

**VENDOR NAME: SBC (The New AT&T)****FEIN: 06-054-26-46****SERVICE/PRODUCT NAME: AT&T FibreMAN Service****SERVICE/PRODUCT DESCRIPTION:**

FibreMAN® Service is a high-speed, fiber based, point-to-point configuration that offers connections of SAN (Storage Area Networks) or remote storage solutions. FibreMAN Service uses the Fibre Channel protocol, a highly reliable interconnection protocol, which allows concurrent communication among workstations, mainframes, servers, data storage systems, and other peripherals.

AT&T FibreMAN® Service connects Fiber Channel switches at speeds of 1 or 2 gigabits per second (Gbps) physical layer rate. AT&T will construct a dedicated point-to-point fiber system between two customer locations and will supply the Network Terminating Equipment (NTE) at the customer premises. The service is terminated at the customer premises fiber patch panel. The customer supplies the Fibre Channel switch or router used to send and receive data across the FibreMAN® service.

*AT&T FibreMAN uses these components:*

**Single-mode fiber optic cables**—connect Fibre Channel switches at locations to provide a high-speed link between locations.

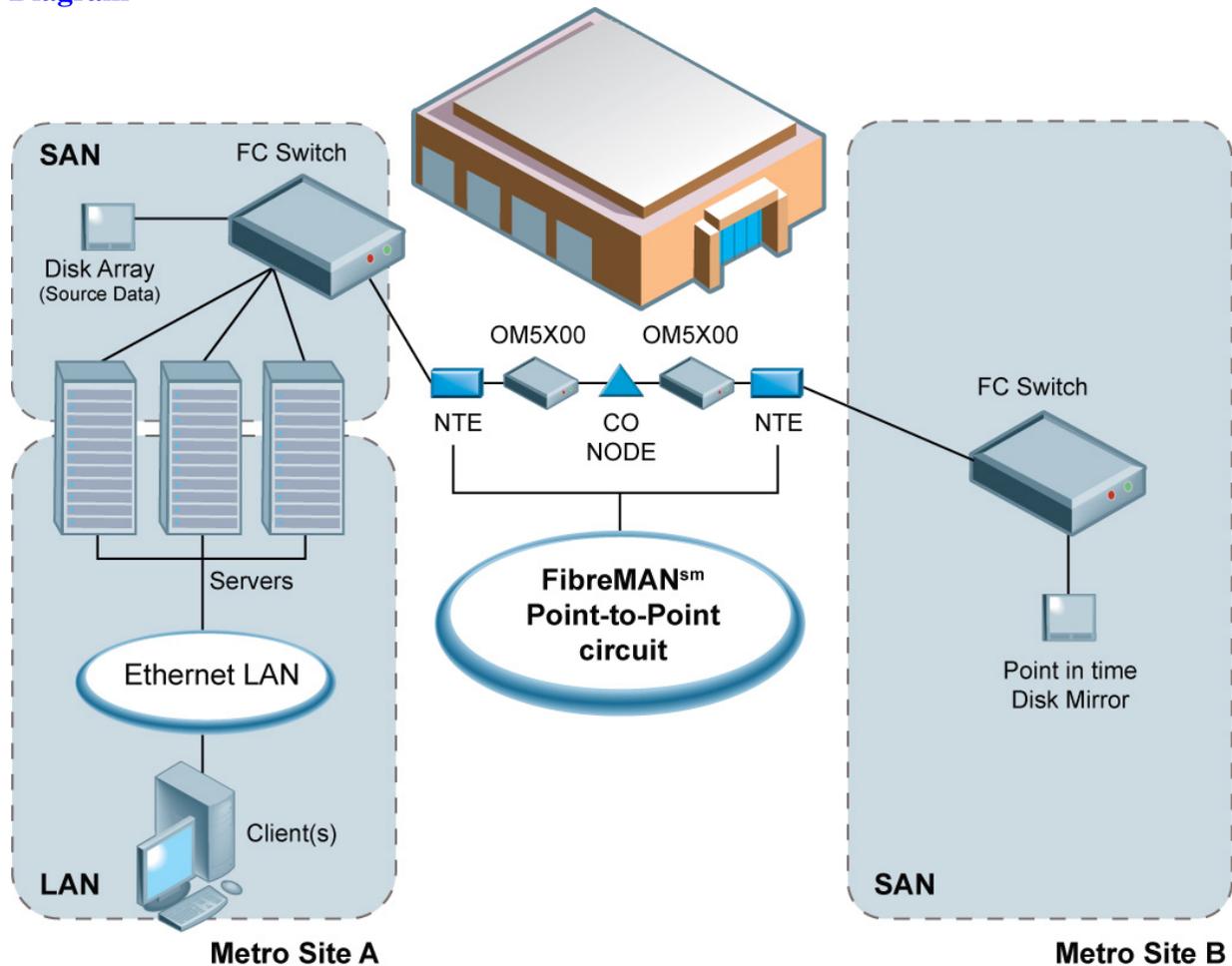
Hand-off Option—Select either single-mode or multi-mode fiber hand-off. With a single mode fiber hand-off, FibreMAN can be extended up to a mile from the AT& T network demarcation point.

