

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Petition of Core Communications, Inc.	:	
for Arbitration of Interconnection Rates,	:	
Terms And Conditions with The United	:	Docket No.
Telephone Company of Pennsylvania	:	A-310922F7002
d/b/a Embarq Pennsylvania pursuant to	:	
47 U.S.C §252(b)	:	

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**DIRECT TESTIMONY OF  
JAMES M. (MIKE) MAPLES**

**EQ PA STATEMENT 3.0**

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**ON BEHALF OF  
THE UNITED TELEPHONE COMPANY OF PENNSYLVANIA  
D/B/A EMBARQ PENNSYLVANIA**

**Prefiled: April 27, 2007**

1 DIRECT TESTIMONY OF  
2 JAMES M. (MIKE) MAPLES  
3 EQ PA STATEMENT 3.0  
4

5 SECTION I – INTRODUCTION  
6

7 *Q. Please state your name, title, and business address.*

8 A. My name is James M. "Mike" Maples. I am employed as Regulatory Manager for  
9 Embarq Management Company, which provides management services to The United  
10 Telephone Company of Pennsylvania d/b/a Embarq Pennsylvania ("United PA" or  
11 "Embarq PA"). My business address is 5454 W. 110<sup>th</sup> Street, Overland Park, KS 66211.  
12

13 *Q. Please summarize your education and professional background.*

14 A. I received a Bachelor of Science degree from East Texas State University, Commerce,  
15 Texas, in December 1973 with majors in mathematics and industrial technology.  
16 Beginning in 1968, I was also employed by Sprint/United Telephone Texas as a  
17 technician responsible for installing and repairing residential, simple, and complex  
18 business systems. I completed the company's Management Training program in 1974  
19 and was promoted to the position of Revenue Requirement Analyst later that year.  
20

21 For the next seventeen years, I held positions of increasing responsibilities in state,  
22 regional, and corporate Sprint organizations. During that period, I prepared or was  
23 responsible for jurisdictional separation studies, revenue budgets, demand forecasts,  
24 access charge rates, and financial reporting to various regulatory agencies.

1 From 1991 through 1995, as Manager Cost Allocations at Sprint United Management  
2 Company, I developed financial models for alternative regulation, participated in a two  
3 year project to develop a system-wide product costing model, developed and trained  
4 personnel on revenue budget models, and standardized systems for separations costing  
5 through system design, development, testing, and implementation.  
6

7 In 1995 I accepted the position of Manager-Pricing/Costing Strategy and for 17 months  
8 coordinated several system-wide teams that were charged with the identification and  
9 development of methods, procedures, and system changes required to implement local  
10 competitive services. During that period, I coordinated the technical support needed to  
11 establish and maintain relationships with competitive local exchange carriers ("CLECs").  
12

13 From September 1996 through July 1999, I held the position of manager of Competitive  
14 Markets – Local Access with the responsibility for pricing unbundled network elements,  
15 supporting negotiations with new competitive carriers, and assisting in implementation  
16 issues.  
17

18 I began my current position for Sprint United Management Company in August 1999,  
19 and later transferred to Embarq Management Company in the same capacity. My  
20 responsibilities include the review of legislation and Federal Communications  
21 Commission ("FCC") and state commission orders affecting telecommunications policy;  
22 interpreting the impact on the company; and developing positions, communicating them  
23 throughout the organization, and representing them before regulatory bodies such as the

1 Pennsylvania Public Utility Commission.

2  
3 **Q.** *Have you testified before regulatory commissions before?*

4 **A.** Yes. I have testified before the Missouri, Florida, Nevada, and California regulatory  
5 commissions regarding interconnection and network unbundling issues. In addition, I  
6 have filed written testimony in Texas, North Carolina, and Georgia on network  
7 unbundling matters.

8  
9 **Q.** *What is the purpose of your testimony?*

10 **A.** The purpose of my testimony is to offer support for Embarq's position with respect to the  
11 portion of Issue 8 that deals with the treatment of VoIP calls and the porting of telephone  
12 numbers between Embarq PA and Core (Issues 8 and 2).

13  
14 **Q.** *Please give a brief statement of Issue 8.*

15 **A.** The terms proposed by Embarq PA at §55.7 state that Voice over Internet Protocol  
16 ("VoIP") calls will be treated on the same basis as all other voice calls with respect to  
17 intercarrier compensation. Core deleted §55.7 on the basis that it disagreed with Embarq  
18 PA's position that the geographic end points of a voice call determine its jurisdiction.  
19 This action leaves the agreement silent on how VoIP calls should be compensated.  
20 Core's position is inappropriate for VoIP products that are interconnected with Public  
21 Switched Telephone Network ("PSTN"), especially since VoIP products are increasingly  
22 being sold as a replacement for traditional circuit switched voice service. The  
23 Commission should order adoption of the terms and conditions proposed by Embarq PA

1 for Issue 8 with respect to VoIP.

2  
3 With respect to the porting of telephone numbers (Issues 8 and 2), Embarq PA has  
4 reviewed telephone numbers that it has ported to Core and determined that the numbers  
5 have been ported outside of the rate center to which those numbers were originally  
6 assigned, in contravention of current FCC rules. In order to maintain use of existing  
7 numbers and be consistent with FCC rules and industry standards, Core should establish  
8 an interconnection arrangement as proposed by Embarq PA's witness Ed Fox.  
9 Alternatively, consistent with the FCC's comments in the local number portability  
10 proceeding, Core could be required to replace the numbers with toll free 800 numbers,  
11 which were designed to provide the service that Core is actually offering.  
12

13 **SECTION II – Unresolved Issues**

14 **A. Issue 8 (VoIP)**

15  
16 ***Q. What is VoIP?***

17 **A.** The FCC has defined VoIP as "...any IP enabled services offering real-time,  
18 multidirectional voice functionality, including, but not limited to, services that mimic  
19 traditional telephony."<sup>1</sup> An IP enabled service includes any service or application that  
20 relies on the Internet Protocol ("IP") family.<sup>2</sup> Neither definition specifies how the IP

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<sup>1</sup> *In the Matter of IP-Enabled Services*, WC Docket No. 04-36, Notice of Proposed Rulemaking, FCC 04-28, Released March 10, 2004 ("IP Enabled NPRM"), footnote 7.

<sup>2</sup> IP Enabled NPRM, footnote 1.

1 technology is used in providing the service, which means that the IP transmission  
2 segment could be at the point where the call originates, somewhere along the route the  
3 call traverses, or at the termination point.

4  
5 *Q. Why should the terms of the agreement address intercarrier compensation for VoIP?*

6 *A.* VoIP traffic is terminated to the PSTN over the traditional circuit switched trunks  
7 between connecting companies commingled with all other voice traffic. There are  
8 currently no means of identifying which calls are VoIP and which calls are circuit  
9 switched based on the recording equipment employed to create records to bill connecting  
10 companies for intercarrier compensation. It is important that the parties reach agreement  
11 on the appropriate terminating compensation for such voice traffic. The terms proposed  
12 by Embarq PA properly treat this VoIP traffic the same as any other voice traffic that  
13 utilizes the PSTN and determine compensation based on the jurisdiction of the call. By  
14 eliminating the terms proposed by Embarq PA, Core would leave the agreement silent on  
15 the treatment of VoIP, effectively deferring the issue to some future date should Core  
16 disagree with treating VoIP calls like any other voice calls.

17  
18 *Q. Is Core obligated to negotiate terms for sending VoIP traffic to Embarq PA?*

19 *A.* Yes. VoIP providers cannot seek interconnection under section 251 of the Act since the  
20 FCC has not reached a decision regarding the statutory classification of that service and  
21 must therefore seek access through a telecommunications carrier, often a CLEC.<sup>3</sup> In

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<sup>3</sup> *Time Warner Cable Request for Declaratory Ruling that Competitive Local Exchange Carriers May Obtain Interconnection Under Section 251 of the Communications Act of 1934, as Amended, to Provide Wholesale*

1 addition, the CLEC offering the wholesale service to the VoIP provider must provide  
2 telecommunications services to its customers<sup>4</sup> and must reach agreement with Incumbent  
3 Local Exchange Carriers ("ILECs") on interconnection and intercarrier compensation for  
4 such traffic.<sup>5</sup> If Core refuses to negotiate terms it forfeits any rights to send VoIP traffic  
5 to Embarq PA.  
6

7 *Q. Would you please give some practical examples of VoIP services that are available to*  
8 *the public today?*

9 *A.* There are generally three types of VoIP calls that are currently available. The first type  
10 of call originates and terminates on a computer or similar customer premises equipment  
11 ("CPE"), is transmitted wholly in IP, and does not originate or terminate on the PSTN.  
12 Such services are often referred to as computer to computer or IP-IP services. Examples  
13 include instant messenger based services such as Skype and Window's Live Messenger.  
14 These types of calls usually do not traverse the PSTN trunks connecting carriers. The  
15 second type of call originates on the PSTN using normal CPE, is routed over IP  
16 transmission facilities, and is terminated on the PSTN on normal CPE. These services  
17 are referred to as PSTN-IP-PSTN or "IP in the middle" services. Given the fact that IP  
18 based transport is becoming the de-facto standard in the industry it is probably safe to say  
19 that much of the long distance traffic and even some local voice services are provided in  
20 this fashion. The last type of VoIP service utilizes a computer or similar CPE at one end

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*Telecommunications Services to VoIP Providers*, WC Docket No. 06-55, Memorandum Opinion and Order, DA 07-709, Released March 1, 2007 ("Time Warner Declaratory Ruling"), ¶13.

<sup>4</sup> Time Warner Declaratory Ruling, ¶ 14.

<sup>5</sup> Time Warner Declaratory Ruling, ¶ 17.

