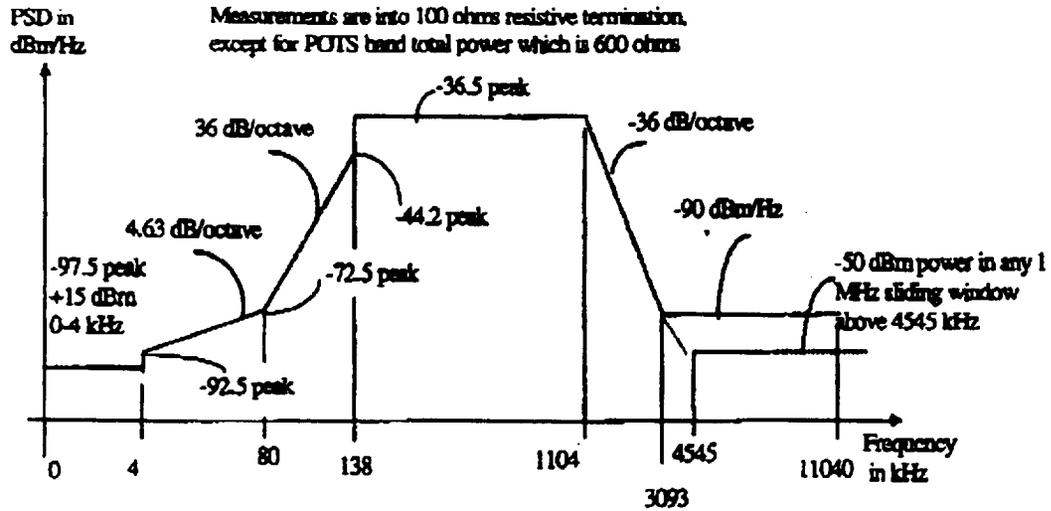


**TR 73600
Issue B**

Downstream transmitter spectrum for reduced NEXT



Note: The breakpoint frequencies and values are exact; the indicated slopes are approximate

Note: The power in a 1 MHz sliding window is measured in 1 MHz bandwidth starting at the measurement frequency

FREQUENCY BAND, kHz	EQUATION FOR LINE, dBm/Hz
0 - 4	-97.5, +15 dBm 0-4 kHz
>4 - 80	$-92.5 + 4.63 \times \log(f/4)/\log(2)$
80 - 138	$-72.5 + 36 \times \log(f/80)/\log(2)$
138 - 1104	-36.5
1104 - 3093	$-36.5 - 36 \times \log(f/1104)/\log(2)$
3093 - 4545	-90
4545 - 11040	< -90 peak. with < -50 dBm power in any 1 MHz sliding window above 4.545 MHz

**Figure 2 – Downstream transmitter spectrum for reduced NEXT
(ADSL Applications)**

5. Designed Unbundled Voice Loop

5.1 Supported Signaling

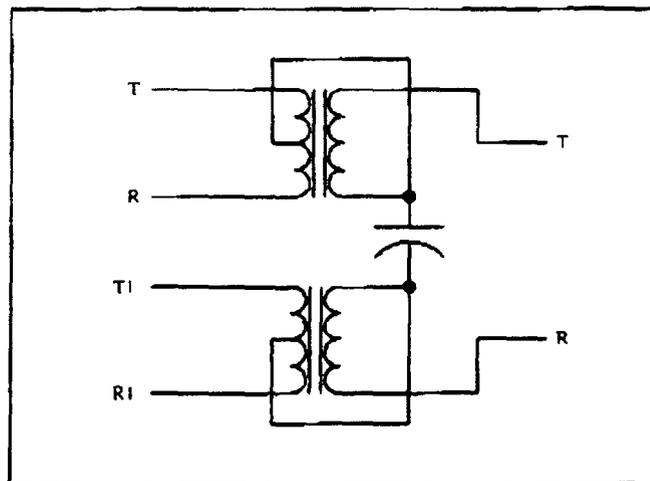
The following signaling types are available on Designed Unbundled Voice Loops:

- Loop-Start
- Ground-Start
- Reverse-Battery

These types of signaling are described briefly below. Bellcore SR-TSV-002275 contains a more thorough discussion. Section 6 contains detailed requirements for these types of signaling at both interfaces of a Designed Unbundled Voice Loop.

5.1.1 Two-wire and Four-wire Signaling

In the discussion below, a two-wire circuit is assumed. Four-wire circuits employ similar signaling, except that the dc signaling — instead of being applied directly to the tip and ring conductors — is applied to the center-taps of the coupling transformer, so that the dc signals appear in the common-mode across both conductors of each of the four-wire pairs. A circuit suitable for the conversion of four-wire to two-wire is shown below.



5.1.2 Loop Start

The two ends of a loop-start circuit are denoted the office end and the station end. The office end provides a voltage across Tip and Ring. In the idle state, the station presents a high resistance across Tip and Ring. To request service, the station presents a low resistance between the conductors. The resultant current flow is detected by the office end. To alert an idle station of an incoming call, the office end applies ringing voltage, relative to ground, to the Ring.

Loop-start circuits arranged with the office end at the MDF interface are commonly used to provide exchange access service. Section 6.2 contains signaling requirements for both the MDF and End User interfaces.

**TR 73600
Issue B****5.1.3 Ground Start**

Ground-start signaling is similar to loop-start, except that in the idle state, the office doesn't apply a voltage across Tip and Ring. Instead it applies a voltage, relative to ground, on only the Ring. This results in the following differences, relative to loop-start service:

- In order to request service, the station provides a low resistance from Tip to ground. Sensing current flow in the Ring, the office provides a (differential) voltage across both Tip and Ring. Upon the application of the differential voltage, the station places a low resistance across the Tip and Ring, and removes the shunt to ground.
- Upon alerting the station, the office applies differential voltage, even between bursts of ringing. If suitably arranged, the station can sense this differential voltage and detect the alerting signal, even before a ringing burst is sent by the office.

Ground-start circuits arranged with the office end at the MDF interface are often used to provide two-way trunks to a PBX. Section 6.3 contains signaling requirements for both the MDF and End User Interface in such an arrangement.

5.1.4 Reverse-Battery

Reverse-Battery signaling is typically used on trunks, rather than lines. There is no 'office end' or 'station end' convention. Ringing is not employed. Reverse-battery signaling accommodates only one-way trunks². For this reason, the ends of the circuit are usually denoted the originating and terminating end.

The terminating end of the circuit provides a voltage across Tip and Ring. In the idle state, the originating end presents a high resistance across Tip and Ring. To request service, the originating end places a low resistance across the conductors. The terminating end senses the resultant loop current. To signal toward the originating end that, for instance, it is ready to accept address digits, the terminating end reverses the polarity across Tip and Ring.

The originating end can return to idle by removing the low resistance across Tip and Ring. If properly equipped, the originating end can sense a reversal of polarity as an indication of return to idle by the terminating end.

Reverse-Battery circuits, with the originating end at the MDF, are often used to provide Direct Inward Dialing (DID) trunks to PBX's located behind the End User Interface. Section 6.4 contains signaling requirements for such an arrangement.

² The term "one-way" indicates that a trunk can only be originated from one end the voice-frequency capability is bi-directional.

**TR 73600
Issue B**

5.2 Supported Signaling and Interface Combinations

The following signaling and interface combinations are supported on Designed Unbundled Voice Loops.

Number of Wires	Signaling Options
2	Loop-start signaling - office end at MDF
2	Ground-start signaling - office end at MDF
2	Reverse - Battery - originating end at MDF
4	Loop-start signaling - office end at MDF
4	Ground-start signaling - office end at MDF

6. Signaling Requirements for Designed Unbundled Voice Loops

6.1 General

When metallic facilities are employed, signaling and supervision is dependent, of course, on the source voltage (provided by either the CLEC equipment or BST equipment to which the loop is connected), and the total circuit resistance. In practically all cases, the loop resistance (the sum of the resistance of both tip and ring) is less than 1500 Ω . The dc resistance between the tip conductor and ground and the ring conductor and ground shall each be greater than 100 K ohms.

Except for instances within ringing burst (as described below) the CLEC shall not apply voltages to either conductor that are positive with respect to ground. Current supplied by CLEC equipment shall be less than 150 mA. Voltages from either conductor to ground shall be more positive than -80 Vdc.

When DLC is employed, both the DLC system and the CLEC must employ compatible signaling. The following requirements are intended to ensure such compatibility, when the loop is provided via DLC or via metallic facilities.

The following requirements apply to both two-wire and four-wire interfaces. For purposes of clarity, the requirements are based on two-wire interfaces. When four-wire interfaces are employed, references and/or measurements to Tip apply to the common mode (simplex) path via both Tip and Ring. Similarly, references and/or measurements to Ring apply to the common mode (simplex) path via Tip 1 and Ring 1.

6.2 Loop-Start - Office End at MDF

6.2.1 General

A Designed Unbundled Voice Loop provided via DLC may not support distinctive ringing or forward disconnect.

6.2.2 MDF Interface

6.2.3 Idle State

In the idle state, the CLEC equipment shall provide an open circuit Tip-to-Ring voltage between 42.5 and 80 Vdc. The Ring shall be negative, relative to the Tip. No positive voltage - relative to ground - shall be applied to either conductor.

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Issue B**

In the idle state, the loop shall provide a dc resistance at the MDF meeting either of the following requirements:

- A dc resistance between Tip and Ring $\geq 10,000 \Omega$ (loop provided via DLC), or
- A dc resistance between Tip and Ring \geq the parallel combination of the following:
 - the series combination of the on-hook dc resistance of connected equipment at the End User Interface and the dc resistance of the loop, and
 - a leakage resistance of $100,000 \Omega$

6.2.4 Alerting State

In the alerting state, the CLEC equipment shall alternately apply a ringing signal and the normal idle-state potential. The ringing signal shall be applied to the Ring conductor. The voltage on the Tip conductor, relative to Ground shall be between 0.0 and -5.0 Vdc. In any six-second period, there shall be at least three continuous seconds of the normal idle-state voltage. The ringing signal shall consist of an ac signal superimposed on a dc signal.

The requirements of the ac component are as follows:

- The frequency shall be 20 ± 3 Hz.
- The magnitude shall be between 84 and $104 V_{rms}$.
- The waveform shall have a peak-to-rms ratio between 1.35 and 1.45 .
- The ac current into a line shall be limited to less than 220 mA.

The potential of the dc component shall be between -36 and 56.6 Vdc, relative to ground.

The ringing signal (ac component + dc component) shall be applied to the Ring, with a source impedance $\leq 500 \Omega$. Ground shall be applied to the Tip, with a source impedance of $\leq 500 \Omega$.

