APPENDIX NIM
(NETWORK INTERCONNECTION METHODS)

TABLE OF CONTENTS

APPENDIX NIM
(NETWORK INTERCONNECTION METHODS)

1. INTRODUCTION

1.1 This Appendix sets forth the terms and conditions that Network Interconnection Methods (NIM) are provided by TDS TELECOM and CLEC. This Appendix describes the physical architecture for Interconnection of the Parties' facilities and equipment for the transmission and routing of Telephone Exchange Service traffic and Exchange Access traffic between the respective Customers of the Parties; provided, however, Interconnection may not be used solely for the purpose of originating a Party's own interexchange traffic.

1.2 Network Interconnection Methods (NIMs) include, but are not limited to, Indirect Interconnection; Leased Facilities Interconnection; Fiber Meet Interconnection; and other methods as mutually agreed to by the Parties.

1.2.1 Trunking requirements associated with Interconnection are contained in Appendix ITR.

1.3 TDS TELECOM shall provide Interconnection for CLEC's facilities and equipment for the transmission and routing of telephone exchange service and exchange access, at a level of quality equal to that which TDS TELECOM provides itself, a subsidiary, an affiliate, or any other party to which TDS TELECOM provides Interconnection and on rates, terms and conditions that are just, reasonable and non-discriminatory.

1.4 The Parties shall effect an Interconnection that is efficient, fair and in a manner that is mutually agreeable to the Parties.

2. PHYSICAL ARCHITECTURE

2.1 TDS TELECOM's network partly consists of End Office switches that serve IntraLATA, InterLATA, Local, and EAS traffic. Either Party's network architecture in any given local exchange area and/or LATA can vary markedly from another local exchange area/LATA. Using one or more of the NIMs herein, the Parties will agree to a physical architecture plan for a specific Exchange Area. The physical architecture plan will be completed within sixty (60) days from CLEC's written request for interconnection contingent upon the Parties' mutual agreement on the architecture. CLEC and TDS TELECOM agree to Interconnect their networks through existing and/or new Interconnection facilities between CLEC's network and TDS TELECOM's network. The physical architecture plan will, at a minimum, include the location of CLEC's network presence in the LATA and TDS TELECOM switch(es) to be interconnected, the facilities that will connect the two networks, the timelines for completion of all major tasks, and which Party will provide (be financially responsible for) the Interconnection

facilities. At the time of implementation in a given local exchange area the plan will be documented and signed by appropriate representatives of the Parties, indicating their mutual agreement to the physical architecture plan.

2.2 Points of Interconnection (POIs): A Point of Interconnection (POI) is a point in the network where the Parties deliver Interconnection traffic to each other, and also serves as a demarcation point between the facilities that each Party is responsible to provide. The initial POI is described in Attachment A of this Appendix.

2.3 Each Party is responsible for the facilities to its side of the POI(s) and may utilize any method of Interconnection described in this Appendix. Each Party is responsible for the appropriate sizing, operation, and maintenance of the transport facility to the POI(s).

2.4 Either Party, must provide thirty (30) days written notice of any changes to the physical architecture plan.

2.5 Each Party is solely responsible for the facilities that carry OS/DA, 911 or mass calling for their respective End Users.

2.6 Technical Interfaces

2.6.1 The Interconnection facilities provided by each Party shall be formatted using B8ZS with Extended Superframe format framing.

2.6.2 Electrical handoffs at the POI(s) will be DS1, DS3 or STS-1 as mutually agreed to by the parties. When a DS3 or STS-1 handoff is agreed to by the Parties, each Party will provide all required multiplexing at their respective end.

3. METHODS OF INTERCONNECTION

3.1 Indirect Interconnection

3.1.1 The Parties agree that where traffic volumes exceed the capacity of direct interconnection facilities, overflow traffic shall be exchanged by transiting such traffic through third party LEC tandems. For overflow traffic each Party shall be financially and operationally responsible for the entire cost of providing facilities from its network to the third party LEC tandem.

3.2 Leased Facility Interconnection ("LFI")

3.2.1 Where facilities exist, either Party may lease facilities from the other Party pursuant to applicable tariff. The rate for two-way facilities provided by TDS TELECOM and dedicated to traffic between CLEC and TDS

TELECOM will be reduced by a shared facility factor of 50% to account for the estimated portion of the facility utilized to carry TDS TELECOM originated traffic.

3.3 Fiber Meet Interconnection

3.3.1 Fiber Meet Interconnection between TDS TELECOM and CLEC can occur at any mutually agreeable, economically and technically feasible point(s) between CLEC's premises and a TDS TELECOM Office.

3.3.2 Where the Parties interconnect their networks pursuant to a Fiber Meet, the Parties shall jointly engineer and operate this Interconnection as a Synchronous Optical NETwork (SONET) ring or single point-to-point linear SONET system. Administrative control of the SONET system shall be mutually agreed upon by the Parties. Only Interconnection trunks or trunks used to provide ancillary services as described in Section 5 of Appendix ITR shall be provisioned over this facility.