1 of the call, is routed using IP over some portion of the call, and is ultimately connected to  
2 the PSTN at the other end. These services are referred to as IP-PSTN services. Vonage  
3 and CATV companies are prime examples of providers offering these types of services.  
4 Instant messenger based service providers also offer this capability.  
5

6 ***Q.** Please describe these services.*

7 ***A.*** Customers of Vonage and Skype or other "over the top" services, including Windows  
8 Live Messenger, make voice calls over Internet broadband connections they have  
9 purchased from providers such as Embarq PA. These customers use their computers or  
10 other specialized customer premises equipment to connect to Vonage and Skype servers  
11 over the Internet and place voice calls.<sup>6</sup> The calls can be directed to other Vonage or  
12 Skype customers utilizing unique numbers or addresses assigned by the provider and  
13 remain entirely on the public Internet or the calls can be directed to any telephone  
14 number on the PSTN. When such calls are directed to a number on the PTSN, the VoIP  
15 call is handed off to a telecommunications carrier to terminate the call. That carrier  
16 converts the call from the IP protocol to traditional circuit switched voice in order to do  
17 so.  
18

19 CATV companies such as Time Warner and Comcast have modified their cable networks  
20 and enabled the provision of voice services. The customer can use a regular standard  
21 telephone, but it must be connected to specialized customer premises equipment that

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<sup>6</sup> End users can install software on their computers allowing them to use the microphone and speakers; they can install an adapter that allows a standard telephone to be connected; or they can connect a telephone using IP.



1 converts the audio signal to IP and routes it over the broadband connection. When calls  
2 are placed between a CATV customer and an Embarq PA customer, the call is usually  
3 routed through a telecommunications carrier over interconnection trunks the carrier has  
4 established with Embarq PA. These calls are converted from IP to traditional circuit  
5 switched voice to accomplish this.  
6

7 The FCC has defined these types of product offerings, which have the ability to connect  
8 to the PSTN, as "Interconnected VoIP services." These services enable real-time, two-  
9 way voice communications; require a broadband connection from the user's location;  
10 require Internet protocol-compatible CPE; and permit users generally to receive calls that  
11 originate on the PSTN and to terminate calls to the PSTN.<sup>7</sup>  
12

13 ***Q.** What has the FCC decided regarding VoIP services?*

14 ***A.*** The FCC determined that free VoIP calls over the Internet using broadband connections  
15 (IP-IP or computer to computer) are an unregulated information service subject to FCC  
16 jurisdiction.<sup>8</sup> These calls never touch the PSTN, are restricted to subscribers of the  
17 service, and do not use telephone number resources. This type of traffic is not at issue in  
18 this proceeding.  
19

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<sup>7</sup> See, C.F.R., Title 47, §9.3.

<sup>8</sup> *Petition for Declaratory Ruling that Pulver.com's Free World Dialup is Neither Telecommunications Nor a Telecommunications Service*, WC Docket No. 03-45, Memorandum Opinion and Order, FCC 04-27, Released February 19, 2004 ("Pulver.com").

1 In the AT&T Phone-to-Phone<sup>9</sup> proceeding, the FCC decided that VoIP calls that use  
2 ordinary CPE, originate and terminate on the PSTN, do not undergo a net protocol  
3 change, and do not receive any enhanced functionality due to the provider's use of IP  
4 technology are telecommunications services and access charges apply (PSTN-IP-PSTN).  
5 This ruling also applies to prepaid calling card services that utilize IP technology to  
6 transport all or a portion of the calling card call.<sup>10</sup>  
7 With respect to Interconnected VoIP service providers the FCC has determined that they  
8 must provide E911/911 access,<sup>11</sup> must be CALEA compliant,<sup>12</sup> and must contribute to the  
9 interstate Universal Service fund.<sup>13</sup>  
10

11 ***Q. Has the FCC determined the method for carriers to compensate each other for these***  
12 ***VoIP services?***

13 ***A.*** As stated above, computer to computer calls are not at issue in this proceeding. It is  
14 possible that an individual could make a VoIP call utilizing a dial up Internet connection,  
15 but to the extent this occurs it would be treated as ISP traffic and indistinguishable from  
16 it. With respect to PSTN-IP-PSTN calls, the FCC has determined that those services are

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<sup>9</sup> *Petition for Declaratory Ruling that AT&T's Phone-to-Phone Telephony services are Exempt from Access Charges*, WC Docket No. 02-61, Order, FCC 04-97, Released April 21, 2004 ("AT&T Phone-to-Phone").

<sup>10</sup> *Regulation of Prepaid Calling Card Services*, WC Docket No. 05-68, Declaratory Ruling and Report and Order, FCC 06-79, Released June 30, 2006 ("Prepaid Calling Card Order").

<sup>11</sup> *IP-Enabled Services and E911 Requirements for IP-Enabled Service Providers*, WC Dockets No. 04-36 and 05-196, First Report and Order and Notice of Proposed Rulemaking, FCC 05-116, Released June 3, 2005 ("VoIP 911 Order").

<sup>12</sup> *Communications Assistance for Law Enforcement Act and Broadband Access and Services*, ET Docket No. 04-295 and RM-10865, First Report and Order and Further Notice of Proposed Rulemaking, FCC 05-153, Released September 23, 2005 ("VoIP CALEA Order").

<sup>13</sup> *Universal Service Contribution Methodology*, WC Docket No. 06-122, Report and Order and Notice of Proposed Rulemaking, FCC 06-94, Released June 27, 2006 ("VoIP USF Order").

1 telecommunications services and are subject to normal voice compensation, which means  
2 that access charges or reciprocal compensation would apply based on jurisdiction. The  
3 FCC has not made a determination regarding Interconnected VoIP services; however, in  
4 its IP-Enabled Services proceeding the FCC stated, "As a policy matter, we believe that  
5 any service provider that sends traffic to the PSTN should be subject to similar  
6 compensation obligations, irrespective of whether the traffic originates on the PSTN, on  
7 an IP network, or on a cable network. We maintain that the cost of the PSTN should be  
8 borne equitably among those that use it in similar ways."<sup>14</sup> That is effectively what  
9 Embarq PA is requesting this Commission to order.  
10

11 *Q. Can the Pennsylvania Commission order the application of intrastate charges to VoIP*  
12 *since the FCC has classified interconnected VoIP as an Interstate service?*

13 *A.* Yes. The FCC has not specifically pre-empted state commissions regarding intercarrier  
14 compensation for interconnected VoIP services. A recent court decision found that the  
15 Congress did not intend for VoIP services to be totally unregulated and that absent a  
16 specific determination a state can exercise jurisdiction.<sup>15</sup> When the FCC reviewed  
17 Vonage's petition for a declaratory ruling concerning its Digital Voice Service, it  
18 concluded that the service was jurisdictionally mixed and that it was used to enable  
19 intrastate communications.<sup>16</sup> In addition, the FCC established a VoIP safe harbor of

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<sup>14</sup> IP Enabled Service Proceeding, ¶33.

<sup>15</sup> See the decision in Comcast IP Phone of Missouri, LLC V. Missouri Public Service Commission, United States District Court for the Western District of Missouri Central Division, Case No. 06-4233-CV-C-NKL.

<sup>16</sup> *Vonage Holdings Corporation Petition for Declaratory Ruling Concerning an Order of the Minnesota Public Utilities Commission*, WC Docket No. 03-211, Memorandum Opinion and Order, FCC 04-267, Released November 12, 2004, ¶18 ("Vonage Order").

1 64.9% interstate in the VoIP USF Order, which classifies 35.1% as intrastate.<sup>17</sup> The FCC  
2 decision in the Vonage Order was specific to Vonage's Digital Voice service. It relied  
3 heavily on the portable nature of the service and decided that there was no way to  
4 practically separate the service into intrastate and interstate components without  
5 thwarting federal law and policy.<sup>18</sup> But not all Interconnected VoIP services are  
6 portable. The FCC refused to declare Vonage's Digital Voice service as either  
7 telecommunications or information and has yet to establish rules regulating intercarrier  
8 compensation for such traffic. There is, therefore, no explicit federal rule prohibiting this  
9 Commission from adopting Embarq PA's terms and conditions (§55.7). The Commission  
10 has the authority to arbitrate this issue and to render an order on it consistent with  
11 Embarq PA's position. Embarq PA's position is eminently reasonable given the nature of  
12 the service (real-time voice to/from the PSTN), the fact that the service competes directly  
13 with circuit switched voice services, and because methods to treat the service uniquely  
14 are administratively more difficult.

15  
16 *Q. But didn't the FCC say in the Vonage Order that it would likely pre-empt any attempts*  
17 *by states to regulate services with similar characteristics?*

18 *A.* While there are comments to that effect in the order, the fact remains that the FCC did not  
19 pre-empt regulation of those services with similar characteristics and effectively punted  
20 the establishment of current interconnection arrangements to the negotiating parties and

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<sup>17</sup> VoIP USF Order, ¶53.

<sup>18</sup> Vonage Order, ¶ 14.

1 state commissions.<sup>19</sup>

2  
3 *Q. Are there any other reasons why the Pennsylvania Commission should treat*  
4 *interconnected VoIP on the same basis as circuit switched voice?*

5 *A.* Regulations that favor one carrier or business plan over another encourage market  
6 development based on regulatory arbitrage, which is inappropriate. Therefore, it is  
7 important that the Commission establish public policy on the basis of competitive  
8 neutrality. The FCC recognized this when it ordered interconnected VoIP providers to  
9 contribute to the Interstate USF. Embarq PA competes directly with VoIP providers in  
10 offering long distance voice services. Embarq PA pays access charges, both intrastate  
11 and interstate, for the services it provides. If VoIP providers pay interstate access charges  
12 or reciprocal compensation for intrastate voice traffic, they will have a competitive  
13 advantage because interstate access charges and reciprocal compensation are usually  
14 lower than intrastate access charges. VoIP providers should not be rewarded or favored  
15 simply because they use a different technology to provide competitive voice services.

16  
17 *Q. You mentioned in your previous response that the FCC recognized the importance of*  
18 *competitive neutrality in its VoIP USF Order. Please explain.*

19 *A.* The FCC recognized that to maintain competitive neutrality it could no longer exempt  
20 VoIP providers from USF obligations when VoIP service is being used as a replacement

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<sup>19</sup> In the recent decision from the United States Court of Appeals for the Eight Circuit the court specifically stated that the FCC did not address fixed VoIP services in the Vonage Order and any assumption that it would do so is "a mere prediction". (Minnesota Public Utilities Commission v. Federal Communications Commission, No. 05-1069, page 21.).

