

Exhibit No.:
Issues: Network and Technical
Witness: Mark Neinast
Type of Exhibit: Rebuttal
Sponsoring Party: Southwestern Bell Telephone
Company, d/b/a AT&T Missouri
Case No.: TC-2012-0284

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

Case No. TC-2012-0284

**Rebuttal Testimony of Mark Neinast
On Behalf of AT&T Missouri**

October 19, 2012

Big River Telephone Company, LLC,)
)
Complainant,)
)
v.)
)
Southwestern Bell)
Telephone, L.P., d/b/a)
AT&T Missouri,)
)
Respondent.)

V.)
)
Southwestern Bell)
Telephone, L.P., d/b/a)
AT&T Missouri,)
)
Respondent.)

COUNTY OF COLLIN)
) SS
STATE OF TEXAS)

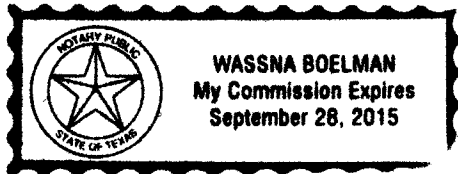
1. My name is Mark Neinast. I am Associate Director - Network Regulatory for AT&T Services, Inc.
2. Attached hereto and made a part hereof for all purposes is my Rebuttal Testimony.
3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge and belief.


Mark Neinast



Notary Public

My Commission Expires: 9/28/15



1 **I. INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME.**

3 A. My name is Mark Neinast.

4 **Q. ARE YOU THE SAME MARK NEINAST WHO SUBMITTED DIRECT**
5 **TESTIMONY IN THIS MATTER ON SEPTEMBER 28, 2012?**

6 A. Yes.

7 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

8 A. I will respond to assertions in the pre-filed direct testimony of Big River witness Gerald
9 J. Howe concerning his claims that Big River's traffic is enhanced and that Big River can
10 therefore avoid the payment of access charges for terminating interexchange traffic on
11 AT&T Missouri's network. Many of the assertions made by Mr. Howe describe details
12 of Big River's services that are similar to ones that Halo/Transcom made earlier this year.
13 The Commission ruled in the Halo proceeding¹ that Transcom's service was not
14 enhanced and that access charges were due. I will also address Mr. Howe's assertions to
15 show the Commission that the traffic referenced in the complaint that Big River is
16 terminating to AT&T Missouri is plain voice traffic and not enhanced services traffic.

17 **Q. MR. HOWE STATES IN HIS DIRECT TESTIMONY THAT BIG RIVER'S**
18 **TRAFFIC MEETS THE FIRST DEFINITION FROM THE**
19 **INTERCONNECTION AGREEMENT ("ICA") FOR ENHANCED SERVICES,**
20 **WHICH IS TRAFFIC THAT UNDERGOES A NET PROTOCOL CONVERSION**
21 **BETWEEN THE CALLING AND CALLED PARTIES. DO YOU AGREE?**

22 A. No. Nowhere in his testimony does Mr. Howe describe a *net* protocol change in the
23 traffic between Big River's end user and AT&T Missouri's end user. Mr. Howe explains

¹ *Halo Wireless, Inc. v. Craw-Kan Telephone Cooperative, Inc., et al.*, Case No. TC-2012-0331, *Report and Order*, August 1, 2012,

1 (at p. 4) that on AT&T Missouri's network, all "media" (by which he means "the sounds
2 of the telephone call," at p. 5) is time division multiplexed ("TDM") using a pulse code
3 modulation ("PCM") format. According to Big River's May 19, 2011 letter to AT&T
4 Missouri, which is Schedule MN-1 to my direct testimony, this is the same format used to
5 originate the traffic on Big River's network. While Mr. Howe goes on to describe
6 protocol conversions made to the "media" or to the separate signaling information
7 elsewhere in Big River's network (i.e., at its "media gateways"), he does not explain how
8 any "net" change is made between the calling and called parties.

9 In addition, Mr. Howe's description (at pp. 4-5) of the different protocols used by
10 Big River to carry signaling information is beside the point. In addition to the content of
11 a voice call, all carriers exchanging telephone calls also exchange signaling information,
12 which is a separate stream of information used for call set-up between networks.² Even if
13 Big River made some net protocol conversion in its signaling (though, again, Mr. Howe
14 has not established any such net change from end-to-end), that would be beside the point
15 because it is not a net protocol change in the communication between the calling party
16 and called party. That communication, again, begins and ends in PCM format, and is
17 simply a telecommunications service between two end users, one of whom is an end user
18 making a call that is originated on one telecommunications carrier's network (i.e., Big
19 River's network) and the other of whom is an end user on another telecommunications
20 carrier's network to which the call is terminated (AT&T Missouri's network). And since

² Call set-up is the signaling between switches (and networks) of the information needed to make a telephone call. This includes the Calling Party Number ("CPN") of the originator, the called number, the trunk circuit that the switches reserve for a call and other related information necessary to complete telecommunications traffic over the PSTN.