The ringing signal shall be removed within 200 milliseconds after the line has gone off-hook, as defined below. The ringing signal shall not be 'tripped' when ringing into the parallel combination of the following:

- $10,000 \Omega$ of dc resistance
- a $2 \mu F$ capacitor or the series combination of 1386Ω and $20 \mu F$ (simulating 5 bridged ringers)
- the series combination of 1386Ω and $20 \mu F$ (simulating 5 bridged ringers)

6.2.5 Off-Hook State

The CLEC equipment shall recognize a resistance of 1900Ω applied between Tip and Ring at the MDF as off-hook. For interoperability with loops with resistance greater than 1500Ω , the CLEC equipment shall recognize a resistance of 3200Ω applied between Tip and Ring at the MDF as off-hook. In either case, the CLEC must provide at least 20 mA through the limiting resistance.

**TR 73600
Issue B**

The CLEC shall also meet the following requirements:

- The power delivered to any load via Tip and/or Ring shall not exceed 2.5 W.
- The current provided, via Tip and/or Ring, shall not exceed 150 mA.

In the off-hook state, the loop shall provide a dc resistance at the MDF meeting one of the following requirements:

- A dc resistance between Tip and Ring $\leq 1150 \Omega$ (loop provided via DLC), or
- A dc resistance between Tip and Ring \leq the series combination of the off-hook dc resistance of connected equipment at the End User Interface and the dc resistance of the loop.

6.2.6 End-User Interface

Signaling provided by connecting equipment at the End User Interface shall meet the Customer Installation requirements in ANSI T1.401-1993. The loop shall meet the network requirements in ANSI T1.401-1993.

6.3 Ground-Start - Office End at MDF**6.3.1 General**

This arrangement is commonly used to support two-way trunks providing switched access to PBX's.

A Designed Unbundled Voice Loop provided via DLC may not support distinctive ringing or forward disconnect.

6.3.2 MDF Interface**6.3.3 Idle State**

In the idle state, the CLEC equipment shall provide an open circuit Ring-to-ground voltage between 16 and 55 Vdc. The Ring shall be negative, relative to ground. The dc resistance from tip to ground shall be $\geq 50,000 \Omega$.

In the idle state, the loop shall provide a dc resistance at the MDF meeting one of the following requirements:

- A dc resistance from Ring to Ground $\geq 10,000 \Omega$ (loop provided via DLC), or
- A dc resistance from Ring to Ground \geq the parallel combination of the following:
 - the series combination of the dc resistance from Ring to Ground at the End User Interface and $\frac{1}{2}$ of the dc resistance of the loop, and
 - a leakage resistance of $100,000 \Omega$

6.3.4 Alerting State

The CLEC shall meet the requirements of 6.2.4.

**TR 73600
Issue B****6.3.5 Service Request State**

To initiate a call, the end-user places a low resistance from Ring to Ground. When a resistance of $\leq 580 \Omega$ is placed from Ring to Ground at the End User Interface, the loop shall provide a dc resistance at the MDF meeting one of the following requirements:

- A dc resistance from Ring to Ground $\leq 900 \Omega$ (loop provided via DLC), or
- A dc resistance from Ring to Ground \leq the series combination of the dc resistance from Ring to Ground at the End User Interface and $\frac{1}{2}$ of the dc resistance of the loop.

6.3.6 Off-Hook State

Upon application of the Ring ground in the Service-Request State, the CLEC equipment shall provide a current-feed interface meeting the requirements of 6.2.5.

The loop shall present a dc resistance across Tip and Ring meeting the requirements of 6.2.5.

6.3.7 End-User Interface

Signaling provided by connecting equipment at the End User Interface shall meet the Customer Installation requirements in ANSI T1.401-1993. The loop shall meet the network requirements in ANSI T1.401-1993.

6.4 Reverse-Battery - Originating End at the MDF**6.4.1 MDF Interface****6.4.2 Idle State**

In the idle state, the CLEC equipment shall maintain a dc resistance from Tip to Ring, Tip to Ground, and Ring to Ground $\geq 22,500 \Omega$.

If the loop is provided via Digital Loop Carrier, the loop shall provide at least 36 Vdc between Tip and Ring, with the Tip positive with respect to the Ring, in the idle state.

6.4.3 Seizure

The Originating end signals an off-hook (seizure) by placing a low resistance between Tip and Ring. In this state, the CLEC equipment shall provide a dc resistance between Tip and Ring $\leq 670 \Omega$.

The current provided by the loop (with CLEC equipment attached that meets the above requirement) shall meet the following requirement:

- If the absolute value of the Tip to Ring voltage is ≥ 33.8 Vdc, the current shall be at least that produced by a 36 Vdc source in series with 135Ω .
- If the absolute value of the Tip to Ring voltage ≥ 29.5 Vdc, but < 33.8 Vdc, the current shall be at least that produced by a 41.7 dc source in series with 489Ω .
- If the absolute value of the Tip to Ring voltage < 29.5 Vdc, the current may be as low as 0 mA.

**TR 73600
Issue B****6.4.4 Reverse – Battery State**

The Terminating end signals an off-hook by reversing the polarity of the voltage applied across Tip and Ring. In this state, the CLEC equipment shall maintain a dc resistance of $\leq 670 \Omega$ across Tip and Ring. In this state, the loop shall meet the requirements of 6.9.3.

6.4.5 End User Interface

Signaling provided by connecting equipment at the End User Interface shall meet the Customer Installation requirements in ANSI T1.405–1996. The loop shall meet the network requirements in ANSI T1.405–1996.

7. Voice – Frequency Transmission Requirements**7.1 General**

When Loop-Start or Ground-Start signaling is employed, the following specifications are supported only during the off-hook state. These specifications apply to other Designed Unbundled Voice Loops regardless of the signaling state. Specifically, the transmission of Caller-ID, or similar signals, is not supported on any Unbundled Local Loop. ANSI/IEEE 743–1995 contains requirements for instrumentation necessary to measure compliance with the following requirements.

7.2 Insertion Loss

The following specifications apply when measured with a 900Ω AC impedance at the MDF and a 600Ω AC impedance at the End User Interface:

- The insertion loss at 1 kHz, shall be 10 dB³ or less.
- The insertion loss, at 2.8 kHz, shall be no greater than 9 dB above that at 1 kHz.

BST does not support transmission on any Designed Unbundled Voice Loop at frequencies below 300 Hz or above 3.0 kHz.

7.3 Noise

The idle-channel noise shall be less than 30 dBmC.

The Signal to C-Notched Noise Ratio shall be at least 32 dB, when measured with a –13 dBm holding tone.

³ This loss assumes loop resistance of less than 1500 Ω . Where the loop resistance of a Basic Unbundled Loop or a Designed Unbundled Voice Loop exceeds 1500 Ω , the insertion loss may be as high as 15dB at 1kHz.

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7.4 Noise-to-Ground

The Noise-to-Ground parameter has two specifications. When measured with a C-message weighting filter, it should be less than 90 dBmC. When measured with a high-impedance voltmeter, it shall not exceed 50 V (126 dBm).

NOTE: While dBm is in units of power, both of these requirements involve voltage measurement, with results displayed in units of power, assuming that the voltage is across a 600 Ω resistor.

The longitudinal balance (longitudinal to metallic conversion loss) of any metallic component of the loop shall be at least 50 dB for frequencies up to 1 kHz. The longitudinal balance of interconnected CLEC equipment shall exceed 60 dB at any frequency up to 1 kHz. This parameter may be measured using ANSI/IEEE 455-1985.

7.5 Voiceband Data

BST does not guarantee that a Designed Unbundled Voice Loop will be suitable for analog data or Facsimile transmission. If a customer is able to send and receive data, BST does not guarantee a data rate.

7.6 Signal Power

The power of the voiceband signal, at either the End User Interface or the MDF, shall not exceed -9 dBm, when averaged over any 3 second period.

The out-of-band signal power shall meet the out-of-band signal power limits in Section 68.308 of FCC Part 68 requirements. In the event that connected equipment is not registered under Part 68, this requirement shall still apply.

8. Digital Unbundled Loop

8.1 General

A Digital Unbundled Loop provides a channel that can support one of a described set of digital transmission schemes. These schemes include the following:

- Digital Baseband at 64 kbps
- Basic Rate Access ISDN
- High-Bit-Rate Digital Subscriber Line
- DS1
- DS3

Requirements for the first three are described below. Requirements for Digital Unbundled Loops at the DS1 and DS3 rates are identical to those associated with tariffed BST service offerings.

**TR 73600
Issue B****8.2 Digital Baseband at 64 kbps****8.2.1 Interfaces**

The interface at the MDF is a 4-wire interface, described as a DS-0A interface in Bellcore TA-TSY-000077. The End User Interface is a 4-wire interface described in ANSI T1.410-1992. Signals applied at either interface shall meet the requirements of these documents.

8.2.2 Transport

The loop facility may be provided via metallic facilities, DLC, or both. The insertion loss of the metallic facility, measured at 28 kHz between 135 Ω terminations, shall be less than 40 dB. DC signaling, in the simplex path, is only supported to the extent necessary to provide maintenance functions as described in Bellcore TA-TSY-000077 and ANSI T1.410-1992.

8.3 Basic Rate Access ISDN**8.3.1 Interfaces**

The interface at both the CLEC (collocated or elsewhere) and the End User Interface is a 2-wire interface as defined in ANSI T1.601-1992. The supported arrangement involves an NT at the end-user and an LT provided by the CLEC. No other arrangements are supported. Signals applied at either interface shall meet the requirements of this document.

8.3.2 Transport

The loop facility may be provided via metallic facilities, DLC, or both. The insertion loss of the metallic facility, measured at 40 kHz, shall be less than 42 dB. No dc specifications are supported. Scaling current — even if not provided by the CLEC equipment (LT) — may be provided, but is not guaranteed.

8.4 HDSL-capable**8.4.1 Availability**

This channel is not available when DLC is employed. This channel is not available if the loop facilities do not meet Carrier Serving Area (CSA) guidelines as described in Committee T1 Technical Report No. 28.

8.4.2 Interfaces

At the CLEC's request, either a 2-wire or 4-wire channel will be provided. The signal applied at either interface shall meet the following specifications:

- The average signal power shall not exceed +15.0 dBm across 100 Ω .
- The PSD shall not exceed -38 dBm/Hz from 0 Hz to 196 kHz, -89 dB/decade attenuation from -38 dBm/Hz at 196 kHz to -118 dBm/Hz at 1.96 MHz, and -118 dBm/Hz above 1.96MHz. This requirement shall be met when measured with a 100 Ω termination.

**TR 73600
Issue B****8.4.3 Transport**

The loop facility consists of only metallic facilities meeting CSA design guidelines as documented in Committee T1 Technical Report No. 28. The dc resistance of a single wire pair should not exceed 850 Ω . The insertion loss of a pair at 100 kHz, measured between 135 Ω terminations, shall not exceed 35 dB.

9. Electrical Disturbances

Unbundled Local Loops may be exposed to electrical surges from lightning and commercial power system disturbances. Despite protective devices on the MDF, some of these disturbances are likely to reach CLEC equipment. CLEC equipment shall be designed to withstand certain surges without being damaged, and shall fail in a safe manner under infrequent high stress.