1 for analog voice service stating:

2 We also find that the principle of competitive neutrality supports our conclusion  
3 that we should require interconnected VoIP providers to contribute to the support  
4 mechanisms. Competitive neutrality means that “universal service support  
5 mechanisms and rules neither unfairly advantage nor disadvantage one provider  
6 over another, and neither unfairly favor nor disfavor one technology over  
7 another.” as the Commission has noted, interconnected VoIP service “is  
8 increasingly used to replace analog voice service.” As the interconnected VoIP  
9 service industry continues to grow, and to attract subscribers who previously  
10 relied on traditional telephone service, it becomes increasingly inappropriate to  
11 exclude interconnected VoIP service providers from universal service  
12 contribution obligations. Moreover, we do not want contribution obligations to  
13 shape decisions regarding the technology that interconnected VoIP providers use  
14 to offer voice services to customers or to create opportunities for regulatory  
15 arbitrage. The approach we adopt today reduces the possibility that carriers with  
16 universal service obligations will compete directly with providers without such  
17 obligations. We therefore find that the principle of competitive neutrality is served  
18 by extending universal service obligations to interconnected VoIP service  
19 providers.<sup>20</sup>  
20

21 Furthermore the FCC found that it was in the public interest to treat interconnected VoIP  
22 service providers on the same basis recognizing that such providers are dependent upon  
23 the wider PSTN network and received great benefit from it.<sup>21</sup>  
24

25 *Q. Are there similar situations where state commissions have ordered intercarrier*  
26 *compensation schemes not specifically defined by the FCC?*

27 *A.* Yes. The Public Utilities Commission of Ohio considered this very issue in an arbitration  
28 proceeding between TeleCove Operations, Inc. and SBC Ohio and ordered the  
29 application of access charges to VoIP calls terminated to the PSTN based on the

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<sup>20</sup> VoIP USF Order, ¶44, footnotes omitted.

<sup>21</sup> VoIP USF Order, ¶¶43, 45.

1 jurisdiction of the call.<sup>22</sup> In addition, I understand that the state commissions of  
2 Massachusetts and Vermont ordered Global NAPS, Inc. to pay Verizon's ILEC intrastate  
3 access charges for ISP calls made by Verizon end users to ISPs served by Global NAPS,  
4 Inc. using virtual NXX telephone numbers. The two cases were appealed to separate  
5 United States Courts of Appeals and both were upheld.<sup>23</sup>

6  
7 **Q. What VoIP language is Embarq PA proposing?**

8 **A.** Embarq PA is proposing that the resulting interconnection agreement include the  
9 following language, as provided to Core on April 4, 2007:

10 55.7 All voice calls exchanged between the Parties originating  
11 from or terminating to the PSTN shall be compensated in the  
12 same manner (eg., reciprocal compensation, interstate access, and  
13 intrastate access) regardless of the technology used to originate,  
14 terminate, or transport the call. The Parties further agree that this  
15 Agreement shall not be construed against either Party as a final  
16 position on the treatment of VNXX. Both Parties reserve the right  
17 to advocate their respective positions before state or federal  
18 commissions whether in bilateral complaint dockets, arbitrations  
19 under Sec. 252 of the Act, commission established rulemaking  
20 dockets, or in any legal challenges stemming from such  
21 proceedings.  
22

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<sup>22</sup> *In the Matter of TelCover Operations, Inc.'s Petition for Arbitrations Pursuant to Section 252(b) of the Communications Act of 1934, as Amended by the Telecommunications Act of 1996, and Applicable State Laws for Rates, Terms, and Conditions of Interconnection with Ohio Bell Telephone Company d/b/a SBC Ohio*, Case No. 04-1822-TP-ARB, Arbitration Award, pages 10-17.

<sup>23</sup> *Global NAPS, Inc., Plaintiff, Appellant, v. Verizon New England, Inc., d/b/a/ Verizon Massachusetts; Massachusetts Department of Telecommunications and Energy*, United States Court of Appeals for the First Circuit, No. 05-2657, April 11, 2006 and *Global NAPS, Inc., Plaintiff-Appellant, v. Verizon New England, Inc., F/K/A New England Telephone & Telegraph Co., D/B/A Bell-Atlantic Vermont, Inc., Vermont Public Service Board*, United States Court of Appeals for the Second Circuit, Docket No. 04-4685-cv, July 5, 2006.

1 *Q. Are you aware of the Pennsylvania Public Utility Commission's Policy Statement at*  
2 *Investigation into Voice over Internet Protocol as a Jurisdictional Service, Docket No.*  
3 *M-00031707?*

4 *A.* Yes, I have reviewed the Commission's Policy Statement.

5  
6 *Q. Do you believe that the Pennsylvania Commission should come to a different*  
7 *conclusion in this proceeding?*

8 *A.* Yes. The decision was made in April, 2004, three years ago and the situation with  
9 respect to VoIP has changed. First, VoIP is no longer a nascent technology. It has  
10 entered the mainstream, many carriers are providing voice service to end user customers,  
11 and it is no longer restricted to private networks or the Internet. VoIP traffic is being  
12 converted and sent to the PSTN over existing trunks. Second, the FCC has made  
13 decisions subjecting a subset of VoIP (Interconnected VoIP) to E911, CALEA, USF, and  
14 is now considering whether or not to subject them to additional regulatory fees. Third,  
15 the VoIP services that Embarq PA is seeking the Commission's decision on are not all  
16 VoIP services, but just VoIP that is interconnected to the PSTN. Fourth, the VoIP  
17 services in question utilize number resources from the North American Numbering Plan  
18 Administrator ("NANPA"). Fifth, the FCC's IP Enabled Proceeding is still open and the  
19 FCC has still not made a decision on this issue. And finally, the Commission is being  
20 asked to exercise authority to resolve arbitrations under Section 251 of the 1996 Telecom  
21 Act, thus as granted by federal statute, rather than under state authority.



1        **B.     Issues 8 & 2 (Porting)**

2  
3        **Q.     *What is number portability?***

4        **A.**     Number portability is the ability of a user of telecommunications services to retain, at the  
5               same location, their existing telephone number when they change service providers.<sup>24</sup>  
6

7        **Q.     *Can the end user keep their telephone number if they change their location?***

8        **A.**     The end user can change location when porting their telephone number from one wireline  
9               service provider to another wireline service provider as long as that location is within the  
10              same rate center. The FCC has not ordered geographic portability and its rules prohibit  
11              porting a telephone number outside of the rate center to which it is assigned. Doing so  
12              can lead to problems with rating, routing, dialing parity, customer confusion, and  
13              E911/911.  
14

15       **Q.     *What rules are you referring to?***

16       **A.**     The FCC adopted and codified the recommendations of the North American Numbering  
17               Council (NANC) Local Number Portability Administration Selection Working Group  
18               Report, dated April 25, 1997 (*Working Group Report*) in the Code of Federal  
19               Regulations, Title 47 §52.26(a). Section 7.3 of Appendix D of that report states that  
20               “location portability is technically limited to rate center/rate district boundaries of the  
21               incumbent LEC due to rating/routing concerns” and that additional limitations might be  
22               required for various reasons such as E911 operability.

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<sup>24</sup> Title 47 C.F.R. § 52.21(l).

1    ***Q.     What is a rate center?***

2    **A.**    A rate center (also know as an "Exchange") is a geographic area used as a metric in  
3           rating calls (i.e., local, toll, distance where applicable). This area coincides with ILEC  
4           wire center(s) boundaries, which are regulated by the Commission.

6    ***Q.     What alternatives are available to customers that want geographic portability?***

7    **A.**    The FCC addressed this in the First Report and Order that mandated service provider  
8           portability and rejected geographic portability stating, "Also, users who strongly desire  
9           location portability can use non-geographic numbers by subscribing to a 500 or toll free  
10          number."<sup>25</sup> In spite of this instruction from the FCC some carriers take advantage of  
11          "gaps" in LNP processes to geographically port numbers to end users that are located  
12          outside of the rate center to which the number is assigned.

14   ***Q.     What gaps are you talking about?***

15   **A.**    The FCC rules for porting numbers between wireline carriers prohibit the number from  
16           being ported outside the rate center but the rules for porting numbers between a wireline  
17           and wireless carrier are not restricted in the same fashion due to the mobility of the  
18           wireless service. Wireline to wireless ports are restricted to the same LATA and  
19           therefore the edits performed by the NPAC (Number Portability Administration Center)  
20           just ensure that the port is within the LATA, not within the same rate center. It is  
21           possible for a wireline carrier to request a number to be ported from another wireline

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<sup>25</sup> *In the Matter of Telephone Number Portability*, CC Docket No. 95-116, First Report and Order and Further Notice of Proposed Rulemaking, FCC 96-286, Released July 2, 1996, ¶ 184.

1 carrier outside the rate center in contravention of the FCC rules and for that request to  
2 pass the NPAC edits. This is the case of many of the numbers that Embarq PA has  
3 ported to Core and had we recognized this when we received the port requests from Core  
4 we could and should have disputed them.

5  
6 *Q. Why do you believe that these numbers have been ported outside the rate centers to*  
7 *which they were originally assigned?*

8 *A.* Several of the telephone numbers that were ported to Core were initially provided by  
9 Embarq PA to an end user that purchased Remote Call Forwarding in order to route calls  
10 from the rate center where the number was assigned to the end user location in a different  
11 rate center. This method of call routing treats the forwarded call as a "second call" that is  
12 treated appropriately as toll or local based on the rate center that the call was being  
13 forwarded to. We therefore had reason to believe that the end user was not  
14 geographically located in the rate center to which the number was assigned. I then  
15 reviewed the Core switch locations to which these numbers were assigned and all of them  
16 are physically located outside of the rate centers in question. Coupled with the fact that  
17 Core has not established physical points of interconnection in the rate centers, this  
18 indicates that both the switch to which the number was ported and the end user location  
19 are both outside of the rate center to which the number is assigned.

