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ATTACHMENT III

NETWORK ELEMENTS

[Issue No. IV-15, open 11/12/01]

Section 1. Introduction

1.1 Verizon shall provide unbundled Network Elements in accordance with this Agreement and Applicable Law. ~~The price for each Network Element is set forth in Attachment I of this Agreement.~~ Except as otherwise set forth in this Attachment, MCIm may order Network Elements as of the Effective Date. The obligations set forth in this Attachment III shall apply to such Network Elements: (i) available when this Agreement becomes effective; (ii) that subsequently become available; and (iii) in all cases to those features, functions, Combinations, and capabilities, the provision of which is Technically Feasible at such time as they are incorporated in unbundled Network Elements offered by Verizon.

[Issue Nos. IV-15, VI-1(E) & VI-1(I), partially resolved]

1.2 The prices for Network Elements are set forth in Attachment I of this Agreement.

[Issue Nos. IV-15 & VI-1(E), partially resolved]

1.3 MCIm may use unbundled Network Elements to provide any Telecommunications Service, in accordance with Applicable Law.

Section 2. Unbundled Network Elements

2.1 Verizon shall offer Network Elements to MCIm on an unbundled basis on rates, terms and conditions that are just, reasonable, and Non-Discriminatory in accordance with the terms and conditions of this Agreement. For purposes of this Attachment III, "Non-Discriminatory" means, at a minimum, that: (i) the quality of a Network Element that Verizon provides, as well as the access to that Network Element, must be equal for all carriers requesting access to that Network Element; and (ii) where Technically Feasible, the access to and the unbundled Network Element(s) provided by Verizon must be provided in substantially the same time and manner as that which Verizon provides to itself. In the rare instances where Technical Feasibility issues arise, Verizon must prove to the Commission that it is technically infeasible to provide access to the Network Element(s) at the same level of quality that Verizon provides to itself.

[Issue No. IV-16, resolved]

2.2 Subject to Applicable Law, the connection of MCIm's facilities, or facilities provided to MCIm by third-parties, with each of Verizon's unbundled Network Elements shall be at any Technically Feasible point within Verizon's network.

2.3 **Intentionally Left Blank**

[Issue No. III-6 & III-7, open 11/12/01]

2.4 Except as provided in Section 2.4.1 below, Verizon shall provide each Network Element individually or in combination with any other Network Element or Network Elements. This includes, but is not limited to, the Combination of all Network Elements, also known as Network Element Platform and Loop/Transport Combinations. Verizon shall not separate network elements that are already combined on Verizon's network unless requested by MCIm. Verizon's charge to MCIm for any Combination of Network Elements that are already combined may not exceed the TELRIC price for the sum of Network Elements that comprise the Combination. At MCIm's request, except as noted below, Verizon shall provide Combinations of Network Elements ordinarily combined in its network, whether or not those Network Elements are currently combined in Verizon's network. Verizon may impose cost-based charges as specified in the pricing provisions of this Agreement for any work reasonably undertaken to combine Network Elements at MCIm's request that were not previously provided.

2.4.1 Notwithstanding Section 2.4 above, Verizon shall not be required to provide Network Elements in novel combinations, that is, in configurations that are not present somewhere in Verizon's network; provided further that in the event a court of competent jurisdiction declares lawful the FCC's Rules 51.315(c)-(f), or the FCC promulgates some analogous rule(s), Verizon agrees to provide such novel combinations in accordance with the terms of that rule.

[Issue No. III-7, open 11/12/01]

2.4.2 Verizon's provision of Loop/Transport Combinations must comply with the following requirements:

2.4.2.1 The Loop/Transport Combination must provide completed end-to-end cross connection of the channels designated by MCIm.

2.4.2.2 The Loop/Transport Combination must provide multiplexing or concentration (at MCIm's request), format conversion, signaling conversion, and through-testing consistent with the underlying capabilities of the equipment deployed in the Verizon network.

2.4.3 With respect to Loop/Transport Combinations, MCIm will be responsible for all channel facility assignment (CFA).

2.4.4 Verizon may only perform maintenance on Loop/Transport Combinations at MCIm's direction.

2.4.5 Without requiring MCIm to collocate at all or particular Verizon serving wire centers, MCIm may provide its own, or request Verizon to provide, either multiplexing/concentration or digital cross connection equipment with any Loop/Transport Combination. Types of this Combination include, but are not limited to, Combinations of (i) DS1 Transport and DS0 Loops and (ii) DS3 Transport and DS1 Loops.

[Issue No. III-8, open 11/12/01]

2.5 For each Network Element including, but not limited to, Combinations, Verizon shall provide connectivity at any Technically Feasible point without requiring MCIm to collocate.

[Issue No. VI-1(G), resolved]

2.6 This Attachment describes the initial set of Network Elements which MCIm and Verizon have identified:

Loop (Section [ ])
Subloop (Section [ ])
Line Sharing and Line Splitting (Section [ ])
Network Interface Device (Section [ ])
Local Switching (also known as Circuit Switching) (Section [ ])
Packet Switching (Section [ ])
Dark Fiber (Section [ ])
Operator Systems (Section [ ])
Shared Transport (Section [ ])
Dedicated Transport (Section [ ])
Signaling Link Transport (Section [ ])
Signaling Transfer Points (Section [ ])
Service Control Points/Databases (Section [ ])
Service Management Systems (Section [ ])
Tandem Switching (Section [ ])
Directory Assistance Service (Section [ ])
Directory Assistance Database (Section [ ])
OSS

[Issue No. VI-3(B), open 11/12/01]

Section 3. Technical Standards and Technical Specifications for Network Elements

3.1 Each Network Element shall be furnished at the service levels included in this Agreement and in accordance with the performance standards required in this Agreement.

3.2 Each Network Element provided by Verizon to MCIm, unless identified differently in this Agreement, shall be provided at Parity and in a Non-Discriminatory manner in the areas of: quality of design, performance, features, functions, capabilities and other characteristics, including, but not limited to, levels and types of redundant equipment and facilities for power, diversity and security, that Verizon provides to itself (where applicable and Technically Feasible), Verizon's own subscribers (where applicable and Technically Feasible), to a Verizon Affiliate, or to any other entity, as set forth in the FCC Rules and Regulations, as the same may be amended from time to time.

3.2.1 Verizon shall provide to MCIm, upon reasonable request, reasonably available engineering, design, performance and other network data sufficient for MCIm to determine that the requirements of this Section [3] are being met. In the event that such data indicates that the requirements of this Section [3] are not being met, the Parties shall in good faith endeavor to address the issue at the network operations supervisor level, and if necessary, employ the escalation procedures of Attachment VIII.

3.2.2 Verizon agrees to work cooperatively with MCIm to ensure that the Network Elements that are provided pursuant to this Agreement will meet MCIm's reasonable needs in providing services to its subscribers.

3.3 Unless otherwise requested by MCIm, each Network Element and the connections between Network Elements provided by Verizon to MCIm shall be made available to MCIm at Parity and in a Non-Discriminatory manner at the points identified in this Agreement, or additional points made available through the BFR process.

Section 4. Loop and Subloop

[Issue Nos. III-12, IV-14, and IV-29, open 11/12/01]

[During mediation WorldCom proposed the following revisions to WorldCom's proposed language:]

4.1 Definition. Loop means a transmission facility between a distribution frame, or its equivalent, in a Verizon central office or wire center, and the loop demarcation point at an end-user customer premises~~, including inside wire owned by Verizon or one of Verizon's Affiliates~~. <u>Based on Verizon's assertion that neither Verizon nor its Affiliates own any inside wire in Virginia, the Loop does not include inside wire.</u> The Loop includes all features, functions, and capabilities of this transmission

facility including, but not limited to, dark fiber, attached electronics (except those electronics used for provision of advanced services, such as DSLAMs), and line conditioning. When Verizon provides MCIm with a Loop, MCIm will have exclusive use of this Loop element. The Loop may be used to provide modes of transmission that include, but are not limited to, two-wire and four-wire analog voice-grade transmission, and two-wire and four-wire transmission of ISDN, ADSL, HDSL, and DS1, DS3, fiber, and other high capacity signals.