**Fibre Channel Switches**—A Fibre Channel Switch must be in place to install FibreMAN® service. If required, AT&T has an extensive equipment catalog and experienced engineers to help you select, purchase, and install them.

**Fibre Repeaters**—AT&T provides the Nortel Networks OPTEra Metro 5100, a specialized fiber repeater as part of our FibreMAN service to transmit the Fibre Channel data signal from end-to-end. The equipment interfaces are standard "stick and click" (SC) connector for multi-mode or single-mode fiber optic cable. If required, long distance regenerators may be provided to extend distance up to 350 miles.

The maximum distance a FibreMAN circuit can go without requiring a repeater is 60 miles end-to-end. This distance is ultimately determined by the number of splice points in the circuit path and the condition of the optical fiber used in the circuit. Since each FibreMAN® circuit is installed with an Optera 5200 for monitoring and alarming in the AT&T Central Office, that same 5200 acts as a repeater, enabling the circuit to go 60 miles without an additional, chargeable repeater. The circuit can go up to 350 miles with a maximum of 12 additional repeaters.

## Diagram



FibreMAN® Service provides a dedicated, point-to-point, full duplex private line connection over optic fiber.

*AT&T FibreMAN provides the following features and options:*

**Protocol Flexibility**—FibreMAN® Service transmits data in a number of different protocols. Existing devices may be used to transmit data rather than having to reformat it to fit a new transmission protocol.

**Route Diversity Options**—Loop diversity, alternate wire center diversity, and inter-wire center diversity are available. End-to-end diversity can be achieved by coupling alternate wire center diversity with inter-wire center diversity.

**High Speed Data Transfer**— FibreMAN® Service offers speeds of either 1 or 2 Gbps.

**Scalability**—FibreMAN® enables Fibre Channel transport in its native format; from single point-to-point gigabit links to integrated enterprises with hundreds of servers.

**Enhanced use of existing infrastructure**—Transport data in digital audio and video networks across the current servers and connect high-performance CAD, CAM, or CAE (computer aided design, manufacturing, or engineering) applications.

**Storage Area Networks**— Today there are increasing needs for secure, efficient, and reliable data storage in the form of enterprise storage arrays, large databases, or data warehouses. All that data needs to be accessed just as efficiently through high-performance connections..

**Internet Data Center (IDC) Options**—include services like Advanced Hosting, Data Center Hosting, and Dedicated Hosting. IDC hosting provides levels of managed service. Each hosting service offers options such as automated backup, load balancing, managed firewall, managed monitoring, and storage area networks.

### **National Security Emergency Preparedness (NS/EP) Telecommunications Service Priority (TSP) System**

In 1988, the Federal Communications Commission revised the Restoration Priority System with the National Security Emergency Preparedness (NSEP) TSP System. This system ensures priority treatment of restoration to telecommunication services following natural or technical disasters.

TSP assigned telecommunication services are provisioned and restored before non-TSP services. Any Federal, State and local government, private industry or foreign government with telecommunications services supporting a national security or emergency preparedness mission qualifies for TSP.

### **Provisioning**

If AT&T receives an Emergency (E) provisioning priority it must take immediate action to provide the service at the earliest possible date, including dispatching service personnel outside of normal business hours. The FCC order requires that service vendors provision Emergency (designated by an E) TSP services before any Essential (designated by a 1, 2, 3, 4, or 5) TSP service or non-TSP services. The order processing is escalated up through management as far as necessary to complete the order. Service vendors receiving service requests with an Essential provisioning priority must make their best effort to provide the TSP services by the service user's requested due date.

### **Restoration**

When a trouble report is received, or AT&T otherwise recognizes that the TSP circuit is out or unusable, it must allocate available resources to restore the service as quickly as possible. TSP services assigned restoration priorities of 1, 2, or 3 require dispatch outside normal business hours. Vendors must dispatch service personnel outside normal business hours to restore TSP service assigned a 4 or 5 priority only when the next business day is more than 24 hours away.

### **Sponsorship**

The FCC designated the Executive Office of the President (EOP) as administrator of the TSP Program. The EOP delegated its responsibilities to the Manager of the National Communications System (NCS), which, in turn, assigned the administration and execution of the TSP Program to the Office of Priority Telecommunications (OPT) located at the NCS. The primary roles of a Federal sponsor are to:

- Review and determine whether to approve foreign, State, and local government and private industry requests for priority actions.
- Affirm that the requested priority level assignment is appropriate.

Sponsorship for TSP may be obtained from the National Communications System through the TSP Web Site at <http://tsp.ncs.gov>.

### **SERVICE LEVELS:**

#### **Installation Intervals**

90 days or mutually agreed upon due date established on location by location basis based on fiber and equipment availability.