20  
21 *Q. Why didn't Embarq PA discover this?*

22 *A.* We did not realize that the NPAC edits would not prevent this from occurring until we  
23 conducted our investigation for this proceeding. We do not have internal edits to catch

1 such abuse and are investigating that potential. A carrier cannot get number resources  
2 assigned to it without first meeting a facilities readiness test. When a carrier states via its  
3 inputs into various industry systems that a number is actually working in a specific rate  
4 center, the industry assumes that the carrier is abiding by the rules and guidelines.

5  
6 *Q. What is the facilities readiness test?*

7 *A.* Before a carrier can secure numbering resources for a particular area from the North  
8 American Numbering Plan Administrator (NANPA), they must file an application and  
9 provide evidence that they are or will be capable of providing service within that area  
10 within sixty (60) days.<sup>26</sup> Examples of such proof include interconnection agreements,  
11 network information, and business plans.<sup>27</sup>

12  
13 *Q. Did Core provide this information to get number resources for Embarq PA rate*  
14 *centers?*

15 *A.* Core would have to do so to secure numbers directly from NANPA. It is possible that  
16 they could have gotten them from another provider as an Intermediate number.

17  
18 *Q. Do you know what Core provided?*

19 *A.* No. The applications are confidential and I have not reviewed them.

---

<sup>26</sup> Title 47 C.F.R. §52.15(g)(2)(ii).

<sup>27</sup> *In the Matter of Numbering Resource Optimization*, CC Docket No. 99-200, Report and Order and Further Notice of Proposed Rule Making, Adopted March 17, 2000, ¶97.

1 *Q. You mentioned previously that porting a number outside of a rate center can cause*  
2 *several problems, one of which is E911 operability. Can you provide an example of*  
3 *problems with E911/911 that might arise out of number portability if not handled*  
4 *properly?*

5 *A.* Certainly. If the end user was not geographically located in the same rate center and they  
6 called 911 during an emergency and they were not registered in the 911 database  
7 appropriately, then they could get routed to the wrong PSAP and may not receive timely  
8 assistance. This is why the FCC ordered interconnected VoIP providers to implement a  
9 method for their end users to register their physical location. Wireless providers employ  
10 similar capabilities registering the location of individual handsets.

11  
12 *Q. Should Core be providing E911 capability for these numbers?*

13 *A.* Yes. FCC rules mandate that E911 capability be provided.

14  
15 *Q. What FCC rules are you referring to?*

16 *A.* In Title 47 of the Code of Federal Regulations §52.23(a)(1), one of the performance  
17 criteria of the LNP methodology listed by the FCC is that the existing emergency services  
18 would not be adversely impacted. The FCC concluded in ¶ 50 of the First Report and  
19 Order on Number Portability that "The public interest also requires that service provider  
20 portability not impair the provision of network capabilities that are important to public  
21 safety, such as emergency services and intercept capabilities. In our proposal to ensure  
22 that PBXs and CMRS provider support enhanced 911 services, we reaffirmed that 911  
23 services enable telephone users to receive fast response to emergency situations, and that

1 broad availability of 911 and E911 service best promotes "safety, of life and property  
2 through the use of wire and radio communication."".  
3

4 *Q. What action should the Commission take with respect to Core's porting of numbers*  
5 *outside of the rate center?*

6 *A.* It should be clear that the telephone numbers in question are assigned to an end user  
7 located in a rate center that is foreign to the rate center to which Core has assigned the  
8 telephone numbers. Embarq PA's provision of service was consistent with the FCC rules  
9 since calls were actually routed through the appropriate rate center and the end user  
10 subscribing to the call forwarding feature paid for the cost of extending the call outside  
11 the rate center and terminating it to a foreign point.<sup>28</sup> The fact that Core simply  
12 "maintained" the appropriate rate center designation in the Local Exchange Routing  
13 Guide ("LERG") and did not appropriately route the call to the foreign point is not  
14 consistent with the FCC rules and wireline industry standards. If Core wants to keep  
15 these numbers the Commission should require Core to establish an interconnection  
16 arrangement as presented by Embarq PA's witness Ed Fox. Alternately, consistent with  
17 the FCC's comments in the LNP proceeding Core could be required to replace the  
18 numbers with toll free 800 numbers, which were designed to provide the service that  
19 Core is offering.  
20

---

<sup>28</sup> To be clear, the end user originating the call did not pay for the cost of routing the call to the foreign rate center. The end user that was being called paid the cost of routing to the foreign rate center.

1        **SECTION III – CONCLUSION**

2  
3        *Q.     Please summarize your testimony.*

4        *A.     **Regarding Issue 8 (VoIP):***

5            If Core wants to send VoIP traffic to Embarq PA it is obligated to negotiate the terms and  
6            conditions of the intercarrier compensation arrangement. The traffic in question is real  
7            time voice traffic exchanged between Core and Embarq PA over the PSTN trunk  
8            facilities connecting the two carriers' networks. The traffic coincidentally utilizes IP  
9            somewhere in the transmission path. The traffic directly competes with voice products  
10          offered by Embarq PA using circuit switched technology.

11  
12          While the FCC has not defined the intercarrier compensation structure for VoIP, it has  
13          stated that the cost of the PSTN should be shared equitably among carriers using it in the  
14          same manner. Competitive neutrality mandates treating interconnected VoIP traffic like  
15          any other voice traffic. The agency has left the determination of compensation to carrier  
16          negotiations and arbitration proceedings such as this one. The FCC has not said that  
17          states cannot establish VoIP intercarrier compensation in the context of an arbitration  
18          proceeding, and the parties in this proceeding are asking this Commission to resolve this  
19          issue. Interconnected VoIP is used to provide voice communications for all jurisdictions.  
20          Embarq PA's recommendation treats all voice traffic exchanged on the PSTN trunks on  
21          an equal basis. The Commission should order adoption of the terms and conditions  
22          proposed by Embarq PA for Issue 8.

1        **Regarding Porting (Issues 8 & 2):**

2        Current FCC rules regulating the porting of telephone numbers between wireline carriers  
3        restrict such porting to service provider portability, not geographic portability. The rules  
4        mandate that rate center assignments be maintained. Investigation of numbers ported  
5        from Embarq PA to Core indicate that Core has violated the current rules since both the  
6        end user and carrier switch are located outside of the rate center and the carrier does not  
7        have any physical presence within the rate center. If Core wants to keep these numbers  
8        the Commission should require Core to establish an interconnection arrangement  
9        consistent with the recommendations of Embarq PA's witness Mr. Ed Fox. Alternately,  
10       consistent with the FCC's comments in the LNP proceeding Core could be required to  
11       replace the numbers with toll free 800 numbers, which were designed to provide the  
12       service that Core is offering.

13  
14    ***Q.    Does this conclude your Direct Testimony?***

15    ***A.    Yes***



**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Petition of Core Communications, Inc.	:	
for Arbitration of Interconnection Rates,	:	
Terms And Conditions with The United	:	Docket No.
Telephone Company of Pennsylvania	:	A-310922F7002
d/b/a Embarq Pennsylvania pursuant to	:	
47 U.S.C §252(b)	:	

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**REBUTTAL TESTIMONY OF  
JAMES M. (MIKE) MAPLES**

**EQ PA STATEMENT 3.1**

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**ON BEHALF OF  
THE UNITED TELEPHONE COMPANY OF PENNSYLVANIA  
D/B/A EMBARQ PENNSYLVANIA**

**\*\*PUBLIC VERSION\*\***

**Prefiled: June 4, 2007**

1                                   **REBUTTAL TESTIMONY OF**  
2                                   **JAMES M. (MIKE) MAPLES**  
3                                   **EMBARQ PA**

4  
5    **SECTION I - INTRODUCTION**  
6

7    ***Q.     Please state your name, title, and business address.***

8    **A.**    My name is James M. "Mike" Maples. I am employed as Regulatory Manager for  
9            Embarq Management Company, which provides management services to The United  
10           Telephone Company of Pennsylvania *d/b/a* Embarq Pennsylvania ("United PA" or  
11           "Embarq PA"). My business address is 5454 W. 110<sup>th</sup> Street, Overland Park, KS 66211.  
12

13   ***Q.     Are you the same Mike Maples who filed Direct Testimony in this proceeding on April***  
14            ***27, 2007?***

15   **A.**    Yes, I am.  
16

17   ***Q.     What is the purpose of your Rebuttal Testimony?***

18   **A.**    My testimony will rebut positions taken by Core witness Timothy J. Gates in his Direct  
19           Testimony specific to Core's use of telephone numbers and claims that its Virtual NXX  
20           ("VNXX") services are the same as Foreign Exchange ("FX") services provided by other  
21           carriers such as Embarq PA. Specifically, I will show that Core is wrong in its assertions  
22           that the service it provides is the same as FX services and that its use of telephone  
23           numbers is consistent with industry standards.