[Issue No. IV-14, open 11/12/01]

4.2 Digital Subscriber Line Loops

4.2.1 Definition. "Digital Subscriber Line" (DSL) refers to a set of service-enhancing copper technologies that are designed to provide digital communications services over copper loops either in addition to, or instead of, normal analog voice service. Whether or not Verizon offers Advanced Services to the customer on a particular Loop, Verizon shall provide DSL Loops as requested by MCIm. "Digital Designed Loops" are comprised of designed loops that meet specific MCIm requirements for metallic loops over 18k ft. or for conditioning of ADSL, HDSL, SDSL, IDSL, or BRI ISDN Loops. "Digital Designed Loops" may include requests for:

4.2.1.1 a 2W Digital Designed Metallic Loop with a total loop length of 18k to 30k ft., unloaded, with the option to remove bridged tap;

4.2.1.2 a 2W ADSL Loop of 12k to 18k ft. with an option to remove bridged tap;

4.2.1.3 a 2W ADSL Loop of less than 12k ft. with an option to remove bridged tap;

4.2.1.4 a 2W HDSL Loop of less than 12k ft. with an option to remove bridged tap:

4.2.1.5 4W HDSL Loop of less than 12k ft with an option to remove bridged tap;

4.2.1.6 a 2 W Digital Designed Metallic Loop with Verizon-placed ISDN loop extension electronics;

4.2.1.7 a 2W SDSL Loop with an option to remove bridged tap; and

4.2.1.8 a 2W IDSL Loop of less than 18k ft. with an option to remove bridged tap;

4.2.2 Integrated Digital Loop Carrier. When requested by MCIm, Verizon shall provide Loops provisioned over integrated digital loop carrier (IDLC) by removing the circuit from the IDLC system and placing it onto all-copper facilities to the main distribution frame. Verizon shall not charge MCIm any additional rates for the provisioning of Loops over IDLC, as the costs of such provisioning are included in the recurring rate for the Loop.

4.2.3 When Loops are provided over an IDLC system, Verizon shall permit MCIm, at MCIm's discretion, the ability to collocate DSLAMs or other DSL equipment at the remote terminal where the copper portion of the IDLC-provided Loop terminates.

[Issue No. IV-28, open 11/12/01]

4.2.3.1 Verizon shall permit MCIm, at MCIm's discretion, to collocate DSLAMs, splitters used in association with DSLAMs, and other equipment necessarily located where the copper portion of the Loop terminates in order to provide DSL functionality, in Verizon's premises where the copper portion of the Loop terminates. The Parties agree to adopt rules to implement the FCC's Order in FCC Docket No. 98-147 providing for the collocation of multifunction equipment where an inability to deploy that equipment would as a practical, economic, or operational matter preclude MCIm from obtaining interconnection or access to unbundled Network Elements.

[Issue No. IV-14, open 11/12/01]

4.2.4 Intentionally Left Blank

4.2.5 Intentionally Left Blank

4.2.6 The following ordering procedures shall apply to the DSL Loops and Digital Designed Loops:

4.2.6.1 MCIm shall place orders for Digital Designed Loops by delivering to Verizon a valid electronic transmittal service order or other mutually agreed upon type of service order. Such service order shall be provided in accordance with industry format and specifications or such format and specifications as may be agreed to by the Parties.

4.2.6.2 Verizon is conducting a mechanized survey of existing Loop facilities, on a Central Office by Central Office basis, to identify those Loops that meet the applicable technical characteristics established by Verizon for compatibility with ADSL, HDSL, IDSL and SDSL signals. The results of this survey will be stored in a mechanized database and made available to MCIm as the process is completed in each Central

Office. MCIm must utilize this mechanized loop qualification database, where available, in advance of submitting a valid electronic transmittal service order for an ADSL, HDSL, IDSL or SDSL Loop. This data base will provide information on whether a loop is qualified for xDSL service, the length of the loop and, if the loop does not qualify for xDSL service, data on why the loop does not qualify (*i.e.*, presence of Digital Loop Carrier, T-1 in the binder group, or load coils). Charges for mechanized loop qualification information are set forth in the Pricing Attachment.

4.2.6.3 If the Loop is not listed in the mechanized database described in this Section [4.2.6.3], MCIm must request a manual loop qualification prior to submitting a valid electronic service order for an ADSL, HDSL, SDSL, IDSL, or BRI ISDN Loop. The rates for manual loop qualification are set forth in the Pricing Attachment. In general, Verizon will complete a manual loop qualification request within three business days, although Verizon may require additional time due to poor record conditions, spikes in demand, or other unforeseen events. The information obtained under a manual loop qualification will generally be of the same type as that which is available under the mechanized loop qualification set forth in Section [4.2.6.2] above.

4.2.6.4 If a query to the mechanized loop qualification database or manual loop qualification indicates that a Loop does not qualify (e.g., because it does not meet the applicable technical parameters set forth in the Loop descriptions above), MCIm may request an Engineering Query, as described in Section [4.2.6.6], to determine whether the result is due to characteristics of the loop itself.

4.2.6.5 If MCIm submits a service order for an ADSL, HDSL, SDSL, IDSL, or BRI ISDN Loop that has not been prequalified, Verizon will query the service order back to the CLEC for qualification and will not accept such service order until the Loop has been prequalified on a mechanized or manual basis. If MCIm submits a service order for an ADSL, HDSL, SDSL, IDSL, or BRI ISDN Loop that is, in fact, not compatible with such services in its existing condition, Verizon will respond back to MCIm with a "Nonqualified" indicator and with information showing whether the non-qualified result is due to the presence of load coils, presence of digital loop carrier, or loop length (including bridged tap).

4.2.6.6 Where MCIm has followed the prequalification procedure described above and has determined that a Loop is not compatible with ADSL, HDSL, SDSL, IDSL, or BRI ISDN service in its existing condition, it may either request an Engineering Query to determine whether conditioning may make the Loop compatible with the applicable service; or if MCIm is already aware of the conditioning required (e.g.,

where MCIm has previously requested a qualification and has obtained loop characteristics), MCIm may submit a service order for a Digital Designed Loop. The results of the Engineering Query can provide the quantity and the locations of load coils, the locations and lengths of bridge taps, as well as actual cable gauges and the length of each gauge. Verizon will undertake to condition or extend the Loop in accordance with this Section [4.2.6] upon receipt of MCIm's valid, accurate and pre-qualified service order for a Digital Designed Loop.

4.2.6.7 Verizon shall make DSL Loops and Digital Designed Loops available to MCIm at the rates as set forth in the Pricing Attachment. [Agreed with respect to Digital Designed Loops]

4.2.7 The Parties will make reasonable efforts to coordinate their respective roles in order to minimize provisioning problems. In general, where conditioning or loop extensions are requested by MCIm, an interval of eighteen (18) business days will be required by Verizon to complete the loop analysis and the necessary construction work involved in conditioning and/or extending the loop as follows:

4.2.7.1 Three (3) business days will be required following receipt of MCIm's valid, accurate and pre-qualified service order for a Digital Designed Loop to analyze the loop and related plant records and to create an Engineering Work Order.

4.2.7.2 Upon completion of an Engineering Query, Verizon will initiate the construction order to perform the changes/modifications to the Loop requested by MCIm. Conditioning activities are, in most cases, able to be accomplished within fifteen (15) business days. Unforeseen conditions may add to this interval.

After the engineering and conditioning tasks have been completed, the standard Loop provisioning and installation process will be initiated, subject to Verizon's standard provisioning intervals.

4.2.7.3 If MCIm requires a change in scheduling, it must contact Verizon to issue a supplement to the original service order. If MCIm cancels the request for conditioning after a loop analysis has been completed but prior to the commencement of construction work, MCIm shall compensate Verizon for an Engineering Work Order charge as set forth in the Pricing Attachment. If MCIm cancels the request for conditioning after the loop analysis has been completed and after construction work has started or is complete, MCIm shall compensate Verizon for an Engineering Work Order charge as well as the charges associated with the conditioning tasks performed as set forth in the Pricing Attachment.

4.2.8 Access to NIDs. Verizon shall permit MCIm to access the NID at the customer premises as required for the deployment of Advanced Services.

4.2.9 Compliance with Industry Standards. Verizon shall adopt and comply with all applicable national and international industry standards, including those adopted and amended from time to time by ANSI and ITU respectively, for the provision of advanced services.

4.2.10 Spectral Compatibility. Verizon shall not unilaterally determine which advanced services technologies MCIm may deploy, nor will Verizon have unfettered control over spectrum management standards and practices. The Parties shall employ a spectral compatibility process to minimize interference and crosstalk, and to manage the deployment of advanced services in the network. This process must be employed in a competitively neutral manner between Verizon's retail service offering and MCIm's or any third party's service offerings, to allow the widest possible deployment of DSL services and other advanced services.