The prevalent voltage-limiting device available for CO use is the 3-mil carbon block. The performance of these devices can best be characterized by a normal distribution function. The upper 3σ firing voltage is 1000 volts peak under surge conditions. The protector may also limit — to about 350 mA over extended periods — the current that is permitted to flow to equipment. In addition, a protective fuse cable located outside the CO incorporating 24 or 26 AWG conductors to coordinate with the protector, serves to limit current to safe levels in the event of prolonged operation of the protector during power fault conditions.

10. ANNEX A**Characteristics of Tie Cable(s) and/or Wiring Component**

The cabling and/or wire between the MDF interface and the collocated CLEC equipment (if any) is not a component of the Unbundled Local Loop. It is an unbundled element. The following specifications apply:

- The total length should be less than 1500 feet.
- The dc resistance should be less than 80 ohms.
- The insertion loss, measured between 900 Ω terminations at 1 kHz, should be 0.5 dB or less.
- The noise shall be 15 dBmC or less.

Louisiana Workshop Collocation Intervals

Introduction

BellSouth has a two phased process for providing collocation: the Application/Inquiry phase and the Firm Order phase. Both phases use BellSouth's Application and Firm Order document, BSTEI. Attached for your reference are BellSouth's Physical Collocation and Virtual Collocation Application/Inquiry documents and line by line instructions for each. A brief scan of these documents will indicate the detailed information necessary for BellSouth to evaluate its ability to provide adequate space, power, ventilation, cooling and network infrastructure components to support each collocation request.

The work required for BellSouth to fulfill a collocation request may generally be divided into two categories: **Network Infrastructure work** and **Space Construction work**. **Network Infrastructure work** includes items such as, but not limited to: placement or extension of cable racking and support structures; extension or addition of power distribution facilities and emergency generator back-up; placement of terminating equipment; and the location and/or placement of central office equipment grounding planes. **Space Construction work** may include, but is not be limited to: certified architectural engineering design work; certified architectural engineering drawings prepared and filed with the local municipality; approved building permits; common area wall construction; addition or upgrade to heating, ventilation, air conditioning (HVAC) systems; extension of HVAC ductwork; placement of mechanical controls and electrical outlets; placement of lighting; enclosure wall construction; building modifications for fire code requirements (e.g., fire exit corridors); asbestos abatement; and municipality required construction in order to receive building permits/certificates of occupancy. Typically, the time interval required to design, order and install Network Infrastructure components exceeds the time interval required to complete the design and construction of Space Construction components.

Application Response Interval

BellSouth commits to respond to requests for physical collocation within 30 business days and to requests for virtual collocation within 20 business days. BellSouth works closely with customers to establish priorities for their request when there is a need to process multiple applications within the same time frame. Response intervals for multiple applications are negotiated based on the priority established by the requesting customer.

AT&T asserts that five business days is a reasonable time period to respond to a collocation request. It is not technically feasible for BellSouth to complete the review, assessment, and pre-planning activities necessary to provide a complete response to a requesting carrier within the five days proposed by AT&T. BellSouth's Application response interval includes reviewing the request(s) for completeness, a technical review and response by the local network operations, capacity management and property management team, conducting a site visit for space availability and allocation, preliminary network infrastructure planning (so that cost and interval estimates can be developed), consultation and pre-design with the design architect, and preparation of space construction cost and timeframe estimates.

Collocation is not a simple exercise in space allocation, as AT&T might lead one to believe. Each central office is different. Each new collocation request presents unique challenges that require thorough planning. To prevent harm to BellSouth's and other collocators' networks, BellSouth must thoroughly evaluate and plan for such diverse elements as equipment heat dissipation, power consumption, floor loading, and network infrastructure utilization, and must screen the collocation request for compliance with Network Equipment Building Safety (NEBS) criteria and equipment engineering standards.

Louisiana Workshop Collocation Intervals

Following is brief discussion of the process BellSouth uses to evaluate and respond to each application request for collocation. BellSouth has dedicated a Collocation Coordinator for each customer group to serve as a single point of contact for collocation requests. BellSouth does not process one application at a time. Most of BellSouth's recent experience has been the receipt of 15-60 applications from a single customer on the same day. Nonetheless, BellSouth endeavors to process each request as quickly as possible and within the agreed upon time frames.

Upon receipt of an application, the Account Team Coordinator reviews the Application document for completeness and accuracy. If the Application is complete and BellSouth has received the Application Fee, the Coordinator distributes the BSTEI-1 to the following BellSouth interdepartmental representatives for review, planning, estimating and response:

- **Interconnection Network Access Coordinator:** negotiates interconnection, acts as the state-specific implementation manager
- **Capacity Management** (which includes three disciplines: common systems, power capacity and circuit capacity): allocates equipment floor space, determines terminal equipment requirements, pre-plans tie cable requirements, evaluates cable support structure routes and availability, determines Point Of Termination equipment requirements, evaluates collocator power requirements to determine if existing power plant capacity can accept additional load, and prepares estimates for network construction intervals and costs based on pre-planning work; provides cabling distances from proposed collocation site to the termination equipment and to the power feeder fuse bay
- **Property Management:** determines building floor space availability in concert with Capacity Management, prepares preliminary construction design, develops design and construction cost estimates, and provides interval projections;
- **Outside Plant Engineering:** reviews entrance facility capacity and performs placement review; provides access manhole locations and cable distances
- **Central Office Operations:** general planning and review.

Based on the space and infrastructure analysis from the interdepartmental team, BellSouth responds to the Application Inquiry in writing. The response contains items such as space availability, a floor plan drawing showing the proposed arrangement location within the BellSouth premises, technical parameters (such as cabling distances), interval and cost estimates for both network infrastructure and space construction (known collectively as Space Preparation), technical contacts, and next step procedures.

BellSouth has encountered a unique set of circumstances in each of its central offices where collocation has been provided. This fact prevents the so-called "cookie cutter" approach to providing collocation. These unique factors contribute to the overall time required to evaluate a request for collocation and, ultimately, to prepare a collocation space for a requesting collocator.

Provisioning Interval

BellSouth begins its provisioning interval upon receipt of a complete and accurate Firm Order document and payment of the agreed to fees. Because BellSouth's design specifications cannot be finalized until BellSouth has obtained the collocator's complete technical and spatial requirements, building construction and infrastructure provisioning can only begin after an accurate and complete firm order is received in writing from the requesting collocator. BellSouth will complete construction of Physical Collocation space, under ordinary conditions, as soon as possible, but within a maximum of 120 days of receiving a complete and accurate Bona Fide Firm Order, excluding the time interval required to secure building permits. For extraordinary conditions, BellSouth will complete construction of the physical collocation space as soon as

Louisiana Workshop Collocation Intervals

possible, but within a maximum of 180 days of the receipt of a complete and accurate Bona Fide Firm Order (also excluding the time interval required to secure building permits). BellSouth defines extraordinary conditions as a major BellSouth equipment rearrangement or addition; significant power plant addition or upgrade; major mechanical (HVAC) addition or upgrade; major upgrade necessary for compliance with the Americans with Disabilities Act compliance (e.g., addition of an elevator); hazardous materials abatement.

Virtual Collocation space, when prepared under ordinary conditions, will be completed within 90 days, excluding any permitting intervals. Virtual Collocation space prepared under extraordinary conditions will be completed within 120 days, excluding any permitting intervals.

BellSouth has committed to collocation provisioning intervals for all activities that are within its control to complete. The interval to secure the appropriate government permits and/or licenses and the collocator's equipment installation interval are accordingly excluded from the overall interval commitment. The provisioning interval starts with receipt of a complete and accurate (bona fide) Firm Order, including payment of appropriate fees. The interval clock stops on the date BellSouth files a request for building permit(s) with the municipality and resumes on the date the permit is approved by the municipality. In its standard Collocation Agreement, BellSouth commits to file its request for permit within 7 days of the completion of design work. Moreover, BellSouth has an affirmative interest in expeditiously completing design activities because the time interval between the bona fide firm order receipt date and the date a permit is filed is included in the overall interval commitment.

Regarding the collocated equipment installation interval, a CLEC separately negotiates the logistics of the collocation equipment installation and arranges for payment of engineering and installation services directly with its chosen certified vendor. BellSouth is not involved in the business arrangement between the collocator and its certified vendor and therefore does not include the collocator's equipment installation-related activities in its interval commitments. Because BellSouth provides a turn-key collocation offering, BellSouth includes in its interval commitment the time required to engineer, furnish and install any BellSouth network infrastructure (e.g., DSX, POT bay, cable support structure) or power equipment and facilities necessary to provide collocation. As stated above, these network infrastructure components generally require a longer timeframe to complete than the space construction work activities.

Based upon the availability of the collocator's personnel, a joint coordination meeting (or other method of joint planning) is held between BellSouth, the collocator and the collocator's engineering and installation vendor within a minimum of seven days and a maximum of twenty days following BellSouth's receipt of a Bona Fide Firm Order, unless an alternative time frame is jointly agreed upon by the parties. The purpose of this meeting is to finalize the construction and infrastructure design for specific customer requirements and to negotiate actual provisioning interval timelines.

Immediately following the coordination meeting, BellSouth and its contractors complete architectural and infrastructure designs, file building permits as required, and begin infrastructure work. Building construction may not begin until building permits are received from the local municipality. BellSouth is proactively working with a number of local municipalities throughout its region to overcome roadblocks in the permitting process. As stated above, the time interval required to design, order and install Network Infrastructure components typically exceeds the time interval required to complete the design and construction of Space Construction components. For instance, in cases where additional power plant construction is required, as a general matter, building codes specify that the power plant work within the collocation area may not begin until space construction has passed inspection and a Certificate of Occupancy is issued for the newly constructed space.

Louisiana Workshop Collocation Intervals

Placement of the collocator's equipment may begin as soon as BellSouth's space and infrastructure work is complete. BellSouth identifies this date as the Space and Infrastructure Complete Date. Depending on the particular conditions at a given central office and provided the space is adequately secured, BellSouth may, at its discretion, permit the collocation equipment installation to begin prior to the Space and Infrastructure Complete Date. In such cases, the collocator must sign a liability waiver before equipment installation work may begin, addressing potential damage to equipment or injury to collocator personnel as a result of ongoing construction related activities, debris or obstructions.

Since collocation is provided in existing structures, each of BellSouth's central offices presents a unique set of circumstances such as available space for collocation, amount of construction work required, the complexity of the permitting process in a given municipality, the adequacy of existing power equipment capacity, and the sufficiency of existing heating and air conditioning facilities. All of these factors and others contribute to the overall time required to evaluate and respond to collocation requests and to prepare a collocation space for a requesting collocator. BellSouth stands ready to perform all this work as soon as possible, and at a maximum within the agreed to time frames.