3.3.3 Neither Party will be given the IP address or allowed to access the Data Communications Channel (DCC) of the other Party's Fiber Optic Terminal (FOT). The Fiber Meet will be designed so that each Party may, as far as is technically feasible, independently select the transmission, multiplexing, and fiber terminating equipment to be used on its side of the POI(s). The Parties will work cooperatively to achieve equipment and vendor compatibility of the FOT equipment. Requirements for such Interconnection specifications will be defined in joint engineering planning sessions between the Parties. The Parties may share the investment of the fiber as mutually agreed. The Parties will use good faith efforts to develop and agree on these facility arrangements within ninety (90) days of the determination by the Parties that such specifications shall be implemented, and in any case, prior to the establishment of any Fiber Meet arrangements between them.

3.3.4 There are four basic Fiber Meet design options.

3.3.4.1 Design One: CLEC's fiber cable (four, or some integral multiple thereof, fibers) and TDS TELECOM's fiber cable (four, or some integral multiple thereof, fibers) are connected at an economically and technically feasible point between the CLEC and TDS TELECOM locations. This Interconnection point would be at a mutually agreeable location.

3.3.4.2 Design Two: CLEC will provide fiber cable to the last entrance (or TDS TELECOM designated) manhole at TDS TELECOM's switch. TDS TELECOM shall make all necessary preparations to

receive and to allow and enable CLEC to deliver fiber optic facilities into that manhole. CLEC will provide a sufficient length of Optical Fire Resistant (OFR) cable for TDS TELECOM to pull the fiber cable through the TDS TELECOM cable vault and terminate on the TDS TELECOM fiber distribution frame (FDF) in TDS TELECOM's office. CLEC shall deliver and maintain such strands wholly at its own expense up to the POI. TDS TELECOM shall take the fiber from the manhole and terminate it inside TDS TELECOM's office on the FDF at TDS TELECOM's expense. In this case the POI shall be at the TDS TELECOM designated manhole location.

3.3.4.3 Design Three: TDS TELECOM will provide fiber cable to the last entrance (or CLEC designated) manhole at the CLEC location. CLEC shall make all necessary preparations to receive and to allow and enable TDS TELECOM to deliver fiber optic facilities into that manhole. TDS TELECOM will provide a sufficient length of Optical Fire Resistant (OFR) cable for CLEC to run the fiber cable from the manhole and terminate on the CLEC fiber distribution frame (FDF) in CLEC's location. TDS TELECOM shall deliver and maintain such strands wholly at its own expense up to the POI. CLEC shall take the fiber from the manhole and terminate it inside CLEC's office on the FDF at CLEC's expense. In this case the POI shall be at the CLEC designated manhole location.

3.3.4.4 Design Four: Both CLEC and TDS TELECOM each provide two fibers between their locations. This design may only be considered where existing fibers are available and there is a mutual benefit to both Parties. The Parties will work cooperatively to terminate each other's fiber in order to provision this joint SONET ring or point-to-point linear system. Both Parties will work cooperatively to determine the appropriate technical handoff for purposes of demarcation and fault isolation.

3.3.5 The CLEC location includes FOTs, multiplexing and fiber required to terminate the optical signal provided from TDS TELECOM. This location is CLEC's responsibility to provision and maintain.

3.3.6 The TDS TELECOM location includes all TDS TELECOM FOTs, multiplexing and fiber required to terminate the optical signal provided from CLEC. This location is TDS TELECOM's responsibility to provision and maintain.

3.3.7 TDS TELECOM and CLEC shall, solely at their own expense, procure, install, and maintain the agreed-upon FOT equipment in each of their

locations where the Parties established a Fiber Meet. Capacity shall be sufficient to provision and maintain all trunk groups prescribed by Appendix ITR for the purposes of Interconnection.

3.3.8 Each Party shall provide its own, unique source for the synchronized timing of its FOT equipment. At a minimum, each timing source must be Stratum-3 traceable and cannot be provided over DS0/DS1 facilities, via Line Timing; or via a Derived DS1 off of FOT equipment. Both Parties agree to establish separate and distinct timing sources that are not derived from the other, and meet the criteria identified above.

3.3.9 CLEC and TDS TELECOM will mutually agree on the capacity of the FOT(s) to be utilized based on equivalent DS1s, DS3s or STS-1s. Each Party will also agree upon the optical frequency and wavelength necessary to implement the Interconnection. The Parties will develop and agree upon methods for the capacity planning and management for these facilities, terms and conditions for over provisioning facilities, and the necessary processes to implement facilities as indicated below. These methods will meet quality standards as mutually agreed to by CLEC and TDS TELECOM.

4. RESPONSIBILITIES OF THE PARTIES

4.1 If CLEC determines to offer local exchange service within a TDS TELECOM area, CLEC shall provide thirty (30) days written notice to TDS TELECOM of the need to establish Interconnection. Such request shall include (i) CLEC's Switch address, type, and CLLI; (ii) CLEC's requested Interconnection activation date; and (iii) a non-binding forecast of CLEC's trunking and facilities requirements.