4.2.10.1 Spectral Compatibility Standards. The Parties shall use spectral compatibility standards, as they become defined by industry standards bodies, such as the T1E1.4 working group of the ANSI, to minimize interference and crosstalk.

4.2.10.2 Advanced Services Acceptable for Deployment. Any DSL services and other advanced services technologies that comply with existing and future industry standards are presumed acceptable for deployment. Any DSL services and other advanced services technologies which have been or are successfully deployed by any carrier without significantly degrading the performance of other services, or have been approved by the FCC, or any state commission, or an industry standards body, are presumed acceptable for deployment.

4.2.11 Spectrum Management. The Parties shall use spectrum management to manage the deployment of DSL services and other advanced services in the network.

4.2.11.1 Spectrum Management Procedures. If Verizon has pre-existing spectrum management procedures, Verizon shall provide MCIm a copy of these procedures no later than 10 days after the Effective Date. If Verizon has no pre-existing procedures then, no later than 30 days after MCIm's written request, Verizon and MCIm shall begin development of spectrum management procedures and policies. These spectrum management procedures should comply with

national standards and Applicable Law. If the development of these procedures is not completed within six months after MCIm's written request to develop these procedures, Verizon and MCIm will jointly seek expedited resolution by the Commission of all remaining issues.

4.2.11.2 Binder Group Management. Assignment of DSL services and other advanced services shall be on a Non-Discriminatory basis within and among Binder Groups; provided that no assignment of DSL services and other advanced services requested by MCIm will be made to a Binder Group containing AMI T1s without the prior written consent of MCIm. Verizon shall discontinue the deployment of AMI T1s and replace them, at no additional cost to MCIm, with non-interfering technologies. Verizon shall effectively manage AMI T1 systems to provide the maximum number of Binders Groups for DSL services and other advanced services deployment while AMI T1 systems are migrated to non-interfering technologies. Verizon shall not assign AMI T1s to Binder Groups containing other non-interfering technologies. As newer copper technologies that cause less interference are developed, Verizon shall develop a plan to migrate to these newer technologies.

4.2.11.3 Elimination of Interfering Technologies. Verizon: (i) may not add or deploy new AMI T1s (or their equivalent); (ii) must begin to remove and phase out the use of existing Disturbers; and (iii) must remove existing AMI T1s when they are in conflict with the deployment of DSL services and other advanced services by MCIm. Assignments or rearrangements to designated Binder Groups will be made so that the fill rate of the Binder Groups reflects the industry standards for such services. Verizon shall not deny any request for DSL services and other advanced services due to spectral interference unless all AMI T1s have been assigned or rearranged to designated Binder Groups and the Binder Groups reflect efficient fill rates.

4.2.12 Denial of DSL Services and Other Advanced Services

4.2.12.1 Verizon shall not deny MCIm's request to deploy DSL services and other advanced services unless it demonstrates to the Commission that deployment of the particular technology will significantly degrade the performance of other DSL services and other advanced services or traditional voice band services. Verizon must make this demonstration using quantifiable data and information.

4.2.12.2 If Verizon rejects an MCIm request for the provision of DSL services and other advanced services, Verizon shall (i) disclose all

information related to the rejection; (ii) provide MCIm in writing with the specific reason for the rejection; and (iii) disclose the number of Loops using DSL services and other advanced services technology within a Binder Group and the type of technology deployed on those Loops, and (iv) provide information on the entire cable assignment.

4.2.12.3 If Verizon claims a service is significantly degrading the performance of other DSL services or other advanced services or traditional voice band services, Verizon shall notify MCIm and allow MCIm a reasonable opportunity to correct the problem. Any claims by Verizon of network harm must be supported with specific and verifiable supporting information.

[Issue Nos. III-11 for section generally and IV-29 for discrete sections, open 11/12/01]

4.3 Subloop

[During mediation WorldCom proposed the following revisions to WorldCom's proposed language:]

4.3.1 Definition. The Subloop is any portion of the Loop that is Technically Feasible to access at terminals in Verizon's outside plant. Based on Verizon's assertion that neither Verizon nor its Affiliates own any inside wire in Virginia, the Subloop does not include~~, including~~ inside wire. An accessible terminal is any point on the Loop where technicians can access the wire or fiber within the cable without removing a splice case to reach the wire or fiber within, including, but not limited to, the pole or pedestal, the NID, the minimum point of entry, the single point of interconnection, the main distribution frame, the remote terminal, and the Loop Feeder/Distribution interface.

[Issue No. III-11, open 11/12/01]

4.3.2 At MCIm's request, Verizon shall provide MCIm, on an unbundled basis: (a) the Loop with all of its Subloop components, or (b) at MCIm's designation, any one or more of the Subloop components, including, but not limited to, Loop Feeder, Loop Concentrator/Multiplexer, NID, and Loop Distribution.

[Issue Nos. III-11 and IV-29, open 11/12/01]

[During mediation WorldCom proposed the following revisions to WorldCom's proposed language:]

4.3.3 Verizon shall not interfere with MCIm's access to inside wire ~~MCIm may obtain, and Verizon shall provide, access to Verizon's inside wire~~ at any

~~Technically Feasible~~ point including, but not limited to, the NID or~~,~~ the minimum point of entry~~, the single point of interconnection, the pedestal, or the pole~~. "Inside wire" is all ~~Loop plant owned by Verizon or one of its Affiliates on end-user~~wire facilities ~~customer premises~~ on the customer side of the NID, including inside the customer's premise. ~~as far as the point of demarcation defined in Section 68.3 of the FCC's rules, including the Loop plant near the end-user customer premises.~~

[Issue No. III-11, open 11/12/01]

4.3.4 If the Parties are unable to agree as to whether it is Technically Feasible, or whether sufficient space is available, to unbundle the Subloop at the point where MCIm designates, Verizon shall have the burden of demonstrating to the Commission that there is not sufficient space available, or that it is not Technically Feasible, to unbundle the Subloop at the point requested by MCIm. Further, if a state commission has determined that it is Technically Feasible to unbundle Subloops at a designated point, Verizon shall have the burden of demonstrating that it is not Technically Feasible, or that sufficient space is not available, to unbundle its own Loops at such a point.

[Issue Nos. III-11 and IV-29, open 11/12/01]

[During mediation WorldCom proposed the following revisions to WorldCom's proposed language:]

4.3.5 In addition to its obligation to provide Non-Discriminatory access to its Subloops under Section [4.3.2], Verizon shall provide MCIm a single point of interconnection at multi-unit premises that is suitable for use by multiple carriers. The Parties shall in good faith negotiate reasonable terms and conditions regarding a single point of interconnection, including, but not limited to, compensation to Verizon under forward-looking pricing principles. If such negotiations fail to produce a mutually agreeable solution within sixty (60) days after one Party's request to initiate such negotiations, either Party may seek resolution under the Dispute Resolution provision of Part A of this Agreement.

[Issue No. III-11 & IV-14, open 11/12/01]

4.4 Loop Feeder

4.4.1 Definition. "Loop Feeder" is the Network Element that provides connectivity between (i) a Feeder Distribution Interface (FDI) associated with Loop Distribution and a termination point appropriate for the media in a

Central Office, or (ii) a Loop Concentrator/Multiplexer in a remote terminal and a termination point appropriate for the media in a Central Office.

4.4.2 Requirements - Loop Feeder

4.4.2.1 Verizon shall provide MCIm physical access to the FDI and the right to connect MCIm-provided Loop Feeder to the FDI.

4.4.2.2 The physical medium of the Loop Feeder may be copper twisted pair, or single or multi-mode fiber or other technologies as designated by MCIm. Upon MCIm's request, Verizon shall provide MCIm a copper twisted pair Loop even in instances where the medium of the Loop Feeder for services that Verizon offers is other than a copper facility.

4.4.2.3 The Loop Feeder provided by Verizon must be capable of transmitting analog voice frequency, basic rate ISDN, digital data, optical signals, or analog radio frequency signals as appropriate.

4.4.2.4 Verizon shall provide appropriate power for all active elements in the Loop Feeder. Verizon shall provide appropriate power from a Central Office source, or from a commercial AC source with rectifiers for AC to DC conversion, and 8-hour battery back-up when the equipment is located in an outside plant Remote Terminal.

