

## **APPENDIX NIM (NETWORK INTERCONNECTION METHODS)**

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### **1. INTRODUCTION**

This Appendix sets forth the terms and conditions that Network Interconnection Methods (NIM) is provided by the applicable SBC Communications Inc. (SBC) owned Incumbent Local Exchange Carrier (ILEC) and CLEC. This Appendix describes the physical architecture for Interconnection of the Parties' facilities and equipment.

- 1.2 SBC Communications Inc. (SBC) means the holding company which directly or indirectly owns the following ILECs: Illinois Bell Telephone Company d/b/a SBC Illinois, Indiana Bell Telephone Company Incorporated d/b/a SBC Indiana, Michigan Bell Telephone Company d/b/a SBC Michigan, Nevada Bell Telephone Company d/b/a SBC Nevada, The Ohio Bell Telephone Company d/b/a SBC Ohio, Pacific Bell Telephone Company d/b/a SBC California, The Southern New England Telephone Company d/b/a SBC Connecticut, Southwestern Bell Telephone, L.P. d/b/a SBC Arkansas, SBC Kansas, SBC Missouri, SBC Oklahoma and/or SBC Texas and/or Wisconsin Bell, Inc. d/b/a SBC Wisconsin.
- 1.3 SBC-2STATE - As used herein, SBC-2STATE means SBC CALIFORNIA and SBC NEVADA, the applicable SBC-owned ILEC(s) doing business in California and Nevada.
- 1.4 SBC-4STATE - As used herein, SBC-4STATE means Southwestern Bell Telephone, L.P. d/b/a SBC Arkansas, SBC Kansas, SBC Missouri, and SBC Oklahoma the applicable SBC-owned ILEC(s) doing business in Arkansas, Kansas, Missouri and Oklahoma.
- 1.5 SBC-7STATE - As used herein, SBC-7STATE means SBC SOUTHWEST REGION 5-STATE, SBC CALIFORNIA and SBC NEVADA, the applicable SBC-owned ILEC(s) doing business in Arkansas, California, Kansas, Missouri, Nevada, Oklahoma, and Texas.
- 1.6 SBC-8STATE - As used herein, SBC-8STATE means SBC SOUTHWEST REGION 5-STATE, SBC CALIFORNIA, SBC NEVADA, and SBC CONNECTICUT the applicable SBC-owned ILEC(s) doing business in Arkansas, California, Connecticut, Kansas, Missouri, Nevada, Oklahoma, and Texas.
- 1.7 SBC-10STATE - As used herein, SBC-10STATE means SBC SOUTHWEST REGION 5-STATE and SBC MIDWEST REGION 5-STATE an the applicable SBC-owned ILEC(s) doing business in Arkansas, Illinois, Indiana, Kansas, Michigan, Missouri, Ohio, Oklahoma, Texas, and Wisconsin.
- 1.8 SBC-12STATE - As used herein, SBC-12STATE means SBC SOUTHWEST REGION 5-STATE, SBC MIDWEST REGION 5-STATE and SBC-2STATE the applicable SBC-owned ILEC(s) doing business in Arkansas, California, Illinois, Indiana, Kansas, Michigan, Missouri, Nevada, Ohio, Oklahoma, Texas, and Wisconsin.
- 1.9 SBC-13STATE - As used herein, SBC-13STATE means SBC SOUTHWEST REGION 5-STATE, SBC MIDWEST REGION 5-STATE, SBC-2STATE and SBC CONNECTICUT the applicable SBC-owned ILEC(s) doing business in Arkansas, California, Connecticut, Illinois, Indiana, Kansas, Michigan, Missouri, Nevada, Ohio, Oklahoma, Texas, and Wisconsin.
- 1.10 SBC ARKANSAS - As used herein, SBC ARKANSAS means Southwestern Bell Telephone, L.P. d/b/a SBC Arkansas, the applicable SBC-owned ILEC doing business in Arkansas.
- 1.11 SBC CALIFORNIA – As used herein, SBC CALIFORNIA means Pacific Bell Telephone Company d/b/a SBC California, the applicable SBC-owned ILEC doing business in California.
- 1.12 SBC CONNECTICUT - As used herein, SBC CONNECTICUT means The Southern New England Telephone Company, the applicable above listed ILEC doing business in Connecticut.