For BellSouth Use Only:
 BellSouth Reference Number: _____
 Inquiry Receipt Date: _____ Issue: _____
 Firm Order Confirmation Date: _____



**EXPANDED INTERCONNECTION APPLICATION
 AND FIRM ORDER DOCUMENT**

BSTEI-1-P
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 3/13/98

1. CUSTOMER INFORMATION

Company Name _____ ACNA _____

Company Address _____ City/State/Zip _____

Jurisdictions: IntraLata _____ Intrastate _____ Interstate _____

Signature date of local interconnection agreement with BellSouth: _____

Signature date of physical collocation agreement with BellSouth: _____

COLLOCATION PROJECT COORDINATOR

Name _____ E-mail/Internet Address _____

Mailing Address _____ City/State/Zip _____

Telephone # _____ Pager # _____ Facsimile # _____

2. REQUESTED EIS LOCATION

Wire Center Name _____ CLLI Code _____

Street Address _____ City/State/Zip _____

3. TYPE OF INTERCONNECTION ACTIVITY

- _____ Initial arrangement installation
- _____ Augmentation to an existing arrangement
- _____ Existing arrangement, equipment change and/or wiring changes
- _____ Existing arrangement, partial equipment disconnect and removal
- _____ Existing arrangement, complete equipment disconnect and removal
- _____ Conversion of existing virtual arrangement to a physical arrangement
- _____ Interconnection of collocation arrangements within this location

4. FLOOR SPACE REQUIREMENTS

- A. Equipment enclosure _____ Yes _____ No
 - B. Equipment enclosure to be constructed by BellSouth _____ Yes _____ No
 - If yes to A or B, enclosure floor space requirements _____ square feet
 - If no to A or B, non-enclosed floor space requirements _____ square feet
 - Augmentation - Additional floor space requirements - enclosed _____ square feet
 - Augmentation - Additional floor space requirements - non-enclosed _____ square feet
- Provide via attachment a proposed equipment floor plan layout which will aid BellSouth's understanding of the space requirements for the equipment to be placed in the location.

**EXPANDED INTERCONNECTION APPLICATION
AND FIRM ORDER DOCUMENT**

6. EQUIPMENT RACK/BAY REQUIREMENTS FOR NON-ENCLOSED EQUIPMENT

Completion of this section is not required if the enclosure option is selected.

- _____ Rack(s) for initial equipment installation. Quantity of racks: _____
- _____ Add rack(s) to existing arrangement. Quantity of racks: _____
- _____ Existing rack location: _____
- _____ Remove rack(s) from an existing arrangement. Quantity of racks: _____
- _____ Rack addition not required for this application.

	Rack 1	Rack 2	Rack 3	Rack 4	Rack 5	Rack 6	Rack 7	Rack 8
Rack Width								
Spacer Width*								
Rack Depth								
Rack Height								
Location								
Equipment Overhang	F R	F R	F R	F R	F R	F R	F R	F R

* If required.

Equipment Overhang: F = Front, R = Rear. Indicate the number of inches that the equipment depth exceeds the rack depth on the front and/or rear of the rack, if applicable.

Total footprint area (width x depth) of all racks (and spacers) to be installed for this application
_____ Square feet

7. -48V POWER AND GROUNDING

Completion of this section is required if -48V telecommunications equipment power is to be provided by BST. Power plant construction requirements and costs will be based upon the information provided. BST can provide -48V DC feeders configured to power equipment installed as part an isolated single point ground or as part of the building integrated ground plane. Isolated ground power options are addressed in section 7B. Integrated ground power options are addressed in section 7C.

7A. Does any of this equipment require an isolated ground plane and associated power supply grounding as described in Bellcore Technical Reference TR-NWT-000295 and BellSouth Engineering and Installation Standards for Central Office Equipment TR-73503?

7A1. Yes _____ No _____ If yes, complete section 7B.

Will any of this equipment be installed (and grounded) as part of the building integrated ground plane (i.e. not part of an isolated ground plane)?

7A2. Yes _____ No _____ If yes, complete section 7C.

**EXPANDED INTERCONNECTION APPLICATION
AND FIRM ORDER DOCUMENT**

7. **-48V POWER AND GROUNDING** continued from page 3.

7B. **Power Feeders for Equipment Installed as Part of an Isolated Ground Plane**

If equipment requires TR-000295 compliant isolated ground plane, the collocator **must** provide Battery Distribution Fuse Bay, Power Distribution Frame, or similar power distribution equipment for distributing power to the equipment to be installed on the isolated ground plane. This BDFB/PDF must be dedicated to the isolated ground equipment. If integrated ground equipment is also installed it must utilize one of the power options described in section 7C.

Specify the quantity of the BST provided isolated ground power feeders to the collocator provided BDFB/PDF. State quantities in multiples of 2 for redundant "A" and "B" feeder pairs (i.e., 2 feeders = 1 A feeder and 1 B feeder. Note: All BST provided power feeders to BDFBs/PDFs will be rated at 180 Amps protected at the BST power board by 225 amp circuit breakers.

Existing	Additional	Total	Terminating BDFB/PDF Rack No. per collocator provided equipment layout

BST will provide power feeder cable support structure between the BST power board and the collocator equipment enclosure. BST will connect the feeder to the BST power board and run the feeder to the enclosure. The collocator's vendor will be responsible for constructing power cable support structure and completing the feeder installation within the enclosure and terminating the cable at the collocator provided BDFB/PDF.

**EXPANDED INTERCONNECTION APPLICATION
AND FIRM ORDER DOCUMENT**

7. **-48V POWER AND GROUNDING** continued from page 4.

7C. **Power Feeders for Equipment installed as Part of the Building Integrated Ground Plane**

Collocator may provide or request BST to provide Battery Distribution Fuse Bay, Power Distribution Frame, or similar power distribution equipment for distributing power to integrated ground equipment.

7C1. **Collocator Provided BDFB/PDF**

If collocator will provide BDFB/PDF, specify the quantity of the BST provided integrated ground power feeders to the collocator provided BDFB/PDF. State quantities in multiples of 2 for redundant "A" and "B" feeder pairs. (i.e., 2 feeders = 1 A feeder and 1 B feeder). Note: All BST provided power feeders to BDFBs/PDFs will be rated at 180 Amps protected at the BST power board by 225 amp circuit breakers.

Existing	Additional	Total	Terminating BDFB/PDF Rack No. per collocator provided equipment layout

BST will provide power feeder cable support structure between the BST power board and the collocator equipment enclosure. BST will connect the feeder to the BST power board and run the feeder to the enclosure. The collocator's vendor will be responsible for constructing power cable support structure and completing the feeder installation within the enclosure and terminating the cable at the collocator provided BDFB/PDF.

**EXPANDED INTERCONNECTION APPLICATION
AND FIRM ORDER DOCUMENT**

7. **-48V POWER AND GROUNDING** continued from page 5.

7C2. **BST Provided BDFB or Miscellaneous Power Board Fuse Positions.** (See note.)
Complete the following table for all fuse positions to be provided by BST.

BST Provided BDFB Fuse Position Quantity	Protection Device Rating (amperes)
State quantity in multiples of 2, one "A" and one "B"	(Max 60 amps)

Note: Some BST -48V power boards are equipped with miscellaneous fuse positions. These fuse positions may be made available for use with collocated equipment in lieu of BDFB fuse positions. BST and collocator responsibilities as described in this section shall apply to the use of these fuse positions.

BST will provide fuse positions as requested. **The collocator must provide the protection devices (fuses) and the appropriately sized power feeders between the BDFB or power board and the collocator provided equipment.** BST will provide power cable support structure between the BST provided BDFB/power board and the collocator's enclosure (or equipment if no enclosure is requested). The collocator's vendor is responsible for the installation of all cable support structure within a collocation enclosure. The maximum rating for a protection device to be placed in a BST provided BDFB or misc. power board fuse position is 60 amps. Typical sizes are 10, 15, 30, 45 and 60 amps. Protection devices should be sized at 1.5 times the maximum load. Quantities should be specified in multiples of 2 for 1 "A" and 1 "B" fuse position.

It is recommended that all collocated equipment arrangements be configured with a power disconnect capability, either internal to the collocated equipment frame(s) or via a collocator provided fuse panel. If no power disconnect is provided, a request will have to be submitted to BST to disconnect power at the BST provided fuse or breaker whenever power must be removed from the equipment.

7D. **Framework Ground**

BST will provide an interconnection point (ground bar or ground cable extension) for connecting the collocator provided equipment framework ground to the building principal ground. BST will extend the floor framework ground connection to a common collocation area ground bar or will extend a framework ground cable to the collocation enclosure for grounding all equipment to be grounded through the building integrated ground plane. If a ground bar is placed in the collocation area (adjacent to a collocation enclosure) the collocator will be responsible for extending a single framework ground connection from the enclosure to the BST provided bar.

If BST provides -48V battery and battery return feeds to collocated equipment grounded through a TR-000295 compliant isolated ground plane, the collocator's certified vendor will be responsible for engineering and installing framework grounds from the equipment to the BST provided ground window.

Specific grounding arrangements should be clarified during the BST-collocator coordination meetings.

**EXPANDED INTERCONNECTION APPLICATION
AND FIRM ORDER DOCUMENT**

8. ENGINEERING AND INSTALLATION VENDOR(S) Complete for Firm Order.

T E = Transmission Equipment; S E = Switching Equipment

Equipment Type & Vendor Function	BST Certified Vendor Name	BST Certified Vendor Contact	BST Certified Vendor Phone #
T E - Engineering			
T E - Installation			
S E - Engineering			
S E - Installation			

9. COLLOCATION INTERCONNECTION REQUIREMENTS

Do you plan to directly interconnect collocation arrangement(s) in this location? Yes _____ No _____
 Type of cable to be used to interconnect collocation arrangements: Copper _____ Fiber _____

The following table must be completed for each requested direct interconnection. BST will provide cable support structure, if feasible, for the interconnection of two collocation arrangements occupying non-contiguous space.

Collocation No.	Controlling Collocation		Interconnected Collocation			Type	Quantity of Circuits	Optical Interconnect
	New	Existing	Virtual	Physical	Owner			
	Rack Loc. or "ENC"	Rack Loc. or Enc. Loc.	Rack Location	Rack Loc. or Enc. Loc.		DS0, DS1, DS3, Optical	Capacity of cable	Preferred Conductor Cable (C) or Patch Cord (P)

When separately owned collocation arrangements are to be interconnected, the arrangement of the owner requesting the interconnection shall be the "Controlling Collocation".
 When commonly owned collocation arrangements are to be interconnected, the owner should designate one as the "Controlling Collocation". **NOTE:** The "controlling" owner will serve as the BST contact on all issues related to the interconnection and will be billed by BST for any and all applicable charges.

All abandoned/disconnected interconnection facilities must be removed from BST cable support structure by the collocator's certified vendor when the interconnected equipment is disconnected or removed. Identify the collocation number from the previous table to be removed per this application:

**EXPANDED INTERCONNECTION APPLICATION
AND FIRM ORDER DOCUMENT**

10. FIBER CABLE INFORMATION

Collocator provided & owned fiber entrance facilities Yes _____ No _____

A. Complete the table below for each fiber entrance cable to be installed or removed.

- _____ Add fiber entrance cable(s) for initial installation.
- _____ Add fiber entrance cable(s) to existing arrangement.
- _____ Fiber entrance cable not required for this application.
- _____ Fiber entrance cable to be removed.