4.4.3 Intentionally Left Blank

4.4.4 Additional Technical Requirements - DS1 Conditioned Loop Feeder. In addition to the requirements set forth in Section [4.4] above, MCIm may designate that the Loop Feeder be conditioned to transport a DS1 signal.

4.4.5 Additional Technical Requirements - Optical Loop Feeder. In addition to the requirements set forth in Section [4.4.2] above, MCIm may designate that the Loop Feeder will transport DS3 and OCn.

4.4.6 Interface Requirements - Loop Feeder

4.4.6.1 The Loop Feeder Point of Termination (POT) within a Verizon Central Office will be as follows:

4.4.6.1.1 Copper twisted pairs must terminate on the MDF;

4.4.6.1.2 DS1 Loop Feeder must terminate on a DSX1, DCS1/0 or DCS3/1; and

4.4.6.1.3 Fiber Optic cable must terminate on a LGX.

[Issue No. III-11 & IV-14, open 11/12/01]

4.5 Distribution

4.5.1 Definition. "Distribution" provides connectivity between the NID component of Loop Distribution and the terminal block on the End User-side of a Feeder Distribution Interface (FDI). The FDI is a device that terminates the Distribution and the Loop Feeder, and cross-connects them in order to provide a continuous transmission path between the NID and a Verizon Central Office. There are three basic types of feeder-distribution connection: (i) multiple (splicing of multiple distribution pairs onto one feeder pair); (ii) dedicated (home run); and (iii) interfaced (cross-connected). While older plant uses multiple and dedicated approaches, newer plant and all plant that uses IDLC or other pair-gain technology necessarily uses the interfaced approach. The feeder-distribution interface (FDI) in the interfaced design makes use of a manual cross-connection, typically housed inside an outside plant device (green box) or in a vault or manhole.

The Distribution may be one or a combination of: copper twisted pair, coax cable, single or multi-mode fiber optic cable, or other technologies. Upon MCIm's request, Verizon shall provide MCIm a copper twisted pair Distribution even in instances where the Distribution for services that Verizon offers is other than a copper facility.

4.5.2 Requirements - Distribution. Verizon shall provide MCIm with Distribution that satisfies the following requirements:

4.5.2.1 Distribution must be capable of transmitting signals for the following services (as requested by MCIm):

4.5.2.1.1 Two-wire & four-wire analog voice grade Loops;

4.5.2.1.2 Two-wire & four-wire facilities that are capable of transmitting the digital signals needed to provide services such as ISDN, DSL, and DS1-level signals.

4.5.2.2 Distribution must transmit all signaling messages or tones. Where the Distribution includes any active elements that terminate any of the signaling messages or tones, these messages or tones must be reproduced by the Distribution at the interfaces to an adjacent Network Element in a format that maintains the integrity of the signaling messages or tones.

4.5.2.3 Distribution must support functions associated with provisioning, maintenance and testing of the Distribution itself, as well as provide necessary access to provisioning, maintenance and testing functions for Network Elements with which it is associated.

4.5.2.4 Where Technically Feasible, Distribution must provide performance monitoring of the Distribution itself, as well as provide necessary access for performance monitoring for Network Elements with which it is associated.

4.5.2.5 Verizon shall provide MCIm with physical access to, and the right to connect to, the FDI.

4.5.2.6 Verizon shall offer, at MCIm's sole discretion, Distribution together with, and separately from, the NID component of Distribution.

4.5.3 Additional Requirements - Special Copper Distribution

In addition to Distribution that supports the requirements in Section [4.5.2] above, MCIm may designate Distribution to be copper twisted pair unfettered by any intervening equipment (e.g., filters, loading coils, range extenders) so that MCIm can use these facilities for a variety of services by attaching appropriate terminal equipment.

4.5.4 Additional Requirements - Fiber Distribution. In addition to the requirements set forth in Section [4.5.2], MCIm may designate fiber optic cable Distribution that is capable of transmitting signals for the following services:

4.5.4.1 DS3 rate service;

4.5.4.2 Optical SONET OCn; and

4.5.4.3 Analog Radio Frequency based services.

4.5.5 Additional Requirements - Coaxial Cable Distribution. In addition to the requirements set forth in Section [4.5.2], MCIm may designate coaxial cable (coax) Distribution that is capable of transmitting signals for the following services:

4.5.5.1 Broadband data, either one way or bi-directional, symmetric or asymmetric, at rates between 1.5 Mbps and 45 Mbps and

4.5.5.2 Analog Radio Frequency based services.

[Issue No. IV-18, open 11/12/01]

4.6 Loop Concentrator/Multiplexer

4.6.1 Definition. The Loop Concentrator/Multiplexer is the Network Element that does one or more of the following:

(a) aggregates lower bit rate or bandwidth signals to higher bit rate or bandwidth signals (multiplexing);

(b) disaggregates higher bit rate or bandwidth signals to lower bit rate or bandwidth signals (demultiplexing);

(c) aggregates a specified number of signals or channels to fewer channels (concentrating);

(d) performs signal conversion, including encoding of signals (e.g., analog to digital and digital to analog signal conversion); or

(e) in some instances performs electrical to optical (E/O) conversion.

4.6.2 The Loop Concentrator/Multiplexer function may be provided through an Integrated Digital Loop Carrier (IDLC) system, channel bank, multiplexer or other equipment at which traffic is encoded and decoded, multiplexed and demultiplexed, or concentrated.

4.6.3 Technical Requirements - Loop Concentrator/Multiplexer. Verizon shall provide MCIm with Loop Concentrator/Multiplexers that satisfy the following requirements:

4.6.3.1 The Loop Concentrator/Multiplexer must be capable of performing its functions on the signals for the following services, including, but not limited to, (as needed by MCIm to provide end-to-end service capability):

4.6.3.1.1 two-wire & four-wire analog voice grade Loops;

4.6.3.1.2 two-wire & four-wire Loops that are capable of transmitting the digital signals needed to provide services such as ISDN, DSL, and DS1 & DS3-level signals;

4.6.3.1.3 four-wire digital data (2.4Kbps through 64Kbps and n times 64Kbps (where n < 24)

4.6.3.2 The Loop Concentrator/Multiplexer must perform the following functions as appropriate:

4.6.3.2.1 Analog to digital signal conversion of both incoming and outgoing (upstream and downstream) analog signals;

4.6.3.2.2 Multiplexing of the individual digital signals up to higher transmission bit rate signals (e.g., DS0, DS1, DS3, or optical SONET rates) for transport through the Loop Feeder facilities; and

4.6.3.2.3 Concentration of end-user signals onto fewer channels of a Loop Feeder (the concentration ratio to be specified by MCIm).

4.6.3.3 Verizon shall provide power for the Loop Concentrator/Multiplexer, through a non-interruptible source if the function is performed in a Central Office, or from a commercial AC power source with battery backup if the equipment is located outside a Central Office.

4.6.4 Requirements - Intelligent Loop Concentrator/ Multiplexer. Where available, Verizon shall provide MCIm with Intelligent Loop Concentrator/Multiplexers that satisfy the following requirements:

4.6.4.1 The Intelligent Loop Concentrator/Multiplexer (IC/M) must provide facility grooming, facility test functions, format conversion and signaling conversion as appropriate.

4.6.4.2 The underlying equipment that provides such IC/M function must continuously monitor protected circuit packs and redundant common equipment.

4.6.4.3 The underlying equipment that provides such IC/M function must automatically switch to a protection circuit pack on detection of a failure or degradation of normal operation.

4.6.4.4 The underlying equipment that provides such IC/M function must be equipped with a redundant power supply or a battery back-up.

4.6.4.5 At MCIm's option, Verizon shall provide MCIm with Real Time performance monitoring and alarm data on IC/M elements that may affect MCIm's traffic. This includes, but is not limited to, IC/M

hardware alarm data and facility alarm data on the underlying device that provides such IC/M function.

4.6.4.6 At MCIm's option, Verizon shall provide MCIm with Real Time ability to initiate tests on the underlying device that provides such IC/M function integrated test equipment as well as other integrated functionality for routine testing and fault isolation.

4.6.5 Interface Requirements - Loop Concentrator/ Multiplexer. As appropriate for the configuration that MCIm designates, any Loop Concentrator/Multiplexer provided by Verizon (including Intelligent Loop Concentrator/Multiplexers) must meet the following interface requirements:

4.6.5.1 The Loop Concentrator/Multiplexer must provide an analog voice frequency copper twisted pair interface at the serving Wire Center.

4.6.5.2 The Loop Concentrator/Multiplexer must provide digital four-wire electrical interfaces at the serving Wire Center.