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- 1.13 SBC KANSAS - As used herein, SBC KANSAS means Southwestern Bell Telephone, L.P. d/b/a SBC Kansas, the applicable SBC-owned ILEC doing business in Kansas.
- 1.14 SBC ILLINOIS - As used herein, SBC ILLINOIS means Illinois Bell Telephone Company d/b/a SBC Illinois, the applicable SBC-owned ILEC doing business in Illinois.
- 1.15 SBC INDIANA - As used herein, SBC INDIANA means Indiana Bell Telephone Company Incorporated d/b/a SBC Indiana, the applicable SBC-owned ILEC doing business in Indiana.
- 1.16 SBC MICHIGAN - As used herein, SBC MICHIGAN means Michigan Bell Telephone Company d/b/a SBC Michigan, the applicable SBC-owned doing business in Michigan.
- 1.17 SBC MIDWEST REGION 5-STATE - As used herein, SBC MIDWEST REGION 5-STATE means Illinois Bell Telephone Company d/b/a SBC Illinois, Indiana Bell Telephone Company Incorporated d/b/a SBC Indiana, Michigan Bell Telephone Company d/b/a SBC Michigan, The Ohio Bell Telephone Company d/b/a SBC Ohio, and/or Wisconsin Bell, Inc. d/b/a SBC Wisconsin, the applicable SBC-owned ILEC(s) doing business in Illinois, Indiana, Michigan, Ohio, and Wisconsin.
- 1.18 SBC MISSOURI - As used herein, SBC MISSOURI means Southwestern Bell Telephone, L.P. d/b/a SBC Missouri, the applicable SBC-owned ILEC doing business in Missouri.
- 1.19 SBC NEVADA - As used herein, SBC NEVADA means Nevada Bell Telephone Company d/b/a SBC Nevada, the applicable SBC-owned ILEC doing business in Nevada.
- 1.20 SBC OHIO - As used herein, SBC OHIO means The Ohio Bell Telephone Company d/b/a SBC Ohio, the applicable SBC-owned ILEC doing business in Ohio.
- 1.21 SBC OKLAHOMA - As used herein, SBC OKLAHOMA means Southwestern Bell Telephone, L.P. d/b/a SBC Oklahoma, the applicable SBC-owned ILEC doing business in Oklahoma.
- 1.22 SBC SOUTHWEST REGION 5-STATE - As used herein, SBC SOUTHWEST REGION 5-STATE means Southwestern Bell Telephone, L.P. d/b/a SBC Arkansas, SBC Kansas, SBC Missouri, SBC Oklahoma and/or SBC Texas the applicable above listed ILEC(s) doing business in Arkansas, Kansas, Missouri, Oklahoma, and Texas.
- 1.23 SBC TEXAS - As used herein, SBC TEXAS means Southwestern Bell Telephone, L.P. d/b/a SBC Texas, the applicable SBC-owned ILEC doing business in Texas.
- 1.24 SBC WISCONSIN - As used herein, SBC WISCONSIN means Wisconsin Bell, Inc. d/b/a SBC Wisconsin, the applicable SBC-owned ILEC doing business in Wisconsin.
- 1.25 Network Interconnection Methods (NIMs) include, but are not limited to, Physical Collocation; Virtual Collocation; Fiber Meet Point; and Indirect Interconnection.
- 1.26 SBC-13STATE shall provide Interconnection for CLEC's facilities and equipment, at a level of quality that is equal to that which SBC-13STATE provides itself, a subsidiary, an affiliate, or any other party to which SBC-13STATE provides Interconnection and on rates, terms and conditions that are just, reasonable and non-discriminatory.
- 1.27 The Parties shall effect an Interconnection that is efficient, fair and equitable with each party being financially responsible for approximately half of the Interconnection facilities or in any other manner that is mutually agreeable to the Parties subject to proportionate cost sharing provisions set forth in Appendix 5.3..