Cable #	Outside diameter (in.)	Size of fiber cable	Weight (lb/kft)	Metallic/Dielectric	Cable Tensile Load (lb/f)

Note 1: Outside plant cable must meet the requirements in Bellcore GR-20-CORE or TR-NWT-000020.

Note 2: If multiple entry is requested, please show 2 cables on the fiber entrance cable table. Multiple entry availability will be provided in response to an application.

B. Complete the table below for each fiber riser cable to be installed or removed.

- _____ Add fiber riser cable(s) for initial installation.
- _____ Add fiber riser cable(s) to existing arrangement.
- _____ Fiber riser cable not required for this application.
- _____ Fiber riser cable to be removed.

Cable #	Outside diameter (in.)	Size of fiber cable	Weight (lb/kft)	Sheath Type	Cable Tensile Load (lb/f)
				Dielectric	
				Dielectric	

Note 1: Pre-terminated, dielectric, fire retardant riser cable should be provided. Riser cable must meet the requirements in Bellcore GR-409-CORE.

Note 2: If multiple entry is requested, please show 2 cables on the riser cable table. Multiple entry availability will be provided in response to an application.

Note 3: Abandoned/disconnected fiber riser cable must be removed by the collocator's certified vendor at the time the associated equipment is removed.

C. Additional information: _____ ~~Multiple entry points requested.~~
 _____ Microwave entrance requested.

**EXPANDED INTERCONNECTION APPLICATION
AND FIRM ORDER DOCUMENT**

11. EQUIPMENT WIRING REQUIREMENTS

Initial installation _____ Equipment Addition _____ Wiring changes _____

Enter the number of DS0 2 wire, DS1, DS3, and/or fiber lowspeed equipment ports that will be wired to the POT.

Quantity DS0 POT DS0 2 Wire	Quantity DS1 POT DS1 Connections	Quantity DS3 POT DS3 Connections	Quantity Optical POT Fiber Connections *

Note: It is recommended that all lowspeed ports not used for connection to other equipment be wired to the POT.

* Assumes 2 (two) fibers per connection.

Will local trunks and/or unbundled loops be ordered for interconnection to this physical arrangement?
 _____ Yes _____ No (An interconnection agreement between BellSouth and your company is required for interconnection of unbundled loops into a collocation arrangement.)

EQUIPMENT WIRING DISCONNECTS

All abandoned/unused cable connections to the POT must be removed by the collocator's certified vendor when the associated equipment is removed. Indicate the type, quantity, and POT bay location of the circuits to be disconnected. For partial removals, attach a cable and pair and/or T1TIE/T3TIE inventory identifying specific connections to be disconnected.

DS0 POT DS0 2 Wire		DS1 POT DS1 Connections		DS3 POT DS3 Connections		Optical POT Fiber Connections	
Quantity	POT	Quantity	POT	Quantity	POT	Quantity	POT

Additional information:

**EXPANDED INTERCONNECTION APPLICATION
AND FIRM ORDER DOCUMENT**

12. CONTACT INFORMATION

EQUIPMENT WIRING: Name _____ Telephone # _____

Facsimile # _____ Pager # _____ E-mail/Internet Address _____

TECHNICAL: Name _____ Telephone # _____

Facsimile # _____ Pager # _____ E-mail/Internet Address _____

LOCAL COORDINATION: Name _____ Telephone # _____

Facsimile # _____ Pager # _____ E-mail/Internet Address _____

BUILDING ACCESS: Name _____ Telephone # _____

Social Security Number (Required for issuing building access cards.) _____

Facsimile # _____ Pager # _____ E-mail/Internet Address _____

13. DESIGN LAYOUT RECORD (DLR) CONTACT INFORMATION

A: COLLOCATION ARRANGEMENT IDENTIFICATION CIRCUIT

DLR Contact Name/Title _____ Telephone # _____

Address _____ City/State/Zip _____

E-mail/Internet Address _____

_____ Use mechanized DLR capability via a DRC code. Enter 3 digit DRC code _____

_____ Use regular mail to provide DLR to the design contact shown above.

B: TIE (T1 & T3) CARRIER(S)

DLR Contact Name/Title _____ Telephone # _____

Address _____ City/State/Zip _____

E-mail/Internet Address _____

_____ Use mechanized DLR capability via a DRC code. Enter 3 digit DRC code _____

_____ Use regular mail to provide DLR to the design contact shown above.

Note! Please be sure the DRC code provided is correct. An incorrect code will result in improper distribution of the DLR, possibly causing a delay in the initial ordering of service.

If you do not have mechanized DLR capability, and would like information on how to obtain mechanized DLR capability, contact your Account Executive.

**EXPANDED INTERCONNECTION APPLICATION
AND FIRM ORDER DOCUMENT**

13. **C: CABLE & PAIR (DS0)**

Contact Name/Title _____ Telephone # _____

Address _____ City/State/Zip _____

E-mail/Internet Address _____

14. **BILLING INFORMATION**

BAN (Billing Account Number - Provided by BellSouth) _____

Billing Name _____

(Indicate the legal business name as it should appear on the monthly billing statement.)

Bill Department/Title _____

Bill Address _____ City/State/Zip _____

Billing Contact Name _____

Address _____

Telephone Number _____ Facsimile Number _____

List Billing Account Number(s) for other BellSouth communication service(s) _____

15. **ATTACHMENTS** List attachments and the number of pages for each attachment. Provide rack equipment drawings for the floor plan layout.

Attachment 1: _____

Attachment 2: _____

Attachment 3: _____

Attachment 4: _____

Remarks: _____

**EXPANDED INTERCONNECTION APPLICATION
AND FIRM ORDER DOCUMENT**

16. **TECHNICAL COMPLIANCE**

Applicant certifies that equipment is in compliance with the following industry standards:

- Criteria Level 1 requirements as outlined in the Bellcore Special Report SR-3580 Issue 1.
- Equipment design spatial requirements per GR-63-CORE, Section 2.
- Thermal heat dissipation per GR-63-CORE, Section 4, Criteria 77 - 79.
- Acoustic noise per GR-63-CORE, Section 4, Criterion 128.
- Applicable National Electric Code requirements.

I hereby certify that the equipment listed on page 2 in this document meet the industry standards for safety and compatibility. For equipment which is noncompliant, attached is documentation describing the equipment, including exceptions or deviations from the above standards.

Signature _____ Date _____

Print Name _____ Title _____

Company _____

Use of Space in Central Offices

From time to time BellSouth may require access to space occupied by collocator. BellSouth retains the right to access such space for the purpose of making equipment and building modifications, e.g., running, altering or removing racking; ducts; electrical wiring; HVAC; and cables. BellSouth will give reasonable notice to collocator when access to collocation space is required and collocator may elect to be present whenever BellSouth performs work in the collocation space. It is agreed that collocator will not bear any of the expense associated with this work.

17. Dates are negotiated during the Firm Order process. For planning purposes, you may indicate your

desired **Space Acceptance** date: _____ and

desired **Commencement** date: _____ for this arrangement.

The **Space Acceptance** date will be the date that BellSouth's floor space and infrastructure construction are complete.

The **Commencement** date will be the date that the collocator's transmission and/or switch equipment are operational and ready for service. Notification of the commencement date should be provided by the collocator to BellSouth in writing.

18. **BSTEI-1-P PREPARATION DATE**

Inquiry/Application Preparation Date _____

Firm Order Preparation Date _____

For BellSouth Use Only:
 BellSouth Reference Number:
 Inquiry Receipt Date: Issue:
 Firm Order Confirmation Date:



**VIRTUAL EXPANDED INTERCONNECTION APPLICATION
 AND FIRM ORDER DOCUMENT**

BSTEI-1-V
 Page 1 of 10
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1. CUSTOMER INFORMATION

Company Name _____ ACNA _____
 Company Address _____ City/State/Zip _____
 Jurisdictions: IntraLata _____ Intrastate _____ Interstate _____
 Signature date of local interconnection agreement with BellSouth: _____

COLLOCATION COORDINATOR

Name _____ E-mail/Internet Address _____
 Mailing Address _____ City/State/Zip _____
 Telephone # _____ Pager # _____ Facsimile # _____

2. REQUESTED VEIS LOCATION

Wire Center Name _____ CLLI Code _____
 Street Address _____ City/State/Zip _____

3. TYPE OF INTERCONNECTION ACTIVITY

- _____ Initial arrangement installation
- _____ Augmentation to an existing arrangement
- _____ Existing arrangement, equipment change and/or wiring changes
- _____ Existing arrangement, software change/upgrade
- _____ Existing arrangement, partial equipment disconnect and removal
- _____ Existing arrangement, complete equipment disconnect and removal
- _____ Interconnection of collocation arrangements within this location

4. A SERVICE DATE is negotiated among the collocator, BellSouth, and the collocator-selected BellSouth certified engineering and installation vendor(s) during the firm order process. For planning purposes, you may indicate your desired service date for this arrangement: _____

**VIRTUAL EXPANDED INTERCONNECTION APPLICATION
AND FIRM ORDER DOCUMENT**

6. EQUIPMENT RACK/BAY REQUIREMENTS

- _____ Rack(s) for initial equipment installation. Quantity of racks: _____
- _____ Add rack(s) to existing arrangement. Quantity of racks: _____
- _____ Existing rack location: _____
- _____ Remove rack(s) from an existing arrangement. Quantity of racks: _____
- _____ Rack addition not required for this application.

	Rack 1		Rack 2		Rack 3		Rack 4		Rack 5		Rack 6		Rack 7		Rack 8	
Rack Width																
Spacer Width*																
Rack Depth **																
Rack Height***																
Location																
Equipment Overhang	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R

- * If required.
 - ** Standard rack depth in BellSouth locations is 12 inches. Depth of collocator provided racks must conform to the rack depth used by BellSouth in the requested location.
 - *** Collocator-provided rack(s) must conform to the rack height used by BellSouth in the requested location.
- Required rack depth and height will be provided in response to an application.

Total footprint area (width x depth) of all racks (and spacers) to be installed for this application
_____ Square feet

7. ENGINEERING AND INSTALLATION VENDOR(S) Complete for Firm Order.

	BST Certified Vendor Name	BST Certified Vendor Address	BST Certified Vendor Phone Number
Engineering			
Installation			

**VIRTUAL EXPANDED INTERCONNECTION APPLICATION
AND FIRM ORDER DOCUMENT**

8. OPTIONS FOR MANAGING SPARE PLUG-IN EQUIPMENT

Select one of the following options for managing spare plug-in equipment. **NOTE:** Option A is recommended to provide the optimum maintenance capability for collocation equipment. The effectiveness of provisioning alternatives to Option A cannot be guaranteed by BellSouth.