4.6.5.3 The Loop Concentrator/Multiplexer must provide optical SONET interfaces at rates of OC-3, OC-12, OC-48, and OCn (where n is defined pursuant to the applicable technical reference).

4.6.5.4 The Loop Concentrator/Multiplexer must provide the Bellcore GR-303 DS1 level interface at the serving Wire Center, where available.

4.6.5.5 The Loop Concentrator/Multiplexer must provide Bellcore TR-08 modes 1&2 DS1 interfaces when designated by MCIm.

[Alternatively, WorldCom proposed to Verizon during the mediation the following Section 4.18 *et seq.*to which WorldCom and BellSouth have already agreed]

4.18 Loop Concentrator

4.18.1 Definition. The Loop Concentrator is the Network Element that does one or more of the following:

(a) aggregates lower bit rate or bandwidth signals to higher bit rate or bandwidth signals (multiplexing);
(b) disaggregates higher bit rate or bandwidth signals to lower bit rate or bandwidth signals (demultiplexing);

(c) aggregates a specified number of signals or channels to fewer channels (concentrating);
(d) performs signal conversion, including encoding of signals (e.g., analog to digital and digital to analog signal conversion); or
(e) in some instances performs electrical to optical (E/O) conversion.

4.18.1.1 The Loop Concentrator function may be provided through an Digital Loop Carrier (DLC) system, channel bank, multiplexer or other equipment at which traffic is encoded and decoded, multiplexed and demultiplexed, or concentrated.

4.18.2 Technical Requirements - Loop Concentrator. Verizon shall provide MCIm with Loop Concentrators that satisfy the following requirements:

4.18.2.1 The Loop Concentrator must be capable of performing its functions on the signals for the following services, including, but not limited to, (as needed by MCIm to provide end-to-end service capability to its subscriber.):

4.18.2.1.1 two-wire & four-wire analog voice grade Loops;

4.18.2.1.2 two-wire & four-wire Loops that are capable of transmitting the digital signals needed to provide services such as ISDN, and DS1-level signals;

4.18.2.1.3 four-wire digital data (2.4Kbps through 64Kbps and n times 64Kbps (where n < 24);

4.18.2.1.4 DSL and DS3 rate, where available;

4.18.2.2 The Loop Concentrator must perform the following functions as appropriate:

4.18.2.2.1 Analog to digital signal conversion of both incoming and outgoing (upstream and downstream) analog signals;

4.18.2.2.2 Multiplexing of the individual digital signals up to higher transmission bit rate signals (e.g., DS0, DS1 and DS3 where available) for transport through the Loop Feeder facilities; and

4.18.2.2.3 Concentration of end-user signals onto fewer channels of a Loop Feeder. (The concentration ratio to be specified by MCIm).

4.18.2.3 Verizon shall provide power for the Loop Concentrator , through a non-interruptible source if the function is performed in a central office, or from a commercial AC power source with battery backup if the equipment is located outside a central office. Such power shall also adhere to the requirements stated herein.

4.18.2.4 The Loop Concentrator shall be provided to MCIm in accordance with the Technical References provided in Appendix 1.

4.18.3 Requirements - Loop Concentrator/ Multiplexer. Verizon shall provide MCIm with Loop Concentrator/Multiplexers that satisfy the following requirements:

4.18.3.1 The Loop Concentrator/Multiplexer (C/M) must provide facility test functions, format conversion and signaling conversion as appropriate.

4.18.3.2 The underlying equipment that provides such C/M function must continuously monitor protected circuit packs and redundant common equipment.

4.18.3.3 The underlying equipment that provides such C/M function must automatically switch to a protection circuit pack on detection of a failure or degradation of normal operation.

4.18.3.4 The underlying equipment that provides such C/M function must be equipped with a redundant power supply or a battery back-up.

4.18.3.5 At MCIm's option, Verizon shall provide MCIm with Real Time ability to initiate tests on the underlying device that provides such IC/M function integrated test equipment as well as other integrated functionality for routine testing and fault isolation.

4.18.4 Interface Requirements - Loop Concentrator .

The Loop Concentrator shall meet the following interface requirements, as appropriate for the configuration that MCIm designates:

4.18.4.1 The Loop Concentrator shall provide an analog voice frequency copper twisted pair interface at the serving wire center, as described in the references in Appendix 1.

4.18.4.2 The Loop Concentrator shall provide digital 4-wire electrical interfaces at the serving wire center, as described in the references in Appendix 1.

4.18.4.3 Upon request from MCIm, Verizon shall, in cooperation with MCIm, use its best efforts to operationalize access to an optical loop concentrator, and such concentrator shall provide optical SONET interfaces at rates of OC-3, OC-12, OC-48, and OC-N, N as described in the references in Appendix 1. The rates for optical loop concentrator shall be determined in accordance with Attachment 1 of this Agreement.

4.18.4.4 The Loop Concentrator shall provide the Bellcore TR-303 DS1 level interface at the serving wire center. Loop Concentrator shall provide Bellcore TR-008 modes 1&2 DS1 interfaces when designated by MCIm. Such interface requirements are specified in the references in Appendix 1.

[Issue No. IV-19, open 11/12/01]

4.7 Network Interface Device

4.7.1 Definition. "Network Interface Device" or (NID) includes any means of interconnection of customer premises wiring to Verizon's Distribution plant, such as a cross connect device used for that purpose.

4.7.2 Verizon shall permit MCIm to connect MCIm's loop facilities to the on-premises wiring of a customer through Verizon's NID in the manner set forth in Section [4.7.3] or in any other Technically Feasible manner.

4.7.3 Access to Network Interface Device

4.7.3.1 Due to the wide variety of NIDs utilized by Verizon (based on customer size and environmental considerations), MCIm may access the customer's inside wire by any of the following means:

4.7.3.1.1 Verizon shall allow MCIm to connect its loops directly to Verizon's multi-line residential NID enclosures that have additional space and are not used by Verizon or any other Telecommunications Carrier to provide service to the premise. MCIm agrees to install compatible protectors and test jacks, to maintain the protection system and equipment.

4.7.3.1.2 Where an adequate length of inside wire is present and environmental conditions permit, and with the subscriber

authorization required by this Agreement and Applicable Law, either Party may remove the inside wire from the other Party's NID and connect that wire to that Party's own NID; or

4.7.3.1.3 Enter the subscriber access chamber or "side" of "dual chamber" NID enclosures for the purpose of extending a connecterized or spliced jumper wire from the inside wire through a suitable "punch-out" hole of such NID enclosures; or

4.7.3.1.4 Request Verizon to make other rearrangements to the inside wire terminations or terminal enclosure on a time and materials cost basis to be charged to the requesting Party (i.e., MCIm, its agent, the building owner or the subscriber). Such charges will be billed to the requesting Party.

4.7.3.2 In no case shall MCIm remove or disconnect ground wires from Verizon's NIDs, enclosures, or protectors.

4.7.3.3 Due to the wide variety of NID enclosures and outside plant environments, Verizon will work with MCIm to develop specific procedures to establish the most effective means of implementing this Section [4.7.3].

4.7.4 Technical Requirements

4.7.4.1 The NID shall provide an accessible point of connection for the subscriber-owned inside wiring, for Verizon's facilities, for the distribution media and/or cross connect to MCIm's NID, and shall maintain a connection to ground.

4.7.4.2 The NID shall be capable of transferring electrical analog or digital signals between the subscriber's inside wiring and the distribution media and/or cross connect to MCIm's NID, consistent with the NID's function at the Effective Date of this Agreement.

4.7.4.3 Where a Verizon NID exists, it is provided in its "as is" condition. MCIm may request that Verizon do additional work to the NID in accordance with Section [4.7.3.1.4].

[Alternatively, WorldCom proposed to Verizon during mediation the following Section 4.17 *et seq.*, to which WorldCom and BellSouth have already agreed.]

4.17 Network Interface Device

4.17.1 Definition:

4.17.1.1 The Network Interface Device (NID) is a single-line termination device or that portion of a multiple-line termination device required to terminate a single line or circuit. The function of the NID is to establish the network Demarcation Point between a carrier and its subscriber. The NID features two independent chambers or divisions which separate the service provider's network from the subscriber's inside wiring. Each chamber or division contains the appropriate connection points or posts to which the service provider, and the subscriber each make their connections.

4.17.2 With respect to multiple-line termination devices, if MCIm requests Verizon to install the NID, MCIm shall specify the quantity of NID connections it requires within such device.