1 **SECTION II – REBUTTAL TESTIMONY**

2  
3 **Virtual NXX and FX Service Comparison**

4  
5 ***Q. Mr. Gates claims that the Virtual NXX ("VNXX") service that Core provides is the***  
6 ***same as ILEC Foreign Exchange or "FX" service (Gates Direct, page 33 at lines 784-***  
7 ***788; and 794-796). What is Foreign Exchange Service?***

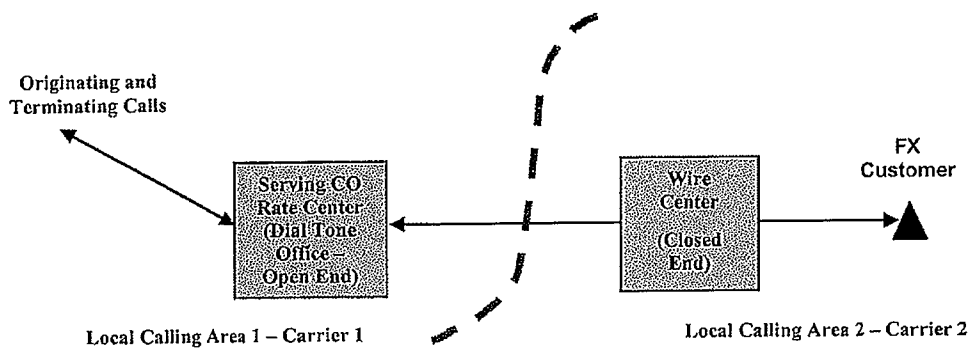
8 ***A.*** The industry standard FX arrangement involves the purchase of transport by the end user  
9 who requests the FX from the local exchange where the number is assigned to the local  
10 exchange where that end user resides. The local exchange where the number is assigned  
11 is "foreign" to the exchange where the end user requesting FX service resides. As other  
12 Embarq PA witnesses have testified, Core has not purchased this transport on behalf of  
13 its end user for VNXX service and, in fact, is routing calls over toll trunks without paying  
14 for the transport. Following is a definition of FX service taken from an FCC order.

15  
16 71. Foreign Exchange (FX) service connects a subscriber ordinarily  
17 served by a local (or "home") end office to a distant (or "foreign")  
18 end office through a dedicated line from the subscriber's premises to  
19 the home end office, and then to the distant end office. The "home"  
20 end is known as the closed end, while the "foreign" end is known as  
21 the open end. In effect, this gives the subscriber a dial tone presence  
22 in the distant exchange without additional toll charges. In  
23 interLATA FX service, which is offered by AT&T but not MCI, the

1 home and foreign end offices are in different LATAs, connected by  
2 the IXC's interstate private lines. In intraLATA FX service, which is  
3 offered by the LECs, the home and foreign end offices are in the  
4 same LATA, connected by the LEC's intraLATA, interoffice lines.  
5 (FCC 98-321, Memorandum Opinion and Order, Released  
6 December 9, 1998)

7  
8 **Q.** *Would you provide an example of FX service involving two carriers?*

9 **A.** Yes, I will. Please refer to the diagram below.



17 **Figure 1 – FX Example**

18  
19 The example above shows two carriers that serve adjoining rate centers. Calls between  
20 customers of the two carriers are long distance. A customer of Carrier 2 in Local Calling  
21 Area 2 wants to make and receive local calls from Local Calling Area 1. Carrier 2 orders  
22 FX service on behalf of the customer from Carrier 1 to accomplish the customer's  
23 request. The FX customer pays for switching and transport from Carrier 1's central  
24 office in Local Calling Area 1 to their premises in Local Calling Area 2. Calls to and

1 from this FX line are switched at the serving central office in Local Calling Area 1 and  
2 routed to the FX customer's location in Local Calling Area 2 over the facilities leased by  
3 the FX customer. The FX customer therefore pays any toll charges for calls originated  
4 from the FX based on the local calling scope of the serving central office rate center  
5 (where they receive dial tone and where it is switched). Similarly, Carrier 1 bills  
6 originating and terminating access for interlata and intralata toll calls to and from the  
7 serving central office rate center placed over the FX, not the physical location of the  
8 subscriber.

9  
10 ***Q. Does Embarq PA provide FX service?***

11 ***A.*** Yes it does. A copy of Embarq PA's FX tariff is attached to this Rebuttal Testimony as  
12 Exhibit JMM-1.

13  
14 ***Q. What does Embarq PA charge the FX purchaser?***

15 ***A.*** Embarq PA charges the end user buying FX service for the interexchange mileage at the  
16 rate of \$5.00 per mile and also charges \$0.60 per quarter mile for line mileage outside of  
17 the base rate area. The end user also pays for the actual service being purchased (such as  
18 a business 1 party line) and a channel termination charge of \$24.00 for each central office  
19 that the FX is routed through. In addition, there is a supplemental charge of \$6.00 for a  
20 partial toll replacement. This supplemental charge is applied for each 5 cent multiple of  
21 the day station-to-station initial period message toll rate between the normal exchange  
22 and the foreign exchange for a partial toll replacement. This means that if the toll rate is  
23 \$.25, the supplemental charge is 5 times the \$6.00 per month or \$30.00 per month.

1 **Q.** *Are these charges the same if another company is involved?*

2 **A.** If an Embarq PA end user wants to purchase an FX from another ILEC, Embarq PA will  
3 rent a terminal from the other ILEC and establish the FX line between the two wire  
4 centers. Embarq PA then charges the end user buying the FX for the service provided by  
5 the other ILEC at the other ILEC's tariffed rates as well as additional mileage charges.

6  
7 **Q.** *Does Embarq PA try to bill the other ILEC or the other ILEC's end users for any*  
8 *portion of the FX service?*

9 **A.** No. The cost is borne by the end user purchasing the FX service.  
10

11 **Q.** *How does the end user buying the FX service recover the cost of paying for it?*

12 **A.** If the end user buying the FX service is a business customer the cost of the FX service is  
13 a business expense that it would recover from the revenues it derives from whatever  
14 product it is selling. So, if an ISP buys FX service it recovers the expense from its  
15 Internet customers.

16  
17 **Q.** *Does Embarq PA provide other services to end user customers such as ISPs to provide*  
18 *toll free calling to the ISPs customers?*

19 **A.** Yes. Embarq PA provides services such as remote call forwarding, which is the service  
20 that some of the ISPs were purchasing from Embarq PA prior to transferring their service  
21 to Core.  
22  
23

1 **Q.** *Please describe the remote call forwarding arrangement.*

2 **A.** In the remote call forwarding arrangement all calls destined for the local telephone  
3 number are routed to the serving central office where the number is assigned and then  
4 forwarded to a distant location via a second phone number. This is essentially a two call  
5 scenario. The second call can be directed to an 800 toll free number or a number  
6 assigned to the distant rate center. In that case toll charges would apply to the second call  
7 and be paid for by the end user purchasing the remote call forwarding arrangement, not  
8 the end user originating the call. This is consistent with an FX arrangement.

9  
10 **Q.** *What is virtual NXX ("VNXX")?*

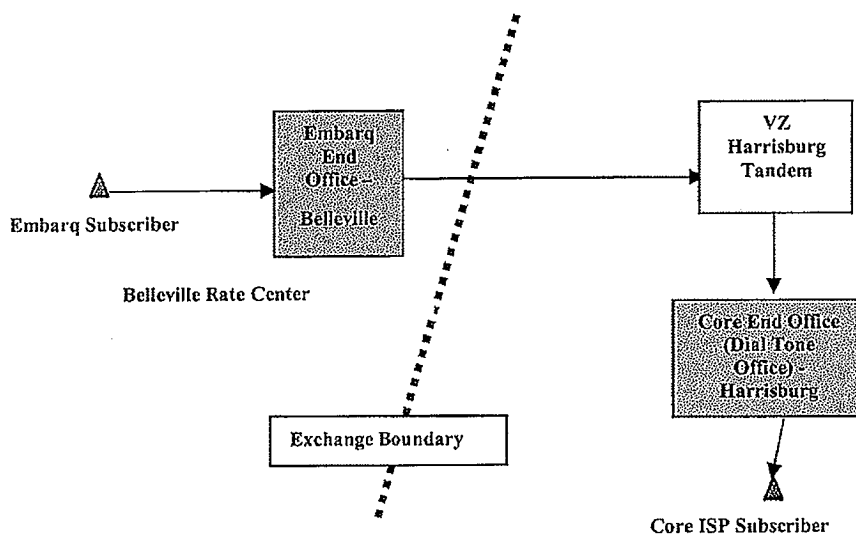
11 **A.** Embark PA witness Fox provides the following definition on page 32 of his Direct  
12 Testimony.

13  
14 Virtual NXX, or VNXX, refers to telephone numbers assigned to a  
15 customer in a local calling area different from the one where the  
16 customer is physically located in circumstances where the telephone  
17 company assigning the number is not using facilities of its own to  
18 transport the call from the calling area associated with the telephone  
19 number to the area where the customer is actually located. (*Global*  
20 *NAPS, Inc. v. Verizon New England, Inc. et al*, No. 04-4685-cv (2<sup>nd</sup>  
21 Circuit July 5, 2006)).  
22

1 In essence, a carrier assigns a telephone number for one rate center to an  
2 end user customer in another rate center and then seeks to get calls routed  
3 between the two rate centers over existing facilities without paying for the  
4 transport.

5  
6 **Q.** *Would you provide an example of a VNXX arrangement?*

7 **A.** Yes, I will. Please refer to the following diagram.



18  
19 **Figure 2 – Wireline VNXX, Indirect Connection**

20  
21 The example above is an actual VNXX arrangement deployed by Core. The telephone  
22 number [BEGIN PROPRIETARY] [END PROPRIETARY] is assigned  
23 to the Belleville rate center by Embarq PA and was assigned to an ISP by Embarq PA for  
24 providing dial up Internet service to Embarq PA's end users in the Belleville exchange.



1 Belleville is south of State College, Pennsylvania. The ISP purchased the remote call  
2 forwarding service described above to provide toll free service to its Internet customers.  
3 Core ported the telephone number to its central office in Harrisburg, which is located  
4 outside of the Belleville rate center. Dial tone for the number is now generated from  
5 Harrisburg, Pennsylvania, and is no longer within the Belleville rate center. When an  
6 Embarq PA end user dials [BEGIN PROPRIETARY] [END  
7 PROPRIETARY], Embarq PA's Belleville switch determines that the number has been  
8 ported and routes it to the Verizon Harrisburg tandem over the existing interexchange  
9 long distance facilities. The call transits the Verizon tandem and is then handed off to  
10 Core. Core receives the call in its switch in Harrisburg and routes it to the ISP. Given  
11 the fact that the ISP's original arrangement with Embarq PA involved the forwarding of  
12 terminating calls outside the Belleville rate center, it is highly likely that the ISP does not  
13 have a presence in the Embarq PA Belleville rate center. Core does not buy any service  
14 from Embarq PA, nor does Core compensate Embarq PA in any fashion for switching or  
15 transport.

