from the opencast mine to the plant. This is a production critical system where backup and redundancy is very important.

OFT also did the project management for the installation and commissioning part of the project. The network consists of 7 OTN node, telephone services, video and Ethernet for the control of the conveyer are services on this network.

Telkom, Bus Route CCTV Expansion - Cape Town City Centre (2002)

A project where Telkom supplied the fibre backbone, and OFT did the installation of the Fibre equipment for the CCTV network. Teleste was the equipment used in this installation; it delivers excellent broadcast quality video over fibre with the necessary data as required. Project management and final quality inspection was a big part in this project.

WAGM & Twinshafts - Southdeep Mining (2004)

This Siemens project required project management, installation and commissioning of 10 OTN nodes in the mine for the communications backbone. This network will handle all telephones, handset communications, seismic and production critical communications.

Western Areas Gold Mining Project – OTN / Underground

Frank Shaft - Impala Platinum (2004)

Installation of OTN for HIPROM at Frank shaft. OTN is the communications backbone for their PLC network. The OTN was installed on surface and 3 underground levels. This is Also a production critical system and therefore OTN was the right product for this application.

Camera Installation – Swaziland (2003)

The installation and commissioning of 40 cameras for DNA Sensormatic in Swaziland. Logistically very difficult. Included in one of the 40 links was one RF link between the gate house and control room

OTHER INSTALLATION SITES & RESPONSIBILITIES:

ATNS Johannesburg, Cape Town, Durban (2004/2005)

A communications backbone for all of the airport air traffic requirements. Installation, commissioning and maintenance.

Anglo Gold – Savuka Plant (2005)

Redesign the whole process network. Centralize the new control room for better monitoring capabilities. Design, supply install and commission off all equipment and fibre cables.

We hope that the bond between OFT and your company will go from strength to strength and believe that the service we offer will help making your fibre experience a pleasant one!

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