1 the traffic is interexchange traffic, access charges are due to the terminating carrier,
2 AT&T Missouri.

3 **Q. MR. HOWE ALSO STATES IN HIS DIRECT TESTIMONY THAT BIG RIVER'S**
4 **TRAFFIC MEETS THE SECOND DEFINITION FROM THE ICA FOR**
5 **ENHANCED SERVICES. DO YOU AGREE?**

6 A. No. The second definition is addressed in my direct testimony at pages 6-7, where I
7 explain that the various features offered by Big River are not sufficiently integrated with
8 its underlying voice service to turn the latter into an enhanced service.. As I previously
9 stated, the Big River traffic is PSTN voice traffic and there are no enhancements to these
10 calls that are sufficiently integrated with that traffic to turn it from telecommunications
11 services traffic into enhanced services traffic.

12 **Q. MR. HOWE DESCRIBES THE BIG RIVER MEDIA GATEWAY**
13 **FUNCTIONALITY ON PAGE 4 OF HIS DIRECT TESTIMONY. DO YOU**
14 **AGREE WITH HIS ANALYSIS?**

15 A. I have no basis to contest Mr. Howe's assertion that Big River uses a media gateway to
16 convert an IP signal to an SS7 TDM signal (and vice versa) for interconnecting Big
17 River's network to AT&T Missouri's network. However, Mr. Howe is incorrect to refer
18 to this as a "point of demarcation." The point of demarcation as described in the ICA
19 pertains to local loops and a point on customer premises, not a network point of
20 interconnection.

21 **Q. FROM PAGES 4 TO 5 OF MR. HOWE'S DIRECT TESTIMONY HE**
22 **DESCRIBES PROTOCOLS USED BY BIG RIVER TO CARRY "MEDIA" (I.E.,**
23 **THE CONTENT OF A VOICE TELEPHONE CALL). DO ANY OF THESE**
24 **CONSTITUTE ENHANCED SERVICE TRAFFIC BEING TERMINATED ONTO**
25 **AT&T MISSOURI'S NETWORK?**

1 A. No. At pages 5-6 of his direct testimony, Mr. Howe explains that in transporting calls
2 across its network, Big River converts media from the PCM format to the ITU G.729
3 standard, and packetizes the information into Real Time Protocol (“RTP”) packets, both
4 of which he describes as more efficient. Again, Mr. Howe does not establish that any *net*
5 change in protocol is used, and in the end he is simply describing the use of the IP
6 network to carry telephone calls, which uses different codecs and protocols to transmit
7 information than the PSTN. Using IP in the middle does not make a service enhanced,
8 and the Commission recently rejected a similar argument regarding basic IP transmission
9 programs, such as comfort noise generators which are used by all telecommunications
10 carriers in their normal operations, holding they do not constitute an enhanced service.³
11 Just as Transcom’s position in the earlier proceeding was to create a smoke screen of
12 technical jargon of IP telephony, Big River has dedicated much of their testimony in the
13 same way. I could similarly discuss the inner workings of a TDM switch and discuss call
14 set-up, trunk selection, route indexing and NPA-NXX code routing, but that would only
15 serve to confuse matters and not get to the core of the issue, which is a very simple matter
16 – the traffic Big River is delivering to AT&T Missouri is interexchange, long distance
17 traffic and access charges apply. Big River’s “enhancement” argument is a red herring to
18 avoid these payments and the Commission should not be fooled by it.

³ In *Halo Wireless, Inc. v. Craw-Kan Telephone Cooperative, Inc., et al.*, Case No. TC-2012-0331, *Report and Order*, August 1, 2012, at 44, the Commission states: “Transcom claims it provides enhanced service because it takes steps to minimize background noise on a voice call and inserts 'comfort noise' during periods of silence so the parties do not think the call has been disconnected. The Commission, however, finds that suppressing background noise and adding comfort noise are not 'enhancements' to the underlying voice telecommunications service. They are merely the same type of call conditioning that carriers normally provide, and have provided for some time, as an incidental part of voice service (*e.g.*, by using repeaters to boost a voice signal over long distances).”