16  
17 *Q. Is Core's VNXX product the same as Embarq PA's FX product or FX as historically*  
18 *deployed?*

19 *A.* No, not even close.

20  
21 *Q. Please explain.*

22 *A.* There are several differences that can be grouped into two main categories: compensation  
23 and technical configuration. With respect to compensation the very obvious distinction is

1 that with FX service the FX subscriber, not the originating carrier or the end user calling  
2 the FX number, bears the cost of transporting the calls from the rate center where the  
3 number is assigned to the geographic location of the FX customer. In situations where  
4 multiple carriers are involved, the carrier serving the FX customer buys services from the  
5 carrier serving the foreign rate center, including transport, and then passes those costs on  
6 to the FX customer. In the VNXX example above, Core forces Embarq PA to bear all  
7 costs.

8  
9 As to the technical configuration, FX service calls are actually routed through the switch  
10 that physically serves the rate center where the telephone number is assigned. In other  
11 words, if Core purchased an FX from Embarq PA's Belleville office dial tone would be  
12 provided by Embarq PA and calls would be routed through the Belleville office,  
13 maintaining appropriate rating and routing. With Core's VNXX configuration, the  
14 telephone number does not reside in the Belleville rate center but resides instead in  
15 Harrisburg. Calls to and from the VNXX (assuming that a call would ever be originated  
16 from the VNXX) are routed through Core's Harrisburg switch and not the Belleville  
17 switch. VNXX service is technically more like 800 toll free service rather than FX  
18 service. Thus, I disagree from a technical standpoint that the VNXX service that Core  
19 provides is the same as FX service.

1 **Q.** *How is VNXX service technically more like 800 toll free service rather than FX*  
2 *service?*

3 **A.** The intent of 800 toll free service is to provide toll free calling utilizing the interexchange  
4 long distance network. That is exactly how Core has configured its VNXX product. The  
5 only difference between the 800 toll free service and Core's VNXX product is the  
6 telephone number that customers dial, which does not offer any justification for calling  
7 the traffic in question "local exchange" traffic. Nor does it provide sufficient justification  
8 for requiring the originating carrier to provide all the transport for free as well as pay  
9 terminating compensation. As discussed in my Direct Testimony on page 17 at line 7,  
10 the FCC pointed out that users wanting location portability, that is, end users like Core's  
11 ISP customer that want to use a number that is outside of the rate center that they are  
12 physically located in, can use non-geographic numbers such as toll free numbers.

13  
14 **Q.** *Does Core's VNXX service provide Core with an unfair competitive advantage over FX*  
15 *services such as those offered by Embarq PA?*

16 **A.** Absolutely. By refusing to reimburse Embarq PA for the costs it incurs (such as  
17 interexchange transport), Core can pass that savings on to the end user buying the VNXX  
18 service and thereby increase Core's profits. Core adds insult to injury by demanding that  
19 Embarq PA pay Core terminating compensation. Core's proposal establishes an implicit  
20 subsidy that enables Core to avoid charges for interexchange transport costs and by  
21 having Embarq PA's end users, including those end users that do not even use the VNXX  
22 service in question to access the ISP, absorb these costs.

1 **Q.** *Why hasn't Embarq PA started offering VNXX services like Core?*

2 **A.** The immediate response is that Embarq PA does not believe that it is right or appropriate.  
3 Unlike Core, Embarq PA has incurred the cost of building facilities within and between  
4 its rate centers and will use those facilities to provide toll free services such as FX. Even  
5 if there were an alternate network, Embarq PA would not attempt to utilize it without  
6 compensating the network owner. The costs of providing the service should be paid for  
7 by the end user buying the FX service. Parity demands that Core's VNXX customer pays  
8 for the cost of providing the service and ceases trying to extract payment from end users  
9 that don't even subscribe to their service. In addition, Embarq PA does not port  
10 telephone numbers out of the appropriate rate center. Embarq PA runs into this situation  
11 with some frequency where CLECs are telling businesses that they can relocate to other  
12 cities, take their telephone numbers with them, and not have to pay for the cost of  
13 transport.

14  
15 **Q.** *Do you agree with Mr. Gates that ISPs do not expect to receive long distance calls from*  
16 *customers seeking to connect to the Internet (Gates Direct, page 32 at line 773)?*

17 **A.** While I agree with Mr. Gates that end users seeking to connect to their dial up Internet  
18 provider as a matter of course are not willing to pay per minute of use long distance  
19 charges, that does not mean that the customer is in fact not making a long-distance call.  
20 It only means that the end user calling the ISP does not pay for the cost of transporting  
21 the call outside of the local calling area. Instead, the ISP pays, or should pay, for the cost  
22 of the long-distance call. For example, ISPs have maintained 1-800 toll free service to  
23 allow customers to access their service toll-free from anywhere in the United States.

1 Such calls are in fact long distance calls. In addition, the whole concept of per minute of  
2 use charging for long distance calls is rapidly going away.

3  
4 **Q.** *Do you agree with Core that the VNXX service it provides is "in essence identical to the*  
5 *FX service offered by Embarq PA, at least from an end user customer perspective"*  
6 *(Gates Direct, page 33 at line 787)?*

7 **A.** No, I do not. As I pointed out above, Core's ISP "end user" customer purchasing the  
8 VNXX service receives a reduction in costs at the expense of Embarq PA's end user,  
9 which in essence, is a form of an implicit subsidy. The ISP is certainly aware of the  
10 benefits that it is receiving and the costs that it is avoiding when it made its choice of  
11 service. Furthermore, if you were to ask an Embarq PA customer with high speed  
12 Internet access if they wanted to pay higher rates so that others could get cheaper dial-up  
13 Internet access, I doubt if they would answer in the affirmative. VNXX is certainly not  
14 the same from Embarq PA's perspective.

15  
16 **Q.** *What do you mean by the last statement?*

17 **A.** When one carrier secures FX service from another carrier on behalf of one of its  
18 customers it reimburses the other carrier. In this case Core, securing FX service on  
19 behalf of its end user customer from one of Embarq PA's rate centers, would buy service  
20 from Embarq PA. Core's VNXX service does not contemplate paying Embarq PA for  
21 any services or for the costs that Embarq PA incurs in the provision of the service to  
22 Core's end user customer.

1 **Q.** *Do you agree with Mr. Gates that in the provision of VNXX service calls "are routed*  
2 *from the ILEC to Core in exactly the same manner as other local calls" (Gates Direct,*  
3 *page 35 at line 827 and line 842)?*

4 **A.** Certainly not. Any such claim is absurd. When one Embarq PA end user in a rate center  
5 calls another Embarq PA end user in the same rate center it is generally a line to line  
6 connection not involving any trunking at all.

7  
8 **Q.** *Isn't Mr. Gates talking about local calls handed off between carriers, between Embarq*  
9 *PA and Core?*

10 **A.** Mr. Gates comments could be interpreted that way. I viewed the phrase "as other local  
11 calls" to encompass all local calls, even those between two Embarq PA end users within  
12 the rate center. That is the context of my response above. However, in the context of  
13 "local calls" between two separate carriers, the VNXX calls that Core is describing are  
14 switched from an Embarq PA end user's line to an interexchange long distance trunk to  
15 Verizon's tandem. The call is then switched again and linked to trunks that are  
16 interconnected with Core's switch and finally terminated to Core's ISP customer, both of  
17 which are located in a rate center that is a toll point. In no way does that switch call path,  
18 the route, look like a local call, nor are the costs incurred the same, especially when Core  
19 is demanding that Embarq PA incur all the costs to transport the calls to the foreign point  
20 and then pay terminating compensation. Core's VNXX calls involve line to trunk routing  
21 and utilize interexchange toll trunks, miles of toll transport, and do not terminate within  
22 the local rate center. Core's claims totally dismiss the interexchange transport aspect that  
23 is part of the routing of VNXX traffic. The only difference between this call that Core

1 calls "local" and a long distance call to Core's ISP customer is the telephone number  
2 dialed.

3  
4 **Q.** *Do you agree with Mr. Gate's contention that Core is the entity providing the Core ISP*  
5 *customer with FX-like functionality (Gates Direct, page 36 at line 864)?*

6 **A.** Not at all. FX service utilizing two carriers' networks is provided by both carriers. The  
7 mere fact that Core is terminating this information services traffic does not amount to  
8 provisioning by Core of an FX-like functionality for its end users. Mr. Gate's testimony  
9 gives the misleading impression that Core is incurring the transport costs that are at the  
10 heart of providing an FX or FX-like service. At most, Core "provides" an FX-  
11 functionality to its ISP customers by abusing the number porting requirements, as I  
12 discuss below. The essence of FX service, which allows an end user to receive the  
13 calling scope and call rating of a rate center other than the local rate center the end user is  
14 physically located in, is the end user's willingness to pay the costs of the interexchange  
15 transport facilities required. However, Core is utilizing Embarq PA's network, without  
16 providing compensation, in order to provide a sham FX service.

17  
18 **Q.** *Please describe what you mean by a "sham FX service"?*

19 **A.** As I have pointed out, FX service recognizes that there are interexchange transport costs  
20 incurred to route a call from its originating rate center to an end user outside of that rate  
21 center. Core refuses to compensate Embarq PA for the functionality that Embarq PA  
22 provides consistent with the FX principles I described above, effectively demanding that  
23 Embarq PA subsidize Core's ISP customers.

1 **Q.** *Is this good for consumers (Gates Direct, page 37, at line 887)?*

2 **A.** The detailed comparison of FX and VNXX services above show that Embarq PA is  
3 simply seeking to have Core provide fair compensation to Embarq PA for the services  
4 that it provides, consistent with how carriers interact to provide FX service. In addition,  
5 as I detailed above, Core's proposal imposes an implicit subsidy on Embarq PA's end  
6 users that do not use the ISP service in question. Embarq PA's position is certainly in  
7 their best interests.