## **2. NETWORK INTERCONNECTION ARCHITECTURE PLAN**

- 2.1 SBC-13STATE's network is partly comprised of End Office switches, Local Only Tandem (SBC SOUTHWEST REGION 5-STATE and SBC MIDWEST REGION 5-STATE), Local/IntraLATA Tandem Switches Local/Access Tandem Switches and Access Tandem Switches. SBC-13STATE's network architecture in any given local exchange area and/or LATA can vary markedly from another local exchange

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- area/LATA. Using one or more of the NIMs herein, the Parties will agree to a physical architecture plan for a specific Interconnection area. For Direct Interconnection, CLEC and SBC-13STATE will Interconnect their networks through existing and/or new Interconnection facilities between CLEC switch(es) and SBC-13STATE End Office(s) and/or Tandem switch(es) at a minimum of one location on SBC's network in the LATA. The physical architecture plan will, at a minimum, include the location of CLEC's switch(es) and SBC-13STATE's End Office switch(es) and/or Tandem switch(es) to be interconnected and the facilities that will connect the two networks. At the time of implementation in a given LATA 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, subject to cost sharing provisions set forth in appendix ITR Section 5. In many cases, at Sprint's sole option multiple POI(s) will be necessary to balance the facilities investment and provide the best technical implementation of Interconnection requirements to each Tandem within an exchange area and/or LATA. Both parties shall negotiate the architecture in each LATA location that will seek to mutually minimize and equalize investment.
- 2.3 Each Party is responsible for the facilities to its side of the negotiated POI(s), subject to cost sharing provisions set forth in Section 5 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). The parties agree to provide sufficient facilities for the Interconnection trunk groups required for the exchange of traffic between CLEC and SBC-13STATE.
- 2.4 Either Party, must provide thirty (30) days written notice of any intent to change to the physical architecture plan.
- 2.5 CLEC is solely responsible for the facilities that carry OS/DA, 911, mass calling and Meet-Point trunk groups as specified in Appendix ITR.
- 2.6 Types of Points of Interconnection
- 2.6.1 A "Tandem Serving Area" or "TSA" is an SBC 13-STATE area defined by the sum of all local calling areas served by SBC 13-STATE End Offices that subtend an SBC 13-STATE tandem for Section 251(b)(5)/IntraLATA Toll Traffic as defined in the LERG.
- 2.6.2 The Parties will interconnect their network facilities at a minimum of one CLEC designated Point of Interconnection (POI) within SBC 13-STATE's network in the LATA where CLEC Offers Service.
- 2.6.3 A "Single POI" is a single point of interconnection within a LATA on SBC 13-STATE's network that is established to interconnect SBC 13-STATE's network and CLEC's network for the exchange of Section 251 (b)(5)/IntraLATA Traffic.
- 2.6.4 The Parties agree that CLEC has the right to choose a Single POI or multiple POIs.
- 2.6.5 When CLEC has established a Single POI (or multiple POIs) in a LATA, CLEC agrees to establish an additional POI:
- (i) at an SBC 13-STATE TSA separate from the existing POI arrangement when traffic through the existing POI arrangement to that SBC 13-STATE TSA exceeds twenty-four (24) DS1s at peak over three (3) consecutive months, or
  - (ii) at an SBC 13-STATE End Office in a local calling area not served by an SBC 13-STATE tandem for Section 251(b)(5)/IntraLATA Toll Traffic when traffic through the existing POI arrangement to that local calling area exceeds twenty-four (24) DS1s at peak over three (3) consecutive months.

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- 2.6.6 The additional POI(s) will be established within 90 days of notification that the threshold has been met.
- 2.6.7 When the interconnection agreement becomes effective, and if the CLEC has more than a single POI in the LATA, and the conditions set forth in 2.4.5(i) and (ii) aren't met, CLEC will be allowed to decommission any facilities ordered to additional POI locations within 90 days and billing will cease.
- 2.7 Technical Interfaces
  - 2.7.1 The Interconnection facilities provided by each Party shall be formatted using either Alternate Mark Inversion (AMI) line code with Superframe format framing or Bipolar 8 Zero Signaling (B8ZS) with Extended Superframe format framing or any mutually agreeable line coding and framing.
  - 2.7.2 Electrical handoffs at the POI(s) will be at the DS1 or DS3 level. When a DS3 handoff is agreed to by the Parties, SBC-13STATE will provide any multiplexing required for DS1 facilities or trunking at their end and CLEC will provide any DS1 multiplexing required for facilities or trunking at their end.
  - 2.7.3 When the Parties demonstrate the need for Optical handoffs at the OC-n level, the parties will meet to negotiate specific Optical handoff needs.

