

**VENDOR NAME: FRONTIER (SBC SNET)****SERVICE/PRODUCT NAME: Local Exchange Service: Digital Trunks (provisioned over T1)- Basic Multipath****SERVICE/PRODUCT DESCRIPTION:**

FRONTIER (SBC SNET) Basic Multipath service is a trunk-side switch-to-switch connection and provides digital service to a PBX using T1 technology Multipath trunks:

- Terminate directly into a T1 switch port
- Transmit signals two-ways, so all channels receive and generate calls
- Allow EM Signaling, or two-state, on hook/ off hook signaling

Multipath Trunks access the Public Switched Telephone Network (PSTN) using a Digital Transmission Loop Arrangement (DTLA). The DTLA is a DS1 digital span, or a T1 facility that transports basic analog circuits up to a rate of 1.544 Mbps. The T1 can handle 24 voice conversations or channels over a single, four-wire or fiber optic cable.

**Terminates into a Central Office Digital Switch**

Basic Multipath trunks provisioned over T1 terminate directly into a digital switch port in the FRONTIER (SBC SNET) Central Office. A digital trunk card capable of handling a T1 signal replaces the individual line cards found in analog PBX systems. With Multipath, the PBX does not need expensive conversion cards to convert the analog signals from FRONTIER (SBC SNET)'s access lines to digital signals. The paths connect directly into the T1 instead of on D4 channel banks so the PBX transmits higher quality voice and data signals.

*Please note:* Trunk side termination in the central office switch makes line side features unavailable, including:

- Detailed tolled billing
- Vertical Features (e.g. call waiting, caller ID, call forwarding and Calling Party Number)
- Night Numbers
- Outbound Call Identification.

**Transmits Signals Two Directions**

Multipath trunks can be programmed as incoming and outgoing calls using Direct Inward Dial (DID) or Non-DID trunks. Digital Trunks create two-way trunks by combining Direct Inward Dial (DID) and Direct Outward Dial (DOD) trunks into groups with blocks of DID numbers handling bi-directional traffic, or two-way transmissions.

**Signals Efficiently**

Basic Multipath uses both EM Signaling and Dual Tone Multi-Frequency (DTMF) pulsing, or touchtone dialing. Two wires, called EM leads, carry signals between the PBX and the trunk. The EM leads provide your PBX efficient on hook/ off hook signaling, or EM Signaling. Digital Trunks are restricted to EM Signaling and DTMF pulsing because Dial Pulse, or Data Processing (DP) pulsing frequently delays calls that originate from the PBX, and most PBXs are incapable of using Multi-Frequency (MF), or network version pulsing.

Digital trunking components include:

- Twenty-four exchange trunks which are flat priced, including standard one-way and combination type trunks.
- The T1 transport from your serving telephone company wire center to your location.
- DID service and DID telephone numbers are incremental to Digital Trunks.

**Features/Functions**

- **Digital transmission** - Direct Inward Dialing and Direct Outward Dialing on the same facility provides cost savings
- **Local & LD Access** on the same facility

- **Multiple Hunting Schemes** are available to allow custom routing of calls
- **24 Digital Channels** – Digital Trunks use a T1 transport facility as the transmission path from your PBX to our Central Office. Each T1 provides 24 digital channels capable of receiving and generating calls.
- **EM Signaling** - Two wires, called EM leads, carry signals between your PBX and the trunk providing your PBX efficient two-state on-hook/ off-hook signaling called E M signaling. E M signaling connects calls by "listening" for a free trunk just like a PBX operator used to do before we had automatic PBXs.
- **Direct Connection to the T1** – Digital Trunks terminate directly on a T1 digital switch port instead of on several D4 channel banks. With Digital Trunks terminating directly on a T1 switch port, you save money and experience higher quality transmissions because signals are not degraded as they pass through the channel bank.
- **Two-way Transmission** - With this feature, your employees spend less time waiting for open phone lines and more time on productive activities. Each digital channel may accommodate two-way transmissions - receive and generate calls. Two-way transmissions allow to you use fewer trunks while handling more calls, so your PBX, and consequently your office, operates more efficiently than with one-way in/ one-way out trunks.