- A. I will provide a rack mounted storage unit to house spare plug-ins, tools, and test equipment. I will provide a spare plug-in for each type of common plug-in, and two spare plug-ins for each type of DS1 and DS3 low speed interface plug-in. I will provide address labels and a pre-paid method for shipping defective plug-ins from the VEIS location. Replacement plug-in(s) shipped to the VEIS location will have the name of the plug-in and my company identification on the outside of the carton.
- B. I will provide everything as indicated in option A, with the exception that I will provide fewer than the recommended spare plug-in equipment levels.
- C. I will not provide on-site spare plug-ins. I will ship spare plug-in(s) to and from the VEIS location as required, using an outside package delivery company. I will provide address labels and a pre-paid method for shipping defective plug-ins from the VEIS location. Replacement plug-in(s) shipped to the VEIS location will have the name of the plug-in and my company identification on the outside of the carton.
- D. I will not provide on-site spare plug-in(s). My company employees will deliver spare plug-in(s) to the VEIS location as required. BellSouth VEIS location personnel will give defective plug-in(s) to the employee making the spare equipment delivery.
- E. I will provide a combination of option C and D using outside package delivery and my company employee.
- F. I will not use the options listed above. I will make the following arrangements as described below:

**VIRTUAL EXPANDED INTERCONNECTION APPLICATION
AND FIRM ORDER DOCUMENT**

9. COLLOCATION INTERCONNECTION REQUIREMENTS

Do you plan to directly interconnect collocation arrangement(s) in this location? Yes _____ No _____
 Type of cable to be used to interconnect collocation arrangements: Copper _____ Fiber _____

The following table must be completed for each requested direct interconnection. BST will provide cable support structure, if feasible, for the interconnection of two collocation arrangements occupying non-contiguous space.

Collocation No.	Controlling Collocation		Interconnected Collocation			Type	Quantity of Circuits	Optical Interconnect
	New	Existing	Virtual	Physical	Owner			
	Rack Number	Rack Location	Rack Location	Rack Loc. or Enc. Loc.		DS0, DS1, DS3, Optical	Capacity of cable	Cable (C) or Patch Cord (P)

When separately owned collocation arrangements are to be interconnected, the collocation of the owner requesting the interconnection shall be the "Controlling Collocation".
 When commonly owned collocation arrangements are to be interconnected, the owner should designate one as the "Controlling Collocation". **NOTE:** The "controlling" owner will serve as the BST contact on all issues related to the interconnection and will be billed by BST for any and all applicable charges.

All abandoned/disconnected interconnection facilities must be removed from BST cable support structure by the collocator's certified vendor when the interconnected equipment is disconnected or removed.
 Identify the collocation number from the previous table to be removed per this application: _____

**VIRTUAL EXPANDED INTERCONNECTION APPLICATION
AND FIRM ORDER DOCUMENT**

10. FIBER CABLE INFORMATION

A. Complete the table below for each fiber entrance cable to be installed.

- _____ Fiber entrance cable(s) for initial installation.
- _____ Add fiber entrance cable(s) to existing arrangement.
- _____ Fiber entrance cable not required for this application.
- _____ Fiber entrance cable to be removed.

Cable #	Outside diameter (in.)	Size of fiber cable	Weight (lb/kft)	Metallic/Dielectric	Cable Tensile Load (lb/f)

Note 1: Outside plant cable must meet the requirements in Belcore GR-20-CORE or TR-NWT-000020.
Note 2: If multiple entry is requested, please show 2 cables on the fiber entrance cable table. Multiple entry availability will be provided in response to an application.

B. Complete the table below for each fiber riser cable to be installed.

- _____ Fiber riser cable(s) for initial installation.
- _____ Add fiber riser cable(s) to existing arrangement.
- _____ Fiber riser cable not required for this application.
- _____ Fiber riser cable to be removed.

Cable #	Outside diameter (in.)	Size of fiber cable	Weight (lb/kft)	Sheath Type	Cable Tensile Load (lb/f)
				Dielectric	
				Dielectric	

Note 1: Pre-terminated, dielectric, fire retardant riser cable should be provided. Riser cable must meet the requirements in Belcore GR-409-CORE. Riser cable should be pre-terminated in a fiber optic splicing shelf utilizing SC connectors.
Note 2: If multiple entry is requested, please show 2 cables on the riser cable table. Multiple entry availability will be provided in response to an application.

- C. Additional information: _____ Multiple entry points requested.
 _____ Microwave entrance requested.

**VIRTUAL EXPANDED INTERCONNECTION APPLICATION
AND FIRM ORDER DOCUMENT**

11. EQUIPMENT WIRING REQUIREMENTS

Initial Installation _____ Equipment Addition _____ Wiring Changes _____

Enter the number of DS0 2 wire, DS1, DS3, and/or fiber lowspeed equipment ports that will be wired to BellSouth's DS0, DS1, DS3, and fiber cross-connect devices for this order. (BST frame assignments will be provided.)

Quantity DS0 2 Wire	Quantity DS1 Connections	Quantity DS3 Connections	Quantity Fiber Connections *

Note 1: To aid BellSouth in determining the number of frame assignments required, provide wiring schematics which identify the cable size, quantity, and lead designations from each lowspeed equipment port.

Note 2: It is recommended that all lowspeed ports not used for connection to other equipment be wired to BellSouth's cross-connect devices.

* Assumes 2 (two) fibers per connection.

Do you plan to order local trunks and/or unbundled loops to interconnect to this virtual arrangement?
 _____ Yes _____ No (A signed agreement between BellSouth and your company is required for interconnection of unbundled loops into a collocation arrangement.)

EQUIPMENT WIRING DISCONNECTS

All abandoned/unused cable connections must be removed by the collocater's certified vendor when the associated equipment is removed. Indicate the type and quantity of the circuits to be disconnected. For partial removals, attach a cable and pair and/or T1TIE/T3TIE inventory identifying specific connections to be disconnected.

Quantity DS0 2 Wire	Quantity DS1 Connections	Quantity DS3 Connections	Quantity Fiber Connections

Additional information:

**VIRTUAL EXPANDED INTERCONNECTION APPLICATION
AND FIRM ORDER DOCUMENT**BSTEI-1-V
Page 8 of 10
3/10/98**12. CONTACT INFORMATION**

EQUIPMENT WIRING: Name _____ Telephone # _____

Facsimile # _____ Pager # _____ E-mail/Internet Address _____

TECHNICAL: Name _____ Telephone # _____

Facsimile # _____ Pager # _____ E-mail/Internet Address _____

LOCAL COORDINATION: Name _____ Telephone # _____

Facsimile # _____ Pager # _____ E-mail/Internet Address _____

PROVISIONING & MAINTENANCE: Name _____ Telephone # _____

Facsimile # _____ Pager # _____ E-mail/Internet Address _____

ACCEPTANCE TESTING: Name _____ Telephone # _____

Facsimile # _____ Pager # _____ E-mail/Internet Address _____

13. DESIGN LAYOUT RECORD (DLR) CONTACT INFORMATION**A: EQUIPMENT MAINTENANCE CIRCUIT(S)**

DLR Contact Name/Title _____ Telephone # _____

Address _____ City/State/Zip _____

E-mail/Internet Address _____

_____ Use mechanized DLR capability via a DRC code. Enter 3 digit DRC code _____

_____ Use regular mail to provide DLR to the design contact shown above.

B: TIE (T1 & T3) CARRIER(S)

DLR Contact Name/Title _____ Telephone # _____

Address _____ City/State/Zip _____

E-mail/Internet Address _____

_____ Use mechanized DLR capability via a DRC code. Enter 3 digit DRC code _____

_____ Use regular mail to provide DLR to the design contact shown above.

**VIRTUAL EXPANDED INTERCONNECTION APPLICATION
AND FIRM ORDER DOCUMENT**

13. C: CABLE & PAIR (DS0)

Contact Name/Title _____ Telephone # _____

Address _____ City/State/Zip _____

E-mail/Internet Address _____

14. BILLING INFORMATION

BAN (Billing Account Number - Provided by BellSouth) _____

Billing Name _____
(Indicate the legal business name as it should appear on the monthly billing statement.)

Bill Department/Title _____

Bill Address _____

City/State/Zip _____

Billing Contact Name _____

Address _____

Telephone Number _____ Facsimile Number _____

List Billing Account Number(s) for other BellSouth communication service(s) _____

15. TECHNICAL COMPLIANCE

Applicant certifies that equipment is in compliance with the following industry standards:

- Criteria Level 1 requirements as outlined in the Bellcore Special Report SR-3580 Issue 1.
- Equipment design spatial requirements per GR-63-CORE, Section 2.
- Thermal heat dissipation per GR-63-CORE, Section 4, Criteria 77 - 79.
- Acoustic noise per GR-63-CORE, Section 4, Criterion 128.
- Applicable National Electric Code requirements.

I hereby certify that the equipment listed on page 2 in this document meet the industry standards for safety and compatibility. For equipment which is noncompliant, attached is documentation describing the equipment, including exceptions or deviations from the above standards.

Signature _____ Date _____

Print Name _____ Title _____

Company _____

**VIRTUAL EXPANDED INTERCONNECTION APPLICATION
AND FIRM ORDER DOCUMENT**

16. LEASE INFORMATION

Company name to appear on lease _____

Type of Company _____

State of incorporation _____

Company address to appear on lease _____

Mailing Information: Provide the name, title, address, telephone number and facsimile number of the employee to receive the lease.

Name and title: _____

Address _____ City/State/Zip _____

Telephone Number _____ Facsimile Number _____

17. ATTACHMENTS

List all attachments and the number of pages for each attachment. (Provide detailed equipment layout. Include engineering drawings and wiring schematics.)

Attachment 1: _____ Attachment 2: _____

Attachment 3: _____ Attachment 4: _____

Remarks: _____

18. BSTEI-1-V PREPARATION DATE

Inquiry/Application Preparation Date _____

Firm Order Preparation Date _____

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Virtual Expanded Interconnection Service (VEIS) provides for location-specific interconnection of collocator-provided BellSouth leased fiber optic facilities to BellSouth interstate switched and special access services. Virtual Expanded Interconnection Service (VEIS) is offered in the BellSouth Telecommunications, Inc. Tariff FCC. No. 1, Section 20. Tariff regulations apply to each installation. It should be noted that the tariff includes specific information regarding conditions of occupancy, service application, service activation, training, inspections, maintenance, liability and damages, confidential information, title, assignment and force majeure. Please refer to the tariff for specific tariff regulations.

The completed Application and Firm Order Document (BSTEI-1-V), appropriate fee(s), and required technical documentation should be mailed to:

**BellSouth Telecommunications, Inc.
Collocation Coordinator**

(Contact your BellSouth Account Executive for the name and address for your company's Collocation Coordinator.)

Make checks payable to: BellSouth

BellSouth Reference Number - Provided by BellSouth. This reference number will be provided to the collocator when the inquiry is responded to by BellSouth, and must be included in future references to this Expanded Interconnection arrangement project.

Inquiry Receipt Date - BellSouth enters the date when the application fee, and a bona fide BSTEI-1-V are received.