8  
9 **Q.** *Mr. Gates implies that Embarq PA's proposal might harm its ISP customers (Gates*  
10 *Direct, page 38 at line 890). At page 41 (lines 958 to 962), Mr. Gates also claims that*  
11 *the economic effect of adopting Embarq PA's proposal to charge Core access would be*  
12 *counter to the public interest and that requiring access would "eliminate an efficient*  
13 *and technologically advanced means of providing dial-up Internet access" in*  
14 *Pennsylvania. Do you agree with these assertions?*

15 **A.** No. While Mr. Gates alludes to the elimination of the dial-up business, he has not proven  
16 that access charges will cause dial-up Internet access providers to go out of business. I  
17 do not accept that conclusion as the only one possible if the Commission requires Core to  
18 pay access for its non-local traffic. Similarly, I do not accept Mr. Gates' assertions as a  
19 foregone, proven conclusion if the Commission requires bill and keep compensation as a  
20 result of this proceeding, as Embarq PA witness Fox has testified. Core has not  
21 demonstrated that it is unable to pass on the costs of Core's doing business onto the ISPs  
22 it serves. Mr. Gates' claims are speculative. The ISPs were providing service before  
23 Core came along. They were buying service from Embarq PA and other carriers. Core's



1       advent did not necessarily provide additional or new services to the customers of ISPs,  
2       rather Core simply developed a business model that allows it, and its ISP customers, to  
3       avoid costs and shift those costs to Embarq PA. Thus, it is certain that the ISPs  
4       transferred their service to Core for financial reasons, be it reduced costs or the potential  
5       for sharing reciprocal compensation revenues. No company has an unqualified right to  
6       make a profit and remain in business, particularly if that company cannot pay the  
7       legitimate costs associated with other providers' facilities that it uses. While Core and  
8       Mr. Gates allege public interest and claim efficiencies may be eliminated, what they are  
9       essentially saying is that the Commission should order Embarq PA and the other ILECs  
10      in the state of Pennsylvania to subsidize these ISPs because Core's chosen business model  
11      cannot be profitable without a competitively advantageous subsidy. Indeed, Mr. Gates  
12      describes dial-up Internet access as "the universal service equivalent of a primary line for  
13      voice service" (Gates Direct, page 41, at line 965), which further support's Embarq PA's  
14      characterization of Core's compensation scheme as an implicit subsidy for the ISP's  
15      utilizing Core's VNXX service and the ISP dial-up Internet customers. Mr. Gates'  
16      speculative assertion of potential elimination of "an efficient and technologically  
17      advanced means of providing dial-up Internet access" is simply not proven and is not  
18      correct. And, as I've described in detail, the technology that is employed with Core's  
19      VNXX service for call routing is nothing new under the sun, but is in fact the same as  
20      making a long distance call.

1 *Q. Mr. Gates makes a case for the continued provision of dial-up Internet access in his*  
2 *Direct Testimony on pages 41 through 43 (lines 963 through 1016). Is Embarq PA's*  
3 *position contrary to that goal?*

4 A. No. There is no question that some consumers continue to use dial-up Internet access for  
5 a variety of reasons, especially where broadband access is not available. Embarq PA is  
6 aware of that and is committed to providing broadband access to every Embarq PA  
7 consumer. In fact, counsel advises me that Embarq PA has a statutory obligation  
8 ultimately to accelerate broadband availability to 100% of Embarq PA by December 31,  
9 2013. However, nowhere in Act 183 or in Embarq PA's alternative regulation plan is it  
10 required – let alone envisioned – that Embarq PA would not only meet Embarq PA's  
11 broadband availability commitments, but also support and subsidize Core's business  
12 operations and maximize Core's profit-seeking potential. Embarq PA's commitments are  
13 to its customers, the General Assembly, and the Commission. Those commitments do  
14 not include subsidizing Core's business. If public policy is the benchmark, as Mr. Gates  
15 suggests, then clearly from a public policy standpoint Core's prediction of doom and  
16 gloom are not only speculative and unfounded, but are unsupported by any statutory  
17 framework in Pennsylvania.

18  
19 *Q. Do you know how many dial-up Internet customers in Embarq PA's territory are*  
20 *subscribing to the ISP's that use Core's VNXX service?*

21 A. We can estimate the number of customers by reviewing the traffic study presented by Mr.  
22 Hart in his Direct Testimony. According to Mr. Hart's study, calls were made from  
23 approximately [BEGIN PROPRIETARY] [END PROPRIETARY] separate

1 telephone numbers. That represents [BEGIN PROPRIETARY] [END  
2 PROPRIETARY] of the 338,544 end users (access lines) that receive local exchange  
3 service from Embarq PA within these rate centers. In addition, the usage characteristics  
4 of several of the telephone numbers are suspicious. Some were connected for the entire  
5 24 hour period with as many as 60 calls. It is questionable to me that someone would sit  
6 at a computer 24 hours a day making a dial up Internet call, staying on line, logging off,  
7 and then logging back on approximately three times an hour. If it is in the public interest  
8 to ensure that ISP's such as Earthlink (Gates Direct, page 42 at line 997) and Core's  
9 profit are maximized – and that this Commission deem dial-up Internet access as part of  
10 the universal service mandate for these customers – then the Commission should consider  
11 it in that context, not this arbitration proceeding. Such a proceeding would show that the  
12 level of subsidy demanded by Core is extreme. For example, if Embarq PA were to agree  
13 to Core's terms and incur the expense estimated by Mr. Hart (*see* Hart Proprietary Direct,  
14 page 27 at line 20), that equates to over \$1,000 in annual expense for each of the  
15 [BEGIN PROPRIETARY] [END PROPRIETARY] dial up Internet customers.  
16 It would be cheaper for Embarq PA to pay the "high" monthly recurring rate for dial up  
17 Internet access of \$24.95 (\$299.40 annually) for each of these customers and receive  
18 proper compensation from ISPs and connecting carriers than to agree to Core's terms.  
19 Core's terms result in an annual expense that is over 3 times that of just paying the ISP  
20 monthly payment for each end user subscribing to dial up Internet access.  
21

1    *Q.    Is Mr. Gates correct in his assessment of whether or not Embarq PA charges access*  
2       *charges for its FX service (Gates Direct, page 40 at line 953)?*

3    A.   No, he is not. Embarq PA does not oppose the use of numbers for real FX services when  
4       carriers interconnect appropriately and compensate Embarq PA for the joint provision of  
5       those FX services. Embarq PA's FX service essentially operates as if the end user  
6       purchasing the FX service resided in the rate center. When the end user makes a long  
7       distance call it is routed to their picked Interexchange Carrier and Embarq PA bills access  
8       charges. Likewise, when a long distance call is terminated to the FX it is routed just like  
9       other calls destined for that rate center and Embarq PA bills the IXC terminating access  
10      charges. The rating is correct because the routing is the same. The additional rates in  
11      Embarq PA's tariff are for the additional transport and central office terminals that are  
12      needed to connect the end user buying the FX service. That is not the case of VNXX  
13      services. The application of access charges and any other rate based on V&H coordinates  
14      utilizing the assigned rate center would be incorrect in the case of VNXX service because  
15      the actual routing is not the same. That is one of the reasons why the FCC prohibits  
16      porting telephone numbers outside of the rate center to which they are assigned.

17  
18       **Local Number Portability ("LNP")**

19  
20    *Q.    Has Embarq PA ever taken the position that carriers cannot use telephone numbers to*  
21       *provide FX services (Gates Direct, page 43 at line 1018)?*

22    A.   No, not at all.  
23

1 *Q. Does Mr. Gates quote from the Numbering Guidelines support Core's use of telephone*  
2 *numbers (Gates Direct, page 43 at line 1021)?*

3 *A.* No. The Numbering Guidelines referred to by Mr. Gates simply state that FX is the  
4 exception where the end user is not geographically located inside of the rate center to  
5 which the telephone number is assigned. The Guidelines do not pre-empt the FCC rules  
6 that explicitly prohibit porting telephone numbers outside of the rate center (Maples  
7 Direct, page 16 at line 16) and as shown above the provisioning of FX service does not  
8 involve porting outside of the rate center. Nor do the Guidelines carry the same weight  
9 as FCC rules because a violation of FCC rules is subject to penalties. Furthermore, there  
10 are also other guidelines clearly prohibiting porting numbers outside of the rate center.  
11 For example, the Telecordia Local Exchange Routing Guide ("LERG"), which  
12 Telecordia Technologies will not allow any carrier to use in a proceeding without its  
13 expressed permission, clearly states that service provider portability does not equate to  
14 location/geographic portability.

15  
16 *Q. When an ILEC provides FX service as you have described, does the ILEC port the*  
17 *number outside of the rate center?*

18 *A.* No. Dial tone for the FX service is provided via the same switch that provides service to  
19 end users that are geographically located in the rate center. ILECs have a local presence  
20 in each rate center. The customer buying the FX services pays for the cost of the  
21 connection between the two rate centers. As I stated in my Direct Testimony, Core  
22 actually ports the telephone number to a switch located outside of the rate center, does  
23 not establish a "presence" in the rate center (as in the case of FX service), and does not

1 pay for the transport between the two rate centers (as in the case of FX), which changes  
2 how calls are routed to and from the telephone number.  
3

4 *Q. What is the significance and import of Core's practice of porting numbers without*  
5 *establishing a presence within the rate center to Core's claims as made in this*  
6 *arbitration case?*

7 *A.* Core calls the traffic in question "local" simply because it uses a local number. While  
8 other witnesses address various components of this issue, I question Core's practices with  
9 using number resources as further demonstration that Core has no local presence. The  
10 actual mechanics of Core's use of ported numbers further shows the non-local nature of  
11 Core's traffic and further proves as unfounded the fiction that Core spins in order to get  
12 compensation "as if" local. For example, Embarq PA has ported 97 numbers to Core  
13 switches located in four foreign rate centers: Wilkes-Barre, Harrisburg, Pittsburgh, and  
14 Altoona; however, Embarq PA does not provide local exchange service to end users in  
15 these four locations. *See*, Embarq PA's response to Core Interrogatories (Set III-27 and  
16 28). The Core switches are not within any Embarq PA rate center. If Core does not have  
17 any physical presence within the Embarq PA rate center, unlike FX service, calls to and  
18 from these numbers will not be routed through the rate centers to which they are  
19 assigned. In addition, Core has ported 60 numbers from Embarq PA rate centers that  
20 Core has not mirrored in any way. Thus, Core's misuse of Local Number Portability  
21 ("LNP") further shows that Core's attempt to qualify its traffic as local for intercarrier  
22 compensation purposes is flawed and suspect.  
23