4.17.3 Intentionally Left Blank

4.17.4 Technical Requirements

4.17.4.1 The Verizon Network Interface Device shall provide a clean, accessible point of connection for the inside wiring for MCIm's Distribution Media via MCIm's NID and shall maintain a connection to ground that meets the requirements set forth below.

4.17.4.2 The NID shall be capable of transferring electrical analog or digital signals between the subscriber's inside wiring for MCIm's Distribution Media via MCIm's NID.

4.17.4.3 All NID posts or connecting points shall be in place, secure, usable and free of any rust or corrosion. The protective ground connection shall exist and be properly installed. The ground wire shall be free of rust or corrosion and have continuity relative to ground.

4.17.4.4 The NID shall be capable of withstanding all normal local environmental variations.

4.17.4.5 The NID shall be physically accessible to MCIm designated personnel. In cases where entrance to the subscriber premises is required to give access to the NID, MCIm shall obtain entrance permission directly from the subscriber.

4.17.4.6 Verizon shall offer the NID together with, and separately from the Distribution Media component of Loop Distribution.

4.17.4.6.1 MCIm may connect its NID to the customer interface of Verizon's NID.

4.17.5 Interface Requirements - Network Interface Device

4.17.5.1 Where deployed the NID will be the interface to End Users' premises wiring for all Loop technologies.

4.17.5.2 Responsibilities of The Parties for Conditions of Access And Attachment To NIDs. Verizon shall allow MCIm to directly connect MCIm's Distribution Media to a Verizon NID either by using excess capacity on the NID or, if no excess capacity exists, and where ordered by the Commission, direct connection would involve disconnecting Verizon's Distribution Media and attaching MCIm's Distribution Media to the NID. Where MCIm disconnects Verizon's Distribution Media, MCIm shall ground Verizon's Distribution Media and maintain the ground in accordance with standard industry practices. In the event an MCIm customer reverts to Verizon, Verizon shall disconnect MCIm's Distribution Media only under these same terms and conditions. MCIm shall assume responsibility and shall bear the burden of properly grounding the loop after disconnection and maintaining same in proper order and safety. MCIm shall assume full liability for its actions and for any adverse consequences that could result. MCIm's responsibility and assumption of liability shall be the same for NIDs used in business settings which are similar to residential service NIDs, as for NIDs used for residential service.

[Issue No. IV-16, resolved]

4.8 Central Office Connections. Verizon shall provide and be responsible for all necessary or appropriate connections within its Central Offices or Wire Centers on its side of the demarcation point for each UNE.

[Issue Nos. III-10-1 through III-10-3 and III-10-5 through III-10-7, resolved]

4.9 Line Sharing and Line Splitting.

4.9.1"Line Sharing" is an arrangement by which Verizon facilitates MCIm's provision of ADSL (in accordance with T1.413), Splitterless ADSL (in accordance with T1.419), RADSL (in accordance with TR # 59), MVL (a proprietary technology), or any other xDSL technology that is presumed to be acceptable for shared line deployment in accordance with FCC rules, to a particular Customer location over an existing copper Loop or copper Sub Loop

that is being used simultaneously by Verizon to provide analog circuit-switched voice grade service to that Customer by making available to MCIm, solely for MCIm's own use, the frequency range above the voice band on the same copper Loop or copper Sub Loop required by MCIm to provide such services. This Section 4 addresses line sharing over loops that are entirely copper loops. MCIm access to the high frequency portion of the loop ("HFPL") on a copper/fiber hybrid loop shall be provided pursuant to the subloop provisions of section 5.1 through 5.12 in the UNE Attachment and the remote terminal collocation provisions of section 5.13 in UNE Attachment and Section 13.1 in the Collocation Attachment, and in accordance with Applicable Law. The Parties agree that Line Sharing, Line Splitting, and stand alone xDSL loops shall be provided in accordance with Applicable Law (including, without limitation, any effective, unstayed order(s) of the Federal Communicatios Commission in cc Docket Nos. 98-147 and 96-98).

4.9.2 In accordance with, but only to the extent required by, Applicable Law, Verizon shall provide Line Sharing to MCIm for MCIm's provision of ADSL (in accordance with T1.413), Splitterless ADSL (in accordance with T1.419), RADSL (in accordance with TR # 59), MVL (a proprietary technology), or any other xDSL technology that is presumed to be acceptable for shared line deployment in accordance with FCC rules, on the terms and conditions set forth herein. In order for a Loop to be eligible for Line Sharing, the following conditions must be satisfied for the duration of the Line Sharing arrangement: (i) the Loop must consist of a copper loop compatible with an xDSL service that is presumed to be acceptable for shared-line deployment in accordance with FCC rules; (ii) Verizon must be providing simultaneous circuit-switched analog voice grade service to the Customer served by the Loop in question; (iii) the Verizon Customer's dial tone must originate from a Verizon End Office Switch in the Wire Center where the Line Sharing arrangement is being requested; and (iv) the xDSL technology to be deployed by the CLEC on that Loop must not significantly degrade the performance of other services provided on that Loop.

4.9.3 Verizon shall make Line Sharing available to MCIm at the rates and charges set forth in the Pricing Attachment. In addition to the recurring and nonrecurring charges set forth in the Pricing Attachment for Line Sharing Itself, the following rates set forth in the Pricing Attachment are among those that may apply to a Line Sharing arrangement: (i) prequalification charges to determine whether a Loop is xDSL compatible (i.e., compatible with an xDSL service that is presumed to be acceptable for shared-line deployment in accordance with FCC rules); (ii) engineering query charges, engineering work order charges, and Loop conditioning (Digital Designed Loop) charges; (iii) charges associated with Collocation activities requested by MCIm; (iv) misdirected dispatch charges, service order charges, charges for installation or repair, manual intervention surcharges, trouble isolation charges, and pair swap/line and station transfer charges; and (v) wideband testing charges, if requested, and OSS charges.

4.9.4 The following ordering procedures shall apply to Line Sharing:

4.9.4.1 To determine whether a Loop qualifies for Line Sharing, the Loop must first be prequalified to determine if it is xDSL compatible. MCIm must utilize the mechanized or manual Loop qualification processes described in the terms applicable to xDSL and Digital Designed Loops, as referenced in Section 4.9.4.5, below, to make this determination.

4.9.4.2 MCIm shall place orders for Line Sharing by delivering to Verizon a valid electronic transmittal service order. Such service order shall be provided in accordance with industry format and specifications or such format and specifications as may be agreed to by the Parties.

4.9.4.3 If the Loop is prequalified by MCIm through the Loop prequalification database, and if a positive response is received and followed by receipt of MCIm's valid, accurate and pre-qualified service order for Line Sharing, Verizon will return an LSR confirmation within twenty-four (24) hours (weekends and holidays excluded) for LSRs with less than six (6) loops and within 72 hours (weekends and holidays excluded) for LSRs with six (6) or more loops.

4.9.4.4 If the Loop requires qualification manually or through an Engineering Query, three (3) additional Business Days will be generally be required to obtain Loop qualification results before an order confirmation can be returned following receipt of MCIm's valid, accurate request. Verizon may require additional time to complete the Engineering Query where there are poor record conditions, spikes in demand, or other unforeseen events.

4.9.4.5 If conditioning is required to make a Loop capable of supporting Line Sharing and MCIm orders such conditioning, then Verizon shall provide such conditioning in accordance with the terms of this Agreement pertaining to Digital Designed Loops; provided, however, that Verizon shall not be obligated to provide Loop conditioning if Verizon establishes that such conditioning is likely to degrade significantly the voice-grade service being provided to Verizon's Customers over such Loops.

4.9.4.6 The standard Loop provisioning and installation process will be initiated for the Line Sharing arrangement only once the requested engineering and conditioning tasks have been completed on the Loop. Scheduling changes and charges associated with order cancellations after conditioning work has been initiated are addressed in the terms pertaining to Digital Designed Loops, as referenced in Section 4.9.4.5, above. The provisioning interval for the Line Sharing arrangement shall be three (3)

business days; provided however, orders that require conditioning, pair swaps, line station transfers or include ten (10) or more loops will require a longer interval. In no event shall the Line Sharing interval applied to MCIm be longer than the interval applied to any Affiliate of Verizon.

4.9.4.7 MCIm must provide all required Collocation, CFA, SBN and NC/NCI information when a Line Sharing Arrangement is ordered. Collocation augments required, either at the POT Bay, Collocation node, or for splitter placement must be ordered using standard collocation applications and procedures, unless otherwise agreed to by the Parties or specified in this Agreement.