### **Custom Location Alternate Routing (CLAR)**

Custom Location Alternate Routing (CLAR) is an Intelligent Network-based service that allows the customer to safeguard against the loss of incoming calls due to circumstances that make the customer's location inaccessible (i.e., disaster, fire, flood, cable cut, etc.). CLAR service allows the customer to develop and maintain alternate routing plans that can be activated to reroute incoming calls to predetermined alternate customer locations. CLAR service also provides the customer the ability to route inbound calls based on customer-defined call traffic management conditions. CLAR is available on Analog Lines and Trunks (CentraLink 1100), Digital Trunks over T-1 (Basic Multipath), Centrex lines (DCOSS, ISDN, CentraLink 2100 and 3100), DID numbers, PRI (Enhanced Multipath) and BRI service. The customer may activate CLAR alternate routing plans 24 hours a day, seven days a week. A customer can define up to nine alternate routing plans with a maximum of 10,000 protected telephone numbers. Only one plan can be active at any given time. Should an emergency arise, the customer activates and deactivates their CLAR plan via any touch-tone phone using a 6 digit pin number. The CLAR customer must specify an actual 10-digit number as the destination number for each protected number in each plan. The destination number can be any 10-digit number, including Cellular service. CLAR offers three optional routing features: Day of Year, Time of Day/Day of Week, and Percentage Allocation: When dialing in to their plan the customer will be able to:

1. Choose the current destination option (i.e. activate or deactivate the CLAR)
2. Hear the mapping of protected Telephone numbers to destination numbers in each destination option
3. Hear whether or not they have Time-of-Day, Day-of-Week, Day of Year, or Percentage Allocation routing, but not hear the details of those configurations
4. Change their PIN

The CLAR customer is responsible for the payment of any applicable station-to-station charges for each call between the central office where the CLAR protected numbers reside and the telephone number to which the call is being rerouted. The customer is also responsible for establishing sufficient capacity of facilities at the forward-to destination to handle the volume of calls being forwarded via CLAR.

### **Revenue Services Basic Multipath Reconfiguration.**

This is a non-standard configuration where telephone numbers are assigned to the 24th channel (trunk) of each of Revenue Service's five Basic Multipath T1s. This requires 5 new Trunk Group numbers, 5 new Route Index numbers (RTI's), and 5 new telephone numbers. The one time charge includes the costs associated with the design, installation and maintenance of this arrangement.

## **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 SBC 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 SBC 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**

Basic Multipath

Less than 10 lines = 15 business days

10 or more lines = Individual Case Basis

CLAR

Less than 100 numbers = 10 business days

100 or more numbers = Individual Case Basis

Activation/Deactivation Intervals

Less than 1 minute

### **Routine Repair Intervals**

Basic Multipath

Response time = Less than 1 hour

Repair Resolution time = 5.5 hours or less

CLAR

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 SNET receives a report of a problem or otherwise becomes aware of a problem, and the time that SNET responds to the end user or other designated contact to verify the problem. It is calculated during a measurement period as an average time (expressed in hours and minutes of the Repair Response intervals) for all problems related to a particular network service for the State's entire network.

Repair Resolution Time means the elapsed time between when the State notifies SNET of a problem, and the time that SNET restores service and such service is acceptable to the State. It is calculated during a measurement period and is expressed as an average time (expressed in hours and minutes of the Repair Resolution intervals) for all problems of a particular network service for the State's entire network.