1 *Q. Are you saying that Core is porting numbers out of the Embarq PA rate center even*  
2 *when it assigns the Embarq PA rate center to one of the four switches listed above?*

3 *A.* Yes. While Core may argue that it is in compliance by assigning Embarq PA rate centers  
4 to these switches, the reality demonstrates otherwise. For example, let's use the VNXX  
5 scenario depicted above (see Figure 2). If a Verizon end user in Harrisburg were to call  
6 the ported number (717-935-5035) it would be dialed as a long distance call since  
7 Belleville is a toll point and the call would be handed off to the end user's interexchange  
8 carrier. As the N-1 carrier<sup>1</sup>, the interexchange carrier would do the LNP look up and  
9 based on the routing information contained in the LERG, direct the call to the Verizon  
10 Harrisburg tandem and on to Core, not going through the Belleville rate center or the toll  
11 tandem for the Belleville rate center (Carlisle). Core would bill terminating access  
12 charges based on the V&H (vertical and horizontal) location of the rate center it  
13 designated in the LERG (Belleville) when the call was actually routed to the Harrisburg  
14 rate center. This practice will either over or under recover the mileage sensitive aspects  
15 of the access rates. It is also difficult for interexchange carriers to validate access billing.

16  
17 *Q. Isn't Core's misuse of LNP better addressed before the FCC?*

18 *A.* Not with respect to the compensation issues now before the Pennsylvania Public Utility  
19 Commission. That is, the Commission is tasked with the obligation in this case of  
20 making a determination as to Core's request for intercarrier compensation based upon the  
21 contention that its traffic is local in nature, and thus Core should be entitled to reciprocal  
22 compensation. My testimony demonstrates that Core's practices regarding ported

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<sup>1</sup> In LNP regulations the N-1 carrier is the one responsible for doing the LNP look up to determine the proper routing. In the case of long distance calls the interexchange carrier is always the N-1 carrier.

1 numbers do not support Core's contention that the traffic routed to those numbers is local  
2 in nature.

3  
4 **SECTION III - CONCLUSION**  
5

6 ***Q. Please summarize your Rebuttal Testimony.***

7 **A.** My Rebuttal Testimony has conclusively shown that Core's VNXX product is not FX or  
8 FX-like with respect to actual provisioning and compensation. Core's scheme is an  
9 attempt to get Embarq PA and its end users to subsidize Core and Core's end user  
10 customers. Core is not providing telecommunications service to any Embarq PA  
11 customer via VNXX, but is in fact providing toll free service to Core's end user  
12 customers located outside of Embarq PA rate centers. Core should compensate Embarq  
13 PA for the cost of transporting the calls from Embarq PA customers outside of the rate  
14 center to the location of the Core VNXX customer. This is consistent with how FX  
15 services are provisioned today. Core has accomplished this charade by manipulating the  
16 LNP process and inappropriately porting telephone numbers outside of the rate centers,  
17 introducing rating and routing errors. Core should be ordered to establish interconnection  
18 as testified to by Embarq PA's witness Fox.

19  
20 ***Q. Do you have anything to add?***

21 **A.** Yes, I would like to note that Core's witness did not address the VoIP compensation issue  
22 in his Direct Testimony. To the extent that Core has substantively addressed the VoIP  
23 compensation issue and that testimony remains in the record, I would like to opportunity



1 to provide a response and to complete the record on this issue and the language proposed  
2 by Embarq PA.  
3

4 *Q. Does this conclude your Rebuttal Testimony?*

5 *A. Yes.*

# ATTACHMENT JMM-1

The United Telephone  
Company of Pennsylvania

Section 6  
Fifth Revised Sheet 1  
Canceling Fourth Revised Sheet 1

## FOREIGN EXCHANGE SERVICE

Foreign exchange service is exchange service furnished from a central office of an exchange other than that normally serving the area in which the customer is located. Foreign Exchange Service, as stated in this tariff, is offered on an intraLATA basis only.

(C)

Foreign exchange service does not come within the Company's general undertaking. The Company does not obligate itself to furnish foreign exchange service generally, but will do so where facilities of such a character are available as will permit satisfactory telephone transmission. In cases where facilities are available in connection with which additional equipment is required, in order to provide satisfactory transmission or signaling equipment, and it is practicable to make use of the additional equipment in connection with the available facilities, and additional charge is made to cover the cost of providing the necessary additional equipment. Pay Telephone Line Service is not furnished on a foreign exchange basis.

When foreign exchange service is furnished by means of a private branch exchange trunk line, connections to the trunk at the customer-provided private branch exchange switchboard are restricted to the customer-provided stations connected with and in the immediate vicinity of the customer-provided private branch exchange switchboard.

The local service and toll rates applicable to foreign exchange service are the same as apply to other stations served from the same foreign central office.

Foreign exchange service is provided only upon contract for a minimum period of six months.

When special operating is required, an additional monthly charge may be made to cover the cost of such operating.

## Rates and Regulations

## A. Intra-Company Foreign Exchange Service

- \*1. When the exchange area in which the customer is located is adjacent to the foreign exchange area and foreign exchange service is given by direct connection to the foreign central office.
  - a. **Intra-Company foreign exchange service** is discontinued as a new offering and is limited to existing customers in the same location. The rates for **this** service are the established local exchange rates applicable to the foreign exchange plus mileage charges as shown below. The mileage charge for **individual line service** is based on the route measurement from the boundary of the base rate area of the foreign exchange to the customer's location. The minimum rate is one mile.

**Individual Line Mileage** ..... †a

\* Limited to Existing Customers

Certain material on this sheet formerly appeared on First Revised Sheet 2.

† See Rate Sheet at end of this Section

(C) Indicates Change

The United Telephone  
Company of Pennsylvania

Section 6  
Second Revised Sheet 2  
Canceling First Revised Sheet 2

## FOREIGN EXCHANGE SERVICE (Continued)

## A. Intra-Company Foreign Exchange Service (Continued)

2. Foreign Exchange Service provided from terminating central offices between adjacent or non-adjacent exchange:

When the exchange area in which the customer is located is not adjacent to the foreign exchange area, connections are subject to the condition that during the period foreign exchange service is retained the subscriber is also a subscriber for local exchange service. This is not a requirement where two exchange are adjacent. In either case, the rate for foreign exchange service is the established individual line or private branch exchange trunk line base rate in the foreign exchange, plus a monthly mileage charge of (†a) per mile measured airline from the foreign central office through the local central office. In addition, a customer located outside the base rate area of the local exchange is subject to a mileage charge (†b) per quarter airline measurement. A channel terminal charge of (†c) is applicable for each central office connection.

## B. Inter-Company Foreign Exchange Service

Foreign exchange service is limited to private branch exchange trunk lines and individual lines. This service will be provided only where the customer agrees to remain a customer of this company and to limit calls from the foreign exchange station to other stations in the local service area of that foreign exchange. This company will rent a terminal in the foreign exchange and provide it to the subscriber at the private branch exchange trunk line or individual line rate at the foreign exchange. In addition the following monthly charges apply:

1. Within the territory of this company, a mileage charge of (†a) per mile, or fraction thereof applies for each circuit measured airline from the rate center of normal exchange to the boundary line of the adjoining company.

Certain material formerly on this sheet now appears on Fifth Revised Sheet 1.

† See Rate Sheet at end of this Section

(C) Indicates Change

The United Telephone  
Company of Pennsylvania

Section 6  
Second Revised Sheet 3  
Canceling First Revised Sheet 3

FOREIGN EXCHANGE SERVICE (Continued)

B. Inter-Company Foreign Exchange Service (Continued)

2. Outside the territory of this company, such charges apply as are provided by other participating companies. (C)
3. A supplemental charge of (†b) applies for 5¢ multiple of the day station-to-station initial period message toll rate, as filed before January 1, 1975, between the normal exchange and the foreign exchange. Such charge will not apply if the local and foreign exchanges are in the same local service area.
4. When the customer is located outside the base rate area of the local exchange, a line mileage charge of (†c) per quarter applies to the foreign exchange local channel.
5. A channel terminal charge of (†d) is applicable for each central office connection.

When foreign exchange service is requested by a customer of another company to an exchange of this company, there will be a charge for the local loop of \$5.00 for a business individual line or \$3.50 for a residence individual line plus the charges listed in "1" above. The charges in "3" above apply unless a similar charge is made by the company in whose territory the subscriber is located.

C. Inter-Company Extension Service

See Section 9, Sheet 3.

† See Rate Sheet at end of this Section  
(C) Indicates Change

The United Telephone  
Company of Pennsylvania

Section 6  
Second Revised Sheet 4  
Canceling First Revised Sheet 4

## FOREIGN EXCHANGE SERVICE

## RATE SHEET

## Rates and Regulations

		Monthly Charge	Section 6, Sheet	
A.	Intra-Company Foreign Exchange Service			
* 1.	Direct Connection			
	Individual Line Mileage	†a \$ .56	1	(D) (C)
2.	Adjacent or non-adjacent exchanges			
	Interexchange Mileage	†a \$ 5.00	2	
	Line Mileage, per quarter	†b .60	2	
	Channel Terminal Charge, each	†c 24.00	2	(D)
B.	Inter-Company Foreign Exchange Service			
1.	Interexchange Mileage	†a \$ 5.00	2	
3.	Supplemental Charge	†b 6.00	3	
4.	Line Mileage, per quarter	†c .60	3	
5.	Channel Terminal Charge, each	†d 24.00	3	(D)

\* Limited to existing customers

(C) Indicates Change

(D) Indicates Decrease

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