Issue Number - The initial inquiry will be numbered issue 1. The first revision will be numbered issue 2. Subsequent revisions will be sequentially numbered.

Firm Order Confirmation Date - BellSouth enters the date when the appropriate fee(s), a revised bona fide BSTEI-1-V and all supporting technical documentation are submitted to place a Firm Order for Expanded Interconnection. BellSouth will provide written notification of receipt of a complete and accurate firm order.

1. CUSTOMER INFORMATION

Enter the legal business name and address of your company. Enter the Bellcore-assigned Access Customer Name Abbreviation (ACNA). (Contact your BellSouth Account Team for assistance.) Indicate the jurisdictions in which your company is a Telecommunications Service Provider. Indicate by entering the date of signature if you have a signed local interconnection agreement with BellSouth. The local interconnection agreement must be on file with the state regulatory authority in the state in which you want unbundled loops interconnected into a collocation arrangement. If a local interconnection agreement has not been signed, enter the expected local interconnection agreement date. Enter NA (Not Applicable) if you will not be ~~providing local service.~~

COLLOCATION COORDINATOR: Enter the name, e-mail/Internet address, mailing address, telephone number, pager number and facsimile number of the person who prepares the application, and who will be the primary coordinator for this collocation arrangement project.

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2. REQUESTED VEIS LOCATION

Enter the requested VEIS location by wire center name, the first eight characters of the Common Language Location Identification Code (CLLI), street address, city, state, and zip. (See the Bellcore Practice BR 795-1XX-100 for central office CLLI information.)

3. TYPE OF INTERCONNECTION ACTIVITY

Indicate the type of interconnection activity being ordered on this application.

Initial Arrangement Installation: This is the initial virtual arrangement installation for this location.

Augmentation to an existing arrangement: Your company has an existing VEIS arrangement in this location and desires to add to that arrangement.

Existing Arrangement, Equipment Change and/or wiring changes: Your company has an existing virtual arrangement in this location and desires to add, replace or remove equipment, and/or modify cabling.

Existing Arrangement, Software Change/Upgrade: Your company has an existing virtual arrangement in this location and desires to modify the software with a change or upgrade.

Existing Arrangement, Partial Equipment Disconnect and Removal: Your company has an existing virtual arrangement in this location and desires to disconnect and remove some equipment from arrangement.

Existing Arrangement, Complete Equipment Disconnect and Removal: Your company has an existing virtual arrangement in this location and desires to disconnect and remove the entire arrangement.

Interconnection of collocation arrangements within this location: This applies to the interconnection of two collocation arrangements occupying non-contiguous space. See item 9.

- 4. A SERVICE DATE** is negotiated among the collocator, BellSouth, and the collocator-selected BellSouth certified installation vendor during the Firm Order process. (Note BellSouth Tariff F. C. C. No. 1, Section 20.20 H: "The Telephone Company, in cooperation with the chosen certified vendor, will determine the installation interval.") For planning purposes, you may indicate your desired service date.

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5. EQUIPMENT TO BE INSTALLED OR REMOVED

Enter the declared equipment value for the equipment to be included in the lease agreement. This information is required for insurance purposes.

Complete columns 1 through 13. Duplicate this table as required to include all equipment to be installed. Complete the table for each item of transmission equipment to be placed in the VEIS location. Include spares, test equipment (including personal computer(s) and PC software), and any connection panels. Include all equipment that may be required to support multiple fiber cable entrances, if applicable. The equipment listed must be shown on your attached engineering drawings.

1. **Rack No.** - Enter the rack number as shown on an attached proposed floor plan layout.
2. **Vendor/Manufacturer & Contact Number** - Enter the vendor's name and telephone number.
3. **Model Number** - Enter the model number of the equipment.
4. **Description** - Enter the functional description of the equipment.
5. **Existing Quantity** - Enter the quantity of the equipment currently installed.
6. **Add** - Enter the quantity to be installed.
7. **Remove** - Enter the quantity to be removed.
8. **Total Quantity** - Enter the total quantity remaining after the addition/removal.
9. **Total Heat Dissipation (Watts)** - Enter the total heat dissipation in watts for the total quantity of items. The sum of this column should reflect the total heat release for all collocated equipment.
10. **Total -48 V DC Power Requirements (AMPS)** - Enter in AMPS the total -48V power requirements for the total quantity of items. The sum of this column should reflect the total power requirements of all collocated equipment.
11. **NEBS Yes/No** - Does this equipment meet the following Bell Communications Research Network Equipment-Building Systems (NEBS) requirements?
 - Criteria Level 1 requirements as outlined in the Bellcore Special Report SR-3580, Issue 1.
 - Equipment design spatial requirements per GR-63-CORE, Section 2.
 - Thermal heat dissipation per GR-063-CORE, Section 4, Criteria 77-79.
 - Acoustic noise per GR-063-CORE, Section 4, Criterion 128.
 - Applicable National Electric Code requirements.

Enter a YES or NO. If NO, attach a separate document listing specific explanations for each equipment type and reasons for NEBS and/or National Electric Code noncompliance.

12. **OSMINE** - Does this equipment meet the minimum Operational System Modification for Intelligent Network Elements (OSMINE) requirements of coding for the TIRKS[®] System? Enter a YES or NO. OSMINE minimum includes Human Equipment Catalog Item Group (HECIG), Equipment Catalog Item Group (ECIG) processing code, Human Equipment Catalog Item (HECI), Equipment Catalog Item (ECI) number, and Function Codes as required for provisioning. OSMINE requirements are covered in Bellcore Publication GR-485-CORE.

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5. EQUIPMENT TO BE INSTALLED IN VEIS LOCATION Continued from page 3.

13. **HECIG** - Enter the Human Equipment Catalog Item Group (HECIG) for this piece of equipment. The collocator should also provide to BellSouth, the equipment manufacturer documentation which provides the applicable HECI codes per equipment level. **This information must accompany a Firm Order.**

Additional information: Via attachment, provide equipment vendor documentation and unique characteristics of the equipment, i.e., weight. Also, provide additional information to aid BellSouth's understanding of the space requirements for the equipment for this arrangement. This would include special needs, such as front and back access to equipment, doors on the storage units, aisle space requirements, if equipment is to be prewired, etc.

Note: Per BellSouth Tariff F. C. C. No. 1, Section 20.22, Training: "If a collocator selects terminating transmission equipment hardware and/or software which is not currently in use in the Telephone Company location where VEIS will be provided, the collocator will be responsible for payment of the charges as set forth in 20.31 (F) following, for any necessary training for Telephone Company personnel needed to install and repair said equipment. Additionally, the collocator will be responsible for payment of any applicable tuition fees associated with said training."

6. EQUIPMENT RACK/BAY REQUIREMENTS

Check "Racks for initial equipment installation" if this is the initial application for this location. Indicate the quantity of racks to be installed. Check "Add rack(s) to existing arrangement" if you have an existing virtual arrangement in this location and you are adding additional racks on this application. Indicate the quantity of racks to be added. Provide rack location for existing arrangement. For "Add racks", show only the new racks to be added on the table below. For "Remove Racks", show only racks to be removed on the table. Indicate the quantity of racks to be removed. Check "Rack addition not required for this application" if this is a subsequent application and additional racks are not required.

Complete the table, showing the dimensions of the racks/bays to be installed in the location. Please note: Standard rack depth in BellSouth locations is 12 inches. Depth and height of collocator provided racks must conform to that used by BellSouth in the requested location. Required rack depth and height will be provided in response to an application. Provide the front (F) and rear (R) equipment overhang in inches for the equipment to be installed in each rack, if the equipment will exceed the depth of the rack in which it is mounted.

Provide the total footprint area in square feet (width x depth) of all racks (and spacers) to be installed for this application.

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7. SELECTED ENGINEERING AND INSTALLATION VENDOR(S)

Complete for Firm Order. Indicate the name, address and telephone number of the BellSouth certified engineering and installation vendor(s) that will be performing the equipment engineering and installation at the virtual location. If a single vendor is selected to perform both functions, specific contact numbers should be furnished for each function. BellSouth certified vendors perform work in compliance with BellSouth installation standards as contained in TR-73503.

8. OPTIONS FOR MANAGING SPARE PLUG-IN EQUIPMENT

Select one of the options listed for managing spare plug-in equipment. **NOTE:** Option A is recommended to provide the optimum maintenance capability for collocation equipment. The effectiveness of provisioning alternatives to Option A cannot be guaranteed by BellSouth. If option "F" is selected, please describe your plan for managing spare plug-in equipment. Per BellSouth Tariff F. C. C. No. 1, Section 20.18 (F), "The collocator shall provide the following: --All necessary plug-ins/circuit packs (both working and spare) including any required options that must be physically set on the plug-ins. --Rack mounted storage unit to house spare plug-ins, tools, and test equipment."

9. COLLOCATION INTERCONNECTION REQUIREMENTS

If covered in the collocation agreement, collocation arrangements may be directly interconnected without using BST cross connect facilities. Indicate if you plan to directly interconnect collocation arrangement(s) in this location. Indicate the type of cable to be used to interconnect collocation arrangements.

Complete the table for each direct interconnection configuration. (See next page.)

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9. COLLOCATION INTERCONNECTION REQUIREMENTS
(continued from page 5.)

Collocation No.	Controlling Collocation		Interconnected Collocation			Type	Quantity of Circuits	Optical Interconnect
	New	Existing	Virtual	Physical	Owner			
	Rack Number	Rack Loc. or Enc. Loc.	Rack Location	Rack Loc. or Enc. Loc.		DS0, DS1, DS3, Optical	Capacity of cable	Preferred Conductor Cable (C) or Patch Cord (P)

When separately owned collocation arrangements are to be interconnected, the arrangement of the owner requesting the interconnection shall be the "Controlling Collocation".

When commonly owned collocation arrangements are to be interconnected, the owner should designate one as the "Controlling Collocation". **NOTE:** The "controlling" owner will serve as the BST contact on all issues related to the interconnection and will be billed by BST for any and all applicable charges.

Collocation No. - Number each interconnection configuration beginning with 1 (one). Number consecutively as required. Duplicate table if required.

Controlling Collocation:

- **New:** - If the controlling end of the interconnection is a new non-enclosed arrangement, identify the rack no. from an attached proposed floor plan layout. If the new arrangement will be enclosed indicate "ENC".
- **Existing:** - Identify the rack location (frame identification code as assigned by the collocator's certified engineering vendor) of an existing non-enclosed arrangement or the location (floor) of an enclosed arrangement that will serve as the Controlling end of the interconnection.

Interconnected Collocation:

- **Virtual** - If the interconnected end of the interconnection is a Virtual collocation, identify the rack location.
- **Physical** - If the interconnected end of the interconnection is a Physical collocation, identify the location (floor) if the arrangement is enclosed, or the rack location if the arrangement is not enclosed.
- **Owner:** - Identify the owner of the Interconnected Collocation.

Type: - Identify the type of interconnection (DS0, DS1, DS3, Optical)

Quantity of Circuits: - Indicate the maximum circuit capacity of the interconnecting cable.