**SERVICE AVAILABILITY/LIMITATIONS:**

See Service Availability spreadsheet

CLAR

CLAR is available on Analog Lines and Trunks (Centralink 1100), Digital Trunks over T-1 (Basic Multipath), Centrex lines (DCOSS, ISDN, Centralink 2100 and 3100), DID numbers, PRI (Enhanced Multipath) and BRI service

LIMITATIONS

- CLAR will not handle the loss of the serving SBC Central Office where the customer's main telephone numbers reside
- CLAR is not available on Residence lines

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| Activity<br>(Add,<br>Delete,<br>Change) | Date of<br>Vendor<br>Request | Date<br>Approved<br>By DAS | Item | Item<br>Code   | Description of Service/Equipment   | Unit     | Non-Recurring<br>Unit Cost | Recurring<br>Monthly Cost |
|---|------------------------------|----------------------------|------|----------------|--|----------|----------------------------|---------------------------|
| Add                                     | 09/09/15                     | 02/10/16                   | 1    | IEV38          | Basic Multipath: Rural Zone  | T-1      | \$875.00                   | \$822.00                  |
| Add                                     | 09/09/15                     | 02/10/16                   | 2    | IEV39          | Basic Multipath: Suburban Zone   | T-1      | \$875.00                   | \$774.00                  |
| Add                                     | 09/09/15                     | 02/10/16                   | 3    | IEV40<br>DS02I | Basic Multipath: Urban Zone  | T-1      | \$875.00                   | \$517.00                  |
| Add                                     | 09/09/15                     | 02/10/16                   | 4    | IEV41<br>DSO2I | Basic Multipath: Metro Zone  | T-1      | \$875.00                   | \$491.00                  |
| Add                                     | 09/09/15                     | 02/10/16                   | 5    | IEV42          | Federal Subscriber Line Charge   | T-1      | \$0.00                     | \$28.65                   |
| Add                                     | 09/09/15                     | 02/10/16                   | 6    | IEV43          | DID Trunks over Basic Multipath  | trunk    | \$0.00                     | \$0.00                    |
| Add                                     | 09/09/15                     | 02/10/16                   | 7    | IEV44          | DID C.O. Equipment- 1st trunk  | loc      | \$0.00                     | \$12.00                   |
| Add                                     | 09/09/15                     | 02/10/16                   | 8    | IEV45          | DID C.O. Equipment- Add'l trunk  | trunk    | \$0.00                     | \$12.00                   |
| Add                                     | 09/09/15                     | 02/10/16                   | 9    | IEV46          | 1- Way Out Trunks over Basic Multipath   | trunk    | \$0.00                     | \$0.00                    |
| Add                                     | 09/09/15                     | 02/10/16                   | 10   | IEV47          | 1- Way In Trunks over Basic Multipath  | trunk    | \$0.00                     | \$0.00                    |
| Add                                     | 09/09/15                     | 02/10/16                   | 11   | IEV48<br>TFL01 | 2- Way Trunks over Basic Multipath   | trunk    | \$0.00                     | \$0.00                    |
| Add                                     | 09/09/15                     | 02/10/16                   | 12   | IEV49<br>RTN1I | DID Numbers  | TNs      | \$0.00                     | \$0.28                    |
| Add                                     | 09/09/15                     | 02/10/16                   | 13   | IEV50          | Hunting feature per line / trunk   | trunk    | \$0.00                     | \$2.84                    |
| Add                                     | 09/09/15                     | 02/10/16                   | 14   | IEV51<br>DS041 | Interoffice Mileage -per mile <i>(if provisioned from non-serving wire center)</i> | mile     | \$0.00                     | \$30.00                   |
| Add                                     | 09/09/15                     | 02/10/16                   | 15   | IEV52          | TSP Priority Installation  | T-1      | \$113.59                   | \$0.00                    |
| Add                                     | 09/09/15                     | 02/10/16                   | 16   | IEV53          | TSP Priority Restoration   | T-1      | \$101.82                   | \$0.00                    |
| Add                                     | 09/09/15                     | 02/10/16                   | 17   | IEV54          | TSP Priority Restoration change level  | T-1      | \$6.47                     | \$0.00                    |
| Add                                     | 09/09/15                     | 02/10/16                   | 18   | IEV55          | TSP Priority Restoration maintenance   | T-1      | \$0.00                     | \$8.82                    |
| <b>CLAR</b>                             |                              |                            |      |                |  |          |                            |                           |