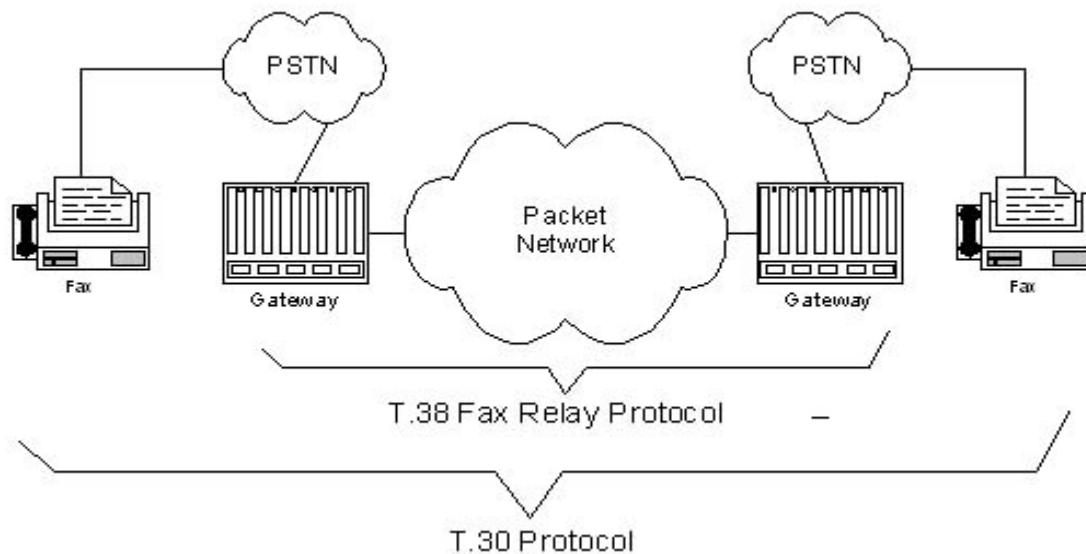
1 **Q. FROM PAGES 6 TO 9 OF HIS DIRECT TESTIMONY, MR. HOWE DESCRIBES**
2 **THE PROTOCOL USED BY BIG RIVER TO CARRY FAX INFORMATION.**
3 **DOES THIS MAKE ALL OF BIG RIVER'S TRAFFIC ENHANCED SERVICES**
4 **TRAFFIC?**

5 A. No. As an initial matter, Mr. Howe does not contend that any, much less all, of the long
6 distance calls from Big River's customers to AT&T Missouri's customers upon which
7 AT&T Missouri assessed access charges were fax transmissions. Moreover, Mr. Howe
8 again fails to establish any net protocol change or enhancement.

9 Mr. Howe describes the T.38 codec (codec = *coder decoder*) Big River uses to
10 "get[] fax information across our network," instead of the standard G.729 codec used to
11 carry voice traffic over a packet (IP) network. As in the Halo case, these are not
12 enhanced services, but are simply the proper codecs to carry traffic over an IP network.
13 Again, Big River's position seems to be that merely because they use IP somewhere in
14 their network, they are offering "enhanced" services.

15 In addition, Big River's use of a different codec to carry fax information does not
16 mean, even with respect to a fax call, that there is any net protocol change. The diagram
17 below depicts an end-to-end fax transmission with a packet network in the middle. As
18 you can see, the PSTN also uses a T.30 codec to insure the fax machines are transmitting
19 and receiving properly. While a different protocol may be used in the middle, in
20 conjunction with the IP network, there is no overall protocol change.

Common operation of T.38 real-time fax relay



The gateway usually supports some kind of codec for voice/audio (e.g., G.729) and detects fax tones and automatically switches to T.38 (fax relay) or other codec method (G.711 fax pass-through) with better compatibility. Mr. Howe refers to this as “intelligence” that “listens” on every call (Howe Direct at 7), but in reality this is just another facet of using IP in the middle of the network to transport traffic – the gateway device must “listen” to the traffic to determine what kind of protocol to use (e.g., G.729 for voice, or T.38 for fax). The modems used by fax machines are the same as the modems used for dial-up data modems. This method also allows dial-up modems to communicate when there is an IP network as part of the connection between the two data modems. But in the end, the protocol conversions are not an “enhanced” service offered to the end-user. Rather, the service offered to the end-user is basic transmission of voice or fax information from one point to another (a telecommunications service), and the end-user has no idea whether the protocol used to transport the customer’s information is converted zero, one, or ten times in between.

1 Mr. Howe also describes (at pages 8-9) Big River's "virtual fax service," which
2 allows customers to *receive* a fax that is converted to .pdf and emailed to them. As I
3 explained previously, this ancillary feature has nothing to do with calls placed by Big
4 River customers to AT&T Missouri customers.