4.2 Upon receipt of CLEC's notice to interconnect, the Parties shall schedule a meeting to negotiate and mutually agree on the network architecture (including trunking) to be documented as discussed above. The Interconnection activation date for an Interconnect shall be established based on then-existing work force and load, the scope and complexity of the requested Interconnection and other relevant factors.

4.3 If CLEC deploys additional switches after the Effective Date or otherwise wishes to establish Interconnection with additional TDS TELECOM Central Offices, CLEC shall provide written notice to TDS TELECOM to establish such Interconnection. The terms and conditions of this Agreement shall apply to such Interconnection. If TDS TELECOM deploys additional End Office switches in a local exchange after the effective date or otherwise wishes to establish Interconnection with additional CLEC Central Offices in such local exchange, TDS TELECOM shall be entitled, upon written notice to CLEC, to establish such

Interconnection and the terms and conditions of this Agreement shall apply to such Interconnection.

4.4 CLEC and TDS TELECOM shall work cooperatively to install and maintain a reliable network. CLEC and TDS TELECOM shall exchange appropriate information (e.g., maintenance contact numbers, network information, information required to comply with law enforcement and other security agencies of the federal and state government and such other information as the Parties shall mutually agree) to achieve this desired reliability.

4.5 CLEC and TDS TELECOM will review engineering requirements as required and establish semi-annual forecasts for facilities utilization provided under this Appendix.

4.6 CLEC and TDS TELECOM shall:

4.6.1 Provide trained personnel with adequate and compatible test equipment to work with each other's technicians.

4.6.2 Notify each other when there is any change affecting the service requested, including the due date.

4.6.3 Recognize that a facility handoff point must be agreed to that establishes the demarcation for maintenance and provisioning responsibilities for each party on their side of the POI.

5. JOINT FACILITY GROWTH PLANNING

5.1 The initial fiber optic system deployed for each Interconnection shall be agreed to by the Parties. The following lists the criteria and processes needed to satisfy additional capacity requirements beyond the initial system.

5.2 Criteria:

5.2.1 Investment is to be minimized.

5.2.2 Facilities will be planned for in accordance with the trunk forecasts exchanged between the Parties as described in Appendix ITR and are to be deployed in accordance with the Processes described below.

5.3 Processes:

5.3.1 In addition to the semi-annual forecast process, discussions to provide relief to existing facilities can be initiated by either party. Actual system augmentations will be initiated upon mutual agreement.

5.3.2 Both Parties will perform a joint validation to ensure current Interconnection facilities and associated trunks have not been over-provisioned. If any facilities and/or associated trunks are over-provisioned, they will be turned down where appropriate. Trunk design blocking criteria described in Appendix ITR will be used in determining trunk group sizing requirements and forecasts.

5.3.3 If, based on the forecasted equivalent DS-1 growth, the existing fiber optic system is not projected to exhaust within one year, the Parties will suspend further relief planning on this Interconnection until a date one (1) year prior to the projected exhaust date. If growth patterns change during the suspension period, either Party may re-initiate the joint planning process.

5.3.4 If the placement of a minimum size system will not provide adequate augmentation capacity for the joint forecast over a two-year period and the forecast appears reasonable, the next larger system may be deployed. If the forecast does not justify a move to the next larger system, another appropriately sized system could be placed. This criterion assumes both Parties have adequate fibers for either scenario. If adequate fibers do not exist, both Parties would negotiate placement of additional fibers.

5.3.5 Both Parties will negotiate a project service date and corresponding work schedule to construct relief facilities prior to facilities exhaust.

5.3.6 The joint planning process/negotiations should be completed within two months of the initiation of such discussion.

6. APPLICABILITY OF OTHER RATES, TERMS AND CONDITIONS

6.1 Every interconnection and service provided hereunder shall be subject to all rates, terms and conditions contained in this Agreement which are legitimately related to such interconnection or service.

TDS Telecom-Communications Corp. of IN/ MCI
Points of Interconnection

The mutually agreed upon Point of Interconnection between MCI and TDS Telecom for traffic to and from the Clayton, IN and Whitestown, IN exchange areas is described below.

Technical Point of Contact for:

MCI: Darren L. Dickson-Local Network Planning – Switch (972)729-6480

TDS Telecom: Bob Ross- Manager Network Implementation (765)522-0233

Exchange(s)	POI- Description	POI- CLLI	Location	Vertical/ Horizontal Coordinates
Clayton Whitestown	TDS Telecom's end office in Clayton, IN	CYTNINXARS0	CR O & CR 500 S	V=06317 H=03037

Executed this day of , 2005.

MCImetro Access Transmission Sevices, L.L.C.

11/10/05
Signature Date

MICHAEL A. BEACH
Printed Name

VICE PRESIDENT
Position/Title

Communications Corporation of Indiana
By TDS Telecommunications Corporation, agent

11/28/05
Signature Date

Louis D. Reilly, III
Printed Name

Director- Carrier Relations
Position/Title