4.9.4.8 The Parties will make reasonable efforts to coordinate their respective roles in Line Sharing in order to minimize provisioning problems and facility issues. Upon Verizon's request, MCIm will provide non-binding, reasonable, timely, and accurate forecasts of its Line Sharing requirements, including splitter placement elections and ordering preferences. These forecasts are in addition to projections provided for other stand-alone unbundled Loop types.

4.9.5 To the extent required by Applicable Law, MCIm shall provide Verizon with information regarding the type of xDSL technology that it deploys on each shared Loop. Where any proposed change in technology is planned on a shared Loop, MCIm must provide this information to Verizon in order for Verizon to update Loop records and anticipate effects that the change may have on the voice grade service and other Loops in the same or adjacent binder groups.

4.9.6 As described more fully in Verizon Technical Reference 72575, the xDSL technology used by MCIm for Line Share Arrangements shall operate within the Power Spectral Density (PSD) limits set forth in T1.413-1998 (ADSL), T1.419-2000 (Splitterless ADSL), or TR59-1999 (RADSL), and MVL (a proprietary technology) shall operate within the 0 to 4 kHz PSD limits of T1.413-1998 and within the transmit PSD limits of T1.601-1998 for frequencies above 4 kHz, provided that the MVL PSD associated with audible frequencies above 4 kHz shall be sufficiently attenuated to preclude significantly degrading voice services. MCIm's deployment of additional Advanced Services shall be subject to the applicable FCC Rules.

4.9.7 MCIm may only access the high frequency portion of a Loop in a Line Sharing arrangement through an established Collocation arrangement at the Verizon Serving Wire Center that contains the End Office Switch through which voice grade service is provided to Verizon's Customer. MCIm is responsible for providing a splitter at that Wire Center that complies with ANSI specification T1.413 through one of the splitter options described below. MCIm is also responsible for providing its own DSLAM equipment in the Collocation

arrangement and any necessary CPE for the xDSL service it intends to provide (including CPE splitters, filters and/or other equipment necessary for the end user to receive separate voice and data services across the shared Loop). Two splitter configurations are available. In both configurations, the splitter must be provided by MCIm and must satisfy the same NEBS requirements that Verizon imposes on its own splitter equipment or the splitter equipment of any Verizon Affiliate. MCIm must designate which splitter option it is choosing on the Collocation application or augment. Regardless of the option selected, the splitter arrangements must be installed before MCIm submits an order for Line Sharing.

Splitter Option 1: Splitter in MCIm Collocation Area

In this configuration, the MCIm-provided splitter (ANSI T1.413 or MVL compliant) is provided, installed and maintained by MCIm in its own Collocation space within the Customer's serving End Office. The Verizon-provided dial tone is routed through the splitter in the MCIm Collocation area. Any rearrangements will be the responsibility of MCIm.

Splitter Option 2: Splitter in Verizon Area

In this configuration, Verizon inventories and maintains a MCIm-provided splitter (ANSI T1.413 or MVL compliant) in Verizon space within the Customer's serving End Office. At MCIm's option, installation of the splitter may be performed by Verizon or by a Verizon-approved vendor designated by MCIm. The splitter is installed (mounted) in a relay rack between the POT (Point of Termination) Bay and the MDF, and the demarcation point is at the splitter end of the cable connecting the CLEC Collocation and the splitter. Verizon will control the splitter and will direct any required activity. Verizon will perform all POT Bay work required in this configuration. Verizon will provide a splitter inventory to MCIm upon completion of the required augment.

4.9.7.1 Where a new splitter is to be installed as part of an initial Collocation implementation, the splitter installation may be ordered as part of the initial Collocation application. Associated splitter and Collocation charges apply. MCIm must submit a new Collocation application, with the application fee, to Verizon detailing its request. Except as otherwise required by Applicable Law, standard Collocation intervals will apply (unless Applicable Law requires otherwise).

4.9.7.2 Where a new splitter is to be installed as part of an existing Collocation arrangement, or where the existing Collocation arrangement is to be augmented (e.g., with additional terminations at the POT Bay), the splitter installation or augment may be ordered via an application for Collocation augment. Associated splitter and Collocation charges apply.

MCIm must submit the application for Collocation augment, with the application fee, to Verizon. Unless a longer interval is stated in Verizon's applicable Tariff, an interval of seventy-six (76) business days shall apply.

4.9.8 Testing shared Loops with Splitter Option 1 or 2 shall be as follows:

4.9.8.1 Under Splitter Option 1, MCIm may conduct its own physical tests of the shared Loop from MCIm's collocation area. If it chooses to do so, MCIm may supply and install a test head to facilitate such physical tests, provided that: (a) the test head satisfies the same NEBS requirements that Verizon imposes on its own test head equipment or the test head equipment of any Verizon Affiliate; and (b) the test head does not interrupt the voice circuit to any greater degree than a conventional MLT test. Specifically, the MCIm-provided test equipment may not interrupt an in-progress voice connection and must automatically restore any circuits tested in intervals comparable to MLT. This optional MCIm-provided test head would be installed between the "line" port of the splitter and the POT bay in order to conduct remote physical tests of the shared loop.

4.9.8.2 Under Splitter Option 2, either Verizon or a Verizon-approved vendor selected by MCIm may install a MCIm-provided test head to enable MCIm to conduct remote physical tests of the shared Loop. This optional MCIm-provided test head may be installed at a point between the "line" port of the splitter and the Verizon-provided test head that is used by Verizon to conduct its own Loop testing. The MCIm-provided test head must satisfy the same NEBS requirements that Verizon imposes on its own test head equipment or the test head equipment of any Verizon Affiliate, and may not interrupt the voice circuit to any greater degree than a conventional MLT test. Specifically, the MCIm-provided test equipment may not interrupt an in-progress voice connection and must automatically restore any circuits tested in intervals comparable to MLT. Verizon will inventory and maintain the MCIm-provided test head, and will direct all required activity.

4.9.8.3 Under either Splitter Option, if a Verizon test head has been installed, Verizon will conduct tests of the shared Loop using a Verizon-provided test head, and, upon request, will provide these test results to MCIm during normal trouble isolation procedures in accordance with reasonable procedures.

4.9.8.4 Under either Splitter Option, Verizon will make MLT access available to MCIm via RETAS after the service order has been completed. MCIm will utilize the circuit number to initiate a test.

4.9.8.5 The Parties will continue to work cooperatively on testing procedures. To this end, in situations where MCIm has attempted to use one or more of the foregoing testing options but is still unable to resolve the error or trouble on the shared Loop, Verizon and MCIm will each dispatch a technician to an agreed-upon point to conduct a joint meet test to identify and resolve the error or trouble. Verizon may assess a charge for a misdirected dispatch only if the error or trouble is determined to be one that MCIm should reasonably have been able to isolate and diagnose through one of the testing options available to MCIm above. The Parties will mutually agree upon the specific procedures for conducting joint meet tests.

4.9.8.6 Verizon and MCIm each have a joint responsibility to educate its Customer regarding which service provider should be called for problems with their respective voice or Advanced Service offerings. Verizon will retain primary responsibility for voice band trouble tickets, including repairing analog voice grade services and the physical line between the NID at the Customer premise and the point of demarcation in the central office. MCIm will be responsible for repairing advanced data services it offers over the Line Sharing arrangement. Each Party will be responsible for maintaining its own equipment. Before either Party initiates any activity on a new shared Loop that may cause a disruption of the voice or data service of the other Party, that Party shall first make a good faith effort to notify the other Party of the possibility of a service disruption. Verizon and MCIm will work together to address Customer initiated repair requests and to prevent adverse impacts to the Customer.

4.9.8.7 When Verizon provides inside wire maintenance services to the Customer, Verizon will only be responsible for testing and repairing the inside wire for voice-grade services. Verizon will not test, dispatch a technician, repair, or upgrade inside wire to clear trouble calls associated with MCIm's Advanced Services. Verizon will not repair any CPE equipment provided by MCIm. Before a trouble ticket is issued to Verizon, MCIm shall validate whether the Customer is experiencing a trouble that arises from MCIm's Advanced Service. If the problem reported is isolated to the analog voice-grade service provided by Verizon, a trouble ticket may be issued to Verizon.

