Optical Wave Services (OWS): Secure, Reliable, High-Speed Multi-Site Connectivity

OVERVIEW

Optical Wave Services (OWS) from IFN provides a private, point-to-point, single-fiber data transport, and dedicated connectivity to meet increasing network scalability demands using a Wavelength Division Multiplexing (WDM) network. It is a point-to-point topology (vs switched Ethernet) and can be custom configured with multiple circuits to provide equipment, path, and route diversity/redundancy.

Key Highlights of OWS:

- **Private and Secure:** OWS is a Layer 1 transport service that allows for interconnection utilizing either Ethernet or OTU interfaces. OWS service transparently passes all traffic and network protocols.

- **Fast and Cost Effective:** With speeds ranging from 1 to 100 Gbps, OWS is effective for high-bandwidth demand applications at a very low cost per bit.

Service Description

- IFN Optical Wave Services (OWS) provide high capacity, dedicated connectivity to meet increasing network scalability demands.

- IFN OWS is a Layer 1 transport service.

- OWS service allows for interconnection utilizing either Ethernet or OTU interfaces.

- IFN OWS service transparently passes all traffic and network protocols.

- The OWS service provides one Optical Data Connection (ODC) between two customer locations.

- The OWS service is offered in various rates and interconnect types.

TECHNICAL SPECIFICATIONS

Interconnect Types:

IFN OWS services can be delivered using either an Ethernet interface or Optical Transport Network (OTN) interface of appropriate capacity for the rate of the service. Table 3 displays various rates and appropriate interconnects.

Traffic Management:

IFN OWS services are limited only by the capacity of the underlying optical facility. There are no additional policers or shapers applied to the services.

Maximum Frame Size:

Equipment supporting IFN OWS services does not present a limitation for the size of frames moving through the OWS service.

Ethernet Service Frame Behavior:

All Frames are delivered conditionally through the network.

Product	Capitol	Handoff	Media
oTU0	1 Gbps	ODU0	Single-Mode Fiber
eOTU0	1 Gbps	Gigabit Ethernet	RJ45 (10/100/1000) Multi-mode Fiber (850nm) Single-mode Fiber (1310nm)
OTU2	10 Gbps	ODU2	Single-mode Fiber (1310nm)
eOTU2	10 Gbps	Ten Gigabit Ethernet	Multi-mode Fiber (850nm) Single-mode Fiber (1310nm)
OTU4	100 Gbps	ODU4	Single-mode Fiber (100GBASE-LR4)
eOTU4	100 Gbps	Hundred Gigabit Ethernet	Single-mode Fiber (100GBASE-LR4)

Figure 1: *Rates and Interconnects*

More advanced technical information can be found in the appendix »