| Add                                     | 09/09/15                     | 02/10/16                   | 19   | NX540          | Service establishment Plan 1   | plan     | \$350.00                   | \$0.00                    |
| Add                                     | 09/09/15                     | 02/10/16                   | 20   | IEL02<br>CPI01 | Protected number- Plan 1   | tn       | \$10.00                    | \$4.00                    |
| Add                                     | 09/09/15                     | 02/10/16                   | 21   | IEL03<br>ACARP | Addl alternate routing Plan 2-9  | plan     | \$70.00                    | \$70.00                   |
| Add                                     | 09/09/15                     | 02/10/16                   | 22   | NX543          | Protected number per addl routing Plan 2-9   | tn       | \$1.50                     | \$0.00                    |
| Add                                     | 09/09/15                     | 02/10/16                   | 23   | NX544          | Routing plan change per tn (1-9)   | tn       | \$10.00                    | \$0.00                    |
| Add                                     | 09/09/15                     | 02/10/16                   | 24   | IEL06          | Calendar Routing :Time of Day / Day of Week /Day of Year                           | app      | \$70.00                    | \$70.00                   |
| Add                                     | 09/09/15                     | 02/10/16                   | 25   | IEL07          | Percentage allocation routing  | plan     | \$70.00                    | \$70.00                   |
| Add                                     | 09/09/15                     | 02/10/16                   | 26   |                | Non standard configuration for Revenue Services on 5 Multipath T-1s                | ( 5)T-1s | \$690.00                   | \$0.00                    |
| <b>E911 Surcharge</b>                   |                              |                            |      |                |  |          |                            |                           |
| Add                                     | 09/09/15                     | 02/10/16                   | 27   |                | E911 Surcharge - 1 Line<br><i>(Per Line Per BTN)</i>                               | LINE     | \$0.00                     | \$0.47                    |
| Add                                     | 09/09/15                     | 02/10/16                   | 28   |                | E911 Surcharge - 2 Lines<br><i>(Per Line Per BTN)</i>                              | LINE     | \$0.00                     | \$0.35                    |
| Add                                     | 09/09/15                     | 02/10/16                   | 29   |                | E911 Surcharge - 3 Lines<br><i>(Per Line Per BTN)</i>                              | LINE     | \$0.00                     | \$0.31                    |
| Add                                     | 09/09/15                     | 02/10/16                   | 30   |                | E911 Surcharge - 4 - 5 Lines<br><i>(Per Line Per BTN)</i>                          | LINE     | \$0.00                     | \$0.28                    |
| Add                                     | 09/09/15                     | 02/10/16                   | 31   |                | E911 Surcharge - 6 - 10 Lines<br><i>(Per Line Per BTN)</i>                         | LINE     | \$0.00                     | \$0.24                    |
| Add                                     | 09/09/15                     | 02/10/16                   | 32   |                | E911 Surcharge - 11 - 25 Lines<br><i>(Per Line Per BTN)</i>                        | LINE     | \$0.00                     | \$0.19                    |
| Add                                     | 09/09/15                     | 02/10/16                   | 33   |                | E911 Surcharge - 26 - 50 Lines<br><i>(Per Line Per BTN)</i>                        | LINE     | \$0.00                     | \$0.16                    |
| Add                                     | 09/09/15                     | 02/10/16                   | 34   |                | E911 Surcharge - 51 - 99 Lines<br><i>(Per Line Per BTN)</i>                        | LINE     | \$0.00                     | \$0.12                    |

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| MASTER AGREEMENT NUMBER: <b>B-03-006</b> | DAS APPROVAL DATE: <b>2/10/2016</b> |
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|--|------------------------------|----------------------------|------|--------------|---|------|----------------------------|---------------------------|--|
| Add  | 09/09/15                     | 02/10/16                   | 35   |              | E911 Surcharge - 100+ Lines<br>(Per Line Per BTN) | LINE | \$0.00                     | \$0.09                    |  |
| * NRC applies to new FRONTIER (SBC SNET) services only |                              |                            |      |              |   |      |                            |                           |  |

**NOTE: Grey highlighted items are no longer available. They have been either deleted, changed, and/or no longer apply.**