4.9.8.8 In the case of a trouble reported by the Customer on its voice-grade service, if Verizon determines the reported trouble arises from MCIm's Advanced Services equipment, splitter problems, or MCIm's activities, Verizon will:

4.9.8.8.1 Notify MCIm and request that MCIm immediately test the trouble on MCIm's Advanced Service.

4.9.8.8.2 If the Customer's voice grade service is so degraded that the Customer cannot originate or receive voice grade calls, and MCIm has not cleared its trouble within a reasonable time frame, Verizon may take unilateral steps to temporarily restore the Customer's voice grade service if Verizon determines in good faith that the cause of the voice interruption is MCIm's data service.

4.9.8.8.3 Upon completion of the steps in 4.9.8.8.1 and 4.9.8.8.2, above, Verizon may temporarily remove the MCIm-provided splitter from the Customer's Loop and switch port if Verizon determines in good faith that the cause of the voice interruption is MCIm's data service.

4.9.8.8.4 Upon notification from MCIm that the malfunction in MCIm's advanced service has been cleared, Verizon will restore MCIm's advanced service by restoring the splitter on the Customer's Loop.

4.9.8.8.5 Upon completion of the above steps, MCIm will be charged a Trouble Isolation Charge (TIC) to recover Verizon's costs of isolating and temporarily removing the malfunctioning Advanced Service from the Customer's line if the cause of the voice interruption was MCIm's data service.

4.9.8.8.6 Verizon shall not be liable for damages of any kind for disruptions to MCIm's data service that are the result of the above steps taken in good faith to restore the end user's voice-grade POTS service, and MCIm shall indemnify Verizon from any Claims that result from such steps.

4.9.8.9 MCIm may provide integrated voice and data services over the same Loop by engaging in "line splitting" as set forth in paragraph 18 of the FCC's Line Sharing Reconsideration Order (CC Docket Nos. 98-147, 96-98),released January 19, 2001. Any line splitting between MCIm and another CLEC shall be accomplished by prior negotiated arrangement between those CLECs. To achieve a line splitting capability immediately, MCIm may order an unbundled xDSL capable loop, which will terminate to a collocated splitter and DSLAM equipment provided by its data partner (or itself), unbundled switching combined with shared transport, collocator-to-collocator connections, and available cross connects, under the terms and conditions set forth in the applicable sections for each element in this Agreement. MCIm or its data partner shall provide any splitters used in a line splitting configuration. Verizon will provide to MCIm any service agreed to by the parties as described and developed by

the ongoing DSL Collaborative in the State of New York, NY PSC Case 00-C-0127 consistent with such implementation schedules, terms, conditions and guidelines established by the Collaborative, allowing for local jurisdictional and OSS differences. Verizon will make a good faith effort to have such offerings and procedures available at the same time as in NY, but no later than the Effective Date of this agreement. Verizon shall make Line Splitting available to MCIm at the rates and charges set forth in the Pricing Attachment for the applicable elements and/or components. Such elements and/or components may include, among others, those set forth in Section [4.3] hereof, as well as unbundling switching, loops and transport.

[Issue No. III-10-4, open 11/12/01]

4.10 DSL Based Services Provided Out of Digital Loop Carrier Equipment. If and when Verizon upgrades its network to provide DSL-based services out of remote terminals, Verizon commits to provide access to remote facilities and to Loops attached to those remote facilities on the same terms and conditions as Verizon has access or provides access to its affiliates.

[Issue No. III-12, Section 5 *et seq.*, open 11/12/01]

[WorldCom proposed to Verizon during the mediation the following to which WorldCom and BellSouth have already agreed]

Section 5. Dark Fiber

5.1 Definition: Dark Fiber is BellSouth/Verizon optical transmission facilities without attached multiplexers, aggregation, or other electronics. To the extent BellSouth's/Verizon's fiber contains any lightwave repeaters (e.g., regenerators or optical amplifiers) installed on the fiber, BellSouth/Verizon shall not remove the same.

5.2 Requirements:

5.2.1 BellSouth/Verizon shall make available Dark Fiber where it exists in BellSouth's/Verizon's network and where, as a result of future building or deployment, it becomes available. BellSouth/Verizon shall offer all Dark Fiber to MCIm pursuant to the prices set forth in Attachment I of this Agreement. BellSouth/Verizon shall make available Dark Fiber at Parity and on a non-discriminatory basis in accordance with applicable FCC rules and orders.

5.2.2 BellSouth/Verizon shall provide a single Point of Contact (SPOC) for negotiating all Dark Fiber arrangements.

5.2.3 MCIm may test the quality of the Dark Fiber to confirm its usability and performance specifications.

5.2.4 BellSouth/Verizon shall use its best efforts to provide to MCIm information regarding the location, availability and performance of Dark Fiber within ten (10) business days for a records based answer and twenty (20) business days for a field based answer, after receiving a request from MCIm ("Request"). Within such time period, BellSouth/Verizon shall send written confirmation of availability of the Dark Fiber ("Confirmation"). BellSouth/Verizon shall hold such requested Dark Fiber for MCIm's use for ten (10) business days from MCIm's receipt of Confirmation and may not allow any other party to use such media, including BellSouth/Verizon. BellSouth/Verizon shall provide Dark Fiber on a first come, first served basis.

5.2.5 BellSouth/Verizon shall use its best efforts to make Dark Fiber available to MCIm within thirty (30) business days after it receives written confirmation from MCIm that the Dark Fiber previously deemed available by BellSouth/Verizon is wanted for use by MCIm. BellSouth/Verizon shall identify all appropriate and available connection points (e.g., Light Guide Interconnection (LGX) or splice points) to enable MCIm to connect or splice MCIm provided transmission media (e.g., optical fiber) or equipment to the Dark Fiber, and MCIm shall notify BellSouth/Verizon which point(s) it desires to use.

5.3 Additional Requirements for Dark Fiber

5.3.1 BellSouth/Verizon shall provide MCIm with the most recent test records it has, if any, for Dark Fiber that MCIm plans to use. If BellSouth has no test records, at MCIm's request, BellSouth/Verizon shall provide an estimate, using accepted industry practices, of the transmission loss of the channel at MCIm's intended transmission wavelength. BellSouth/Verizon shall not warrant the accuracy of its estimate. If BellSouth's/Verizon's estimate of transmission loss exceeds MCIm's specifications, MCIm shall have the option of performing its own tests prior to purchase of the Dark Fiber.

5.3.2 MCIm may splice at the end points and test Dark Fiber obtained from BellSouth/Verizon using MCIm or third party personnel. For connections at a splice point, BellSouth/Verizon shall uncoil existing fiber a minimum of 25 feet from the manhole to allow MCIm to splice the fiber.

5.4 Availability of Unused Transmission Media other than Dark Fiber shall be determined by BellSouth/Verizon on a case by case basis. BellSouth/Verizon is not required to build out or deploy coaxial cable or copper where it has not been installed, although its availability will be affected as a result of future building out or deployment of such other unused transmission media.

5.4.1 If deployed in BellSouth's/Verizon's network, on a case by case basis, BellSouth/Verizon may provide wave division multiplexer ("WDM") applications at rates to be negotiated by the Parties. For WDM applications, BellSouth/Verizon shall provide to MCIm an interface to an existing WDM device or allow MCIm to install its own WDM device (where sufficient system loss margins exist or where MCIm provides the necessary loss compensation) to multiplex the traffic at different wavelengths. This applies to both the transmit and the receive ends of the Dark Fiber.

[Issue No. IV-14, open 11/12/01]

Section 6. Packet Switching/DSLAMs

6.1 "Packet Switching" means the basic packet switching function of routing or forwarding packets, frames, cells or other data units based on address or other routing information contained in the packets, frames, cells or other data units, and the functions that are performed by Digital Subscriber Line Access Multiplexers (DSLAMs), including but not limited to:

6.1.1 The ability to terminate copper customer loops (which includes both a low band voice channel and a high-band data channel, or solely a data channel);

6.1.2 The ability to forward the voice channels, if present, to a circuit switch or multiple circuit switches;

6.1.3 The ability to extract data units from the data channels on the loops; and

6.1.4 The ability to combine data units from multiple loops onto one or more trunks connecting to a packet switch or packet switches.

6.2 Verizon shall provide Non-Discriminatory access to Packet Switching where each of the following conditions is satisfied:

6.2.1 Verizon has deployed digital loop carrier systems, including but not limited to, integrated digital loop carrier (IDLC) or universal digital loop carrier systems; or has deployed any other system in which fiber optic