### **3. METHODS OF INTERCONNECTION**

- 3.1 Physical Collocation
  - 3.1.1 When CLEC provides their own facilities or uses the facilities of a 3<sup>rd</sup> party to a SBC-13STATE Tandem or End Office and wishes to place their own transport terminating equipment at that location, CLEC may Interconnect using the provisions of Physical Collocation as set forth in Appendix I Collocation.
- 3.2 Virtual Collocation
  - 3.2.1 When CLEC provides their own facilities or uses the facilities of a 3<sup>rd</sup> party to a SBC-13STATE Tandem or End Office and wishes for SBC-13STATE to place transport terminating equipment at that location on the CLEC's behalf, they may Interconnect using the provisions of Virtual Collocation as set forth in Appendix I Collocation. Virtual Collocation allows CLEC to choose the equipment vendor and does not require that CLEC be Physically Collocated.
- 3.4 Fiber Meet Point
  - 3.4.1 Fiber Meet Point Interconnection between SBC-13STATE and CLEC can occur at any mutually agreeable and technically feasible point at an SBC-13STATE Tandem or End Office building within each LATA (SBC SOUTHWEST REGION 5-STATE).
  - 3.4.2 When the Parties agree to interconnect their networks pursuant to the Fiber Meet, a single point-to-point linear chain SONET system must be utilized. Only Local Interconnection Trunk Groups shall be provisioned over this jointly provided facility.
  - 3.4.3 Neither Party will be 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.
  - 3.4.4 Requirements for such Interconnection specifications will be defined in joint engineering planning sessions between the Parties.
  - 3.4.5 In addition to the semi-annual trunk forecast process, discussed in Appendix ITR, discussions to provide relief to existing facilities can be initiated by either party. Actual system augmentations will

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be initiated only upon mutual agreement. Facilities will be planned for to accommodate the verified and mutually agreed upon trunk forecast for the Local Interconnection Trunk Groups.

- 3.4.6 Both Parties will negotiate a project service date and corresponding work schedule to construct relief facilities prior to facilities exhaust.
- 3.4.10 CLEC will provide fiber cable to the last entrance (or SBC-13STATE designated) manhole at the SBC-13STATE Tandem or End Office building. SBC-13STATE 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 Fiber cable for SBC-13STATE to pull through the SBC-13STATE cable vault. CLEC shall deliver and maintain such strands wholly at its own expense up to the POI. SBC-13STATE shall take the fiber from the manhole and terminate it inside SBC-13STATE's office at the cable vault at SBC-13STATE's expense. In this case the POI shall be at the SBC-13STATE designated manhole location.
- 3.4.11 Each Party shall provide its own source for the synchronized timing of its FOT equipment.
- 3.4.12 CLEC and SBC-13STATE will mutually agree on the capacity of the FOT(s) to be utilized based on equivalent DS1s or DS3s. 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 in section 4 of this document.
- 3.5 Other Interconnection Methods
  - 3.5.1 The Parties may mutually agree to other methods of obtaining interconnection that are technically feasible which are incorporated into the Interconnection Agreement by amendment.
  - 3.5.2 Indirect Interconnection: For small volumes of traffic (less than 6 DS1s), CLEC may choose to interconnect with SBC-Missouri on an Indirect basis where SBC-13STATE end office does not subtend an SBC tandem.
  - 3.5.3 Indirect Interconnection: For small volumes of traffic (less than 7 DS1s), CLEC may choose to interconnect with SBC-13STATE on an Indirect basis where SBC-13STATE end office does not subtend an SBC tandem.