#### **Routine Repair Intervals**

Response time = Less than 1 hour

Repair Resolution time = 4 hours or less

#### **Repair Service Level Definitions:**

Repair Response is the time elapsed between when AT&T receives a report of a problem or otherwise becomes aware of a problem, and the time that AT&T responds to the end user or other designated contact to verify the problem.

Repair Resolution Time means the elapsed time between when the State notifies AT&T of a problem, and the time that AT&T restores service and such service is acceptable to the State.

## **Service Level Agreements**

### Availability:

AT&T Telco has an availability objective for FibreMAN® Service as 99.98% for unprotected circuits. Interruptions will be measured in hours and increments thereof, accumulated on a monthly basis.

Unavailability is defined to begin at the onset of ten consecutive severely errored seconds and to end at the onset of ten consecutive seconds with no severely errored seconds, as confirmed by AT&T Telco. Measurement of unavailable time will commence with a trouble report from the customer to the appropriate Report Center and will end when the circuit is returned to service, as confirmed by AT&T Telco.

### Mean Time to Restore

Mean Time to Restore (MTTR) objective shall be the average time required to restore service and resume availability in a one month (720 hour) period. The time is measured from the moment the outage is reported until the service is available. AT&T Telco has an objective to have the service restored within an average of four (4) hours.

### Customer Service Commitment and Financial Remedies for Non Performance

AT&T Telco stands behind FibreMAN® by offering customers billing credits for ANY detectable service unavailability, thus it is a 100% Service Level commitment--- anything less than 100% availability will be eligible for a billing credit as defined below.

FibreMAN® (not fully path-protected)

A service interruption will result in a credit calculated according to the length of the disruption. Customer will be credited according to a formula that provides 10 times the billing rate for the equivalent period of service, up to a maximum of 100% of the monthly recurring charge. For example, a 4 hour outage would be eligible for a credit equal to 40 hours of pro-rated monthly recurring charges. Maximum of 100% credit in any single billing period will apply.

This outage must be reported by the customer and the circuit made available to AT&T for testing. The outage must be determined by AT&T Telco to be in its network. The customer must request credit within 20 days of an event of unavailability.

### Latency, Jitter, Packet Loss

FibreMAN® Service does not have objectives for latency, jitter or packet loss. These measurements are normally considered for delay sensitive traffic offered over switched or routed networks, where the potential for congestion and different routes may result in variable packet delivery rate and sequence. FibreMAN® is a private line optical service, with latency (microseconds) primarily a function of distance over fiber optics (propagation). All packets are transported in the sequence originated by customer's equipment; with no packet switching, routing or congestion within the FibreMAN® network.

## **SERVICE AVAILABILITY/LIMITATIONS:**

See Service Availability spreadsheet (available in all Central Offices except Greenwich)

### **LIMITATIONS**

FibreMAN Service is provided at the option of AT&T where equipment and facilities permit. If appropriate facilities are not available, Special Construction charges may apply. Charges are determined on an individual case basis.

MASTER AGREEMENT NUMBER: **B-03-006** DOIT APPROVAL DATE: **10/23/2007**

VENDOR NAME: **SBC (The New AT&T)** VENDOR FEIN: **06-054-26-46**

SERVICE NAME: **AT&T FibreMAN Service**

Activity (Add, Delete, Change)	Date of Vendor Request	Date Approved By DOIT	Item	Item Code	Description of Service/Equipment	Unit	Non-Recurring Monthly Cost	Recurring Monthly Cost	
Add	09/25/07	10/23/07	1	ICB	1 Gigabit Local Channel	LDC	\$1,500.00	\$2,500.00	
Add	09/25/07	10/23/07	2	ICB	2 Gigabit Local Channel	LDC	\$1,500.00	\$3,500.00	
Add	09/25/07	10/23/07	3	ICB	Fixed Mileage if >0	per mi	\$0.00	\$100.00	
Add	09/25/07	10/23/07	4	ICB	Variable Mileage	per mi	\$0.00	\$75.00	
Add	09/25/07	10/23/07	5	ICB	Local Channel Diversity	LDC	\$0.00	\$750.00	
Add	09/25/07	10/23/07	6	ICB	Alternate Wire Center Diversity	circ	\$0.00	\$1,200.00	
Add	09/25/07	10/23/07	7	ICB	Inter-Wire Center Diversity	circ	\$0.00	\$500.00	
Add	09/25/07	10/23/07	8	ICB	Long Distance Regenerator	circ	\$0.00	\$850.00	
Add	09/25/07	10/23/07	9	PR5PX	TSP Priority Restoration	circ	\$101.82	\$0.00	
Add	09/25/07	10/23/07	10	PR8PX	TSP Priority Restoration change level	circ	\$6.47	\$0.00	
Add	09/25/07	10/23/07	11	PR9PX	TSP Priority Restoration maintenance	circ	\$0.00	\$8.82	