Optical Interconnection - Preferred Conductor: - Specify cable (C) or patchcord (P).

BellSouth will evaluate the locations of the interconnecting arrangements and existing cable support structures to determine if the preferred conductor can be accommodated

All abandoned/disconnected interconnection facilities must be removed from BST cable support structure by the collocator's certified vendor when the interconnected equipment is disconnected or removed. Identify the collocation number from the previous table to be removed per this application.

10. FIBER CABLE INFORMATION

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A. Complete the table below for each fiber entrance cable to be installed. An example is provided.

Check "Fiber entrance cable(s) for initial installation" if this is the initial application for this location. Check "Add fiber entrance cable(s) to existing arrangement" if you have an existing virtual arrangement in this location and you are adding additional fiber entrance cable(s) on this application. For "Add fiber entrance cable", show only the new fiber entrance cable(s) to be added on the table below. Check "Fiber entrance cable not required for this application" if this is a subsequent application and additional fiber entrance cable(s) are not required. Check "Fiber entrance cable to be removed" if the cable is being abandoned or disconnected.

Cable # - Enter a "1" for the first cable to be placed, a "2" for the second, etc.

Outside diameter - Enter the outside diameter of the cable measured in inches.

Size of fiber cable - Enter the number of fibers contained in the cable.

Weight (lb/kft) - Enter the weight in pounds per kilofeet of the cable.

Metallic/Dielectric - Enter the sheath type for each cable.

Cable Tensile Load - Enter the Cable Tensile Load.

Cable #	Outside diameter (in.)	Size of fiber cable	Weight (lb/kft)	Metallic/Dielectric	Cable Tensile Load (lb/f)
1	0.5	96 pair	330	Metallic	600

Note 1: Outside plant cable must meet the requirements in Bellcore GR-20-CORE or TR-NWT-000020.

Note 2: If multiple entry is requested, please show 2 cables on the fiber entrance cable table. Multiple entry availability will be provided in response to an application.

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9. **FIBER CABLE INFORMATION** Continued from page 7.

B. Complete the table below for each fiber riser cable to be installed. An example is provided.

Check "Fiber riser cable(s) for initial installation" if this is the initial application for this location. Check "Add fiber riser cable(s) to existing arrangement" if you have an existing virtual arrangement in this location and you are adding additional fiber riser cable(s) on this application. For "Add fiber riser cable", show only the new fiber riser cable(s) to be added on the table below. Check "Fiber riser cable not required for this application" if this is a subsequent application and additional fiber riser cable(s) are not required. Check "Fiber riser cable to be removed" if the cable is being abandoned or disconnected.

Cable # - Enter a "1" for the first cable to be placed, a "2" for the second, etc.

Outside diameter - Enter the outside diameter of the cable measured in inches.

Size of fiber cable - Enter the number of fibers contained in the cable.

Weight (lb/kft) - Enter the weight in pounds per kilofeet of the cable.

Sheath Type - Riser cable must be dielectric.

Cable Tensile Load - Enter the Cable Tensile Load.

Cable #	Outside diameter (in.)	Size of fiber cable	Weight (lb/kft)	Sheath Type	Cable Tensile Load (lb/f)
1	0.7	96 pair	400	Dielectric	600
				Dielectric	

Note 1: Pre-terminated, dielectric, fire retardant riser cable should be provided. Riser cable must meet the requirements in Bellcore GR-409-CORE. Riser cable should be pre-terminated in a fiber optic splicing shelf utilizing SC connectors.

Note 2: If multiple entry is requested, please show 2 cables on the riser cable table. Multiple entry availability will be provided in response to an application.

C. Additional information - Indicate your interest in multiple entry points and/or microwave entrance facilities. Per BellSouth Tariff F. C. C. No. 1, Section 20.17, "If multiple entry points are available, and the collocator so desires, multiple entry points will be provided to the collocator." Provide additional information about your cables or cable routing, if applicable.

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11. EQUIPMENT WIRING REQUIREMENTS

Indicate if this is the initial virtual installation, an equipment addition to an existing virtual arrangement, or if this request is for wiring changes only.

Enter the number of DS0 2 wire, DS1, DS3, and/or fiber lowspeed equipment ports that will be wired to BellSouth's DS0, DS1, DS3, and fiber cross-connect devices for this order. (BST frame assignments will be provided.)

Quantity DS0 2 Wire	Quantity DS1 Connections	Quantity DS3 Connections	Quantity Fiber Connections *

Note 1: To aid BellSouth in determining the number of frame assignments required, provide wiring schematics which identify the cable size, quantity, and lead designations from each lowspeed equipment port.

Note 2: It is recommended that all lowspeed ports not used for connection to other equipment be wired to BellSouth's cross-connect devices.

* Assumes 2 (two) fibers per connection.

Indicate your plans to order local trunks and/or unbundled loops to interconnect to this virtual arrangement. An Unbundled Loop, is an active transmission facility which provides connectivity from other transport in a central office to the customer premise. The loop does not include the interoffice element, although it can be connected to an interoffice element. The loop can be connected into a collocator's space, either directly as voice grade (if the collocator's space is in the same serving central office), or multiplexed into a higher order transmission system. A signed agreement between BellSouth and your company is required for interconnection of unbundled loops into a collocation arrangement.

EQUIPMENT WIRING DISCONNECTS

All abandoned/unused cable connections must be removed by the collocator's certified vendor when the associated equipment is removed. Indicate the type and quantity of the circuits to be disconnected. For partial removals, attach a cable and pair and/or T1TIE/T3TIE inventory identifying specific connections to be disconnected.

Quantity DS0 2 Wire	Quantity DS1 Connections	Quantity DS3 Connections	Quantity Fiber Connections

Additional information: Enter comments regarding wiring requirements, if applicable.

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12. CONTACT INFORMATION

EQUIPMENT WIRING: Enter the name, telephone number, facsimile number, pager number and e-mail/Internet address of the person BellSouth can contact regarding information entered in item 11.

TECHNICAL: Enter the name, telephone number, facsimile number, pager number and e-mail/Internet address of the person BellSouth can contact regarding information entered in items 4 through 10.

LOCAL COORDINATION: Enter the name, telephone number, facsimile number, pager number and e-mail/Internet address of your company's local coordinator at the selected location for the VEIS arrangement .

PROVISIONING AND MAINTENANCE: Enter the name, telephone number, facsimile number, pager number and e-mail/Internet address of your company's provisioning and/or maintenance contact at the selected location for the VEIS arrangement . [Identify the contact for the ACAC (Access Customer Advocacy Center) to contact for maintenance issues.]

ACCEPTANCE TESTING: Enter the name, telephone number, facsimile number, pager number and e-mail/Internet address of your company's contact for acceptance testing for the VEIS arrangement .

13. DESIGN LAYOUT RECORD (DLR) CONTACT INFORMATION

The design contact identifies the employee to be contacted on design/engineering matters and to whom the DLR will be sent. A DLR will be issued for 1) one "JAVL" equipment maintenance circuit per collocator relay rack, 2) the T1TIE and T3TIE carrier systems between the collocation equipment low speed ports and the BellSouth DSX panels. There will not be a DLR issued for the DS0 interface cable and pair facility, but BellSouth will issue a spreadsheet designating the cable and pair arrangement in relation to the collocator's equipment ports.

If the design contact for the equipment maintenance circuit(s) is different from the design contact for the cross-connect circuit(s), the DLR for each circuit type can be sent to separate locations designated by you. Use 13 A to provide design contact information for the equipment maintenance circuit(s). Use 13 B to provide design contact information for the cross-connect circuit(s). Use 13 C to provide design contact information for the DS0 interface cable and pair facility.

A: EQUIPMENT MAINTENANCE CIRCUIT(S)

Enter the name, telephone number, paper mailing address (include room number, floor) and the e-mail/Internet address for your design contact for the equipment maintenance circuit(s). Indicate your preference for DLR delivery. If you have mechanized DLR capability, enter the Design Routing Code (DRC). The DRC is a three digit alpha/numeric code that identifies the routing for mechanized DLRs. If you do not have mechanized DLR capability, a paper copy will be mailed to the address provided. If you do not have mechanized DLR capability, and would like information on how to obtain mechanized DLR capability, contact your Account Executive.

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13. **DESIGN CONTACT INFORMATION** Continued from page 10.

B: TIE (T1 & T3) CARRIER(S)

Enter the name, telephone number, paper mailing address (include room number, floor) and e-mail/Internet address for your design contact for TIE carrier(s). Indicate your preference for DLR delivery. If you have mechanized DLR capability, enter the Design Routing Code (DRC). The DRC is a three digit alpha/numeric code that identifies the routing for mechanized DLRs. If you do not have mechanized DLR capability, a paper copy will be mailed to the address provided. copy will be mailed to the address you provide.

Note! Please be sure the DRC code provided is correct. An incorrect code will result in improper distribution of the DLR, possibly causing a delay in the initial ordering of service.

If you do not have mechanized DLR capability, and would like information on how to obtain mechanized DLR capability, contact your Account Executive.

C: CABLE & PAIR (DS0)

Enter the name, title, telephone number, the paper mailing address (include room number, floor) and the e-mail/Internet for the design contact for the cable and pair inventory. A paper copy will be mailed to the address provided. An e-mail/Internet address is required if you want to receive the cable and pair information electronically.

14. **BILLING INFORMATION**

Indicate the legal business company name and address as it should appear on the monthly billing statement to be submitted by BellSouth to your company for this VEIS arrangement. Provide a contact name, telephone number and facsimile number to be contacted regarding bill payment, discrepancies, etc. List billing account numbers established for other communication service(s) provided by BellSouth.

15. **TECHNICAL COMPLIANCE**

Signature, title and date are required at end of the document. Each subsequent issue of the BSTEI-1 must also be signed.

Applicant certifies that equipment is in compliance with the following industry standards:

- Criteria Level 1 requirements as outlined in the Bellcore Special Report SR-3580 Issue 1.
- Equipment design spatial requirements per GR-63-CORE, Section 2.
- Thermal heat dissipation per GR-63-CORE, Section 4, Criteria 77 - 79.
- Acoustic noise per GR-63-CORE, Section 4, Criterion 128.
- Applicable National Electric Code requirements.

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16. LEASE INFORMATION

Enter your company's name as it should appear on the lease. Specify the nature of the business entity (e. g., corporation, limited partnership). Enter the state in which the company is incorporated, if applicable, and specify the company address to appear on lease.

Mailing Information: Provide the name, title, address, telephone number and facsimile number of the employee to receive the lease.

17. ATTACHMENTS

List all attachments and the number of pages of each attachment.

Attachments should provide **detailed** equipment layouts, engineering drawings and wiring schematics. Provide drawings of the equipment showing all perspectives - top, side, front, back. Drawings should include wiring schematics and all equipment shown in Item 5.

18. BSTEI-1-V PREPARATION DATE

Enter the date that your company prepared this BSTEI-1-V inquiry/application.
Enter the date that your company prepared this BSTEI-1-V firm order.