#### **4. RESPONSIBILITIES OF THE PARTIES**

- 4.1 For each local Interconnection within an SBC-13STATE area, CLEC shall provide written notice to SBC-13STATE of the need to establish Interconnection in each LATA (SBC SOUTHWEST REGION 5-STATE) or LATA (SBC CALIFORNIA, SBC NEVADA, SBC CONNECTICUT and SBC MIDWEST REGION 5-STATE). CLEC shall provide all applicable network information on forms acceptable to SBC-13STATE (as set forth in SBC's CLEC Handbook, published on the CLEC website).
- 4.2 Upon receipt of CLEC's notice to interconnect, the Parties shall schedule a meeting to discuss the network architecture (including trunking) to be documented as discussed in Section 2.1. The Interconnection activation date for an Interconnect shall be established based on then-existing force and load, the scope and complexity of the requested Interconnection and other relevant factors.
- 4.3 Either party may add or remove additional switches. The parties shall provide 120 days written notice to establish such Interconnection; and the terms and conditions of this agreement will apply to such Interconnection.
- 4.4 The Parties 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.

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## 5. INTERCONNECTION FACILITIES

- 5.1 Interconnection facilities leased from SBC for the transmission and routing of telephone exchange and exchange access service shall be provided to Sprint at SBC's TELRIC-based rates and subject to cost sharing provisions in this Section.
- 5.2 When Interconnection Facilities are leased from SBC to carry both Section 251(b)(5) traffic and non-Section 251(b)(5) traffic, the Parties shall determine the percentage of the Interconnection Facility utilized for Section 251(b)(5) Traffic. The charges applied to the percentage of the Interconnection Facility utilized to carry Section 251(b)(5) Traffic shall be based upon SBC's TELRIC-based rates and subject to cost sharing provisions in this Section. The remaining percentage of the facilities shall be billed at SBC's applicable access tariff rates.
- 5.3 When two-way Interconnection Facilities are utilized, neither Party shall be financially responsible for that portion of the Interconnection Facility used to transmit the other Party's originating traffic.
- 5.3.1 The Party, who is delivering traffic originating on its network through facilities and/or trunks provided by the other Party, shall pay to the other Party providing such facilities and/or trunks the monthly recurring and non-recurring costs of such facilities and/or trunks times the difference of 1 minus the Shared Facility Factor set forth below; provided, however, that either Party may submit to the other Party a traffic study, a reasonable estimate of its traffic with supporting justification for such estimate, and/or other network information in complete and appropriate form (determined in good faith)("Shared Facility Information") that the Parties will use to negotiate in good faith a different CLEC-specific Shared Facility Factor. The Shared Facility Information must be CLEC-specific and relate to CLEC's network in the State; it shall not be based on industry average data or the data of other Telecommunications Carriers. If such Shared Facility Information is provided within ninety (90) Days after the date this Agreement is executed by duly authorized representatives of both Parties, then any CLEC-specific Shared Facility Factor derived using such Shared Facility Information shall be effective as of the date on which the Shared Facility Information was provided in complete and appropriate form (determined in good faith) to the other Party, but no earlier than the Effective Date of this Agreement; otherwise, the CLEC-specific Shared Facility Factor will be effective as of the date the Shared Facility Information was provided in complete and appropriate form (determined in good faith) to the other Party. Any CLEC-specific Shared Facility Factor that becomes effective during the Initial Term of the Agreement will remain in effect during the Initial Term of the Agreement. After the expiration of the Initial Term hereof, such CLEC-specific Shared Facility Factor established during the Initial Term shall remain in effect thereafter unless either Party provides new Shared Facility Information to the other Party. In such case, the Parties shall use that new CLEC-specific Shared Facility Information to renegotiate in good faith a new revised CLEC-specific Shared Facility Factor. Renegotiation of the CLEC-specific Shared Facility Factor shall occur no more frequently than once every twelve months.
- |  |     |
|--|-----|
| Shared Facility Factor - CLEC:         | 50% |
| Shared Facility Factor – SBC 13-State: | 50% |
- 5.3.2 If Sprint leases the two-way Interconnection Facility from SBC, SBC shall credit the cost of such facility (both recurring and non-recurring charges) by 50%.
- 5.3.3 If Sprint leases the Interconnection Facility from SBC and SBC does not provide a credit according to Section 3.7.2 above, or if Sprint self-constructs or leases the Interconnection Facility from a third party, Sprint may charge SBC 50% of the recurring charges and non-recurring charges for the Interconnection Facilities.

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