5 **Q. MR. HOWE DISCUSSES DTMF (DUAL TONE MULTI-FREQUENCY) AND BIG**
6 **RIVER'S CONVERSION TO PACKET DATA. IS THIS A TRANSFORMATION**
7 **THAT WOULD CONSTITUTE BIG RIVER'S PROVIDING AN ENHANCED**
8 **SERVICE?**

9 A. No. All sounds must be "packetized" when using Internet protocol. Part of this process
10 is to digitize the sound, whether it is a human voice, a dog barking in the background or a
11 DTMF tone. The fact that telecommunications systems are programmed to respond to a
12 DTMF tone is irrelevant to the analysis of the calls that Big River is terminating to
13 AT&T Missouri. If tones were activated to record a call, which is one of the features that
14 Big River claims makes its service enhanced, this would not make the service enhanced,
15 per the FCC's *InterCall Order*.

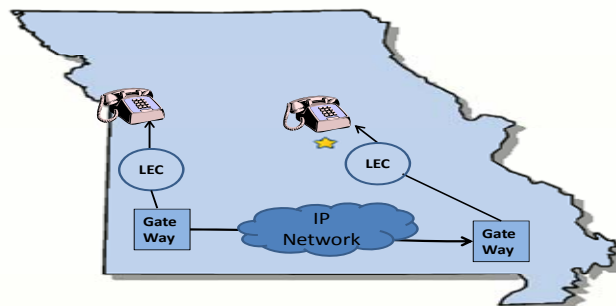
16 **Q. MR. HOWE DISCUSSES THE EFFICIENCIES OF AN IP NETWORK IN HIS**
17 **TESTIMONY ON SEVERAL OCCASIONS. IS THIS RELEVANT?**

18 A. No. As an initial matter, I agree that Internet protocol is much more efficient than TDM,
19 from the perspective of transporting telecommunications traffic, for several reasons.
20 TDM technology requires a dedicated circuit for the entire duration of a call, which is a
21 physical path for each call. A DS1 is a transport convention that accommodates 24
22 simultaneous calls when using TDM signaling. This is done by dividing the DS1 into 24
23 separate voice channels. This is referred to as a "channelized" DS1 for the 24 channels,
24 which is how TDM networks use a DS1. However, IP signaling does not use a
25 channelized method and because of that can more than double the amount traffic over the

1 same DS1. Also important is IP only transmits data when there is data to transmit. In
2 other words, a DS1 channel is not tied up for the duration of a call as in the case of TDM
3 signaling, but rather the voice or data packets are sent only when necessary. Another
4 advantage when using IP technology, because the DS1 is not channelized you can mix
5 voice and data over the same DS1, creating additional flexibility in the use of a DS1.

6 These efficiencies are especially realized in long distance traffic, i.e.
7 interexchange traffic (as in the traffic in this complaint), which is why so many carriers
8 have begun using IP technology to transport traffic. But the fact that a carrier may
9 operate its network more efficiently by packetizing signals and carrying them in IP-
10 compatible formats does not make the services it offers and provides its customers
11 enhanced services. Below is a diagram of a call from Kansas City to Jefferson City with
12 IP in-the-middle technology. In my direct testimony, at page 5, I referenced the FCC's
13 rules and conclusion that the traffic is not enhanced services traffic with this architecture.
14 If Big River is using this same architecture to deliver calls from Kansas City to Jefferson
15 City, while it may be more efficient for Big River, the conclusion would be the same.

IP IN-THE-MIDDLE CALL



1 **Q. ON PAGE 11 OF MR. HOWE'S TESTIMONY, HE STATES THAT BIG RIVER**
2 **IS PURCHASING A SERVICE FROM AT&T MISSOURI CALLED AVOICS. IS**
3 **HE CORRECT?**

4 A. No, this service is not provided by AT&T Missouri. The service is a long distance
5 service provided by AT&T Communications, which is an interexchange carrier affiliate
6 of AT&T Missouri (an incumbent local exchange carrier). AVOICS is an acronym for
7 AT&T Voice Over IP Connect Service. The service description is for long distance call
8 termination, and calls routed in this fashion are not part of the instant complaint. This
9 complaint concerns calls delivered by Big River to AT&T Missouri for termination under
10 the parties' ICA, not calls that Big River delivered to AT&T Communications once it
11 began purchasing AVOICS.

12 **Q. ON PAGES 12-13 OF MR. HOWE'S TESTIMONY, HE DISCUSSES BIG**
13 **RIVER'S VOICE MAIL SERVICE AND ITS WEB SELF-CARE SYSTEM. ARE**
14 **THESE PERTINENT TO THIS COMPLAINT?**

15 A. No. The voice mail service Mr. Howe describes is a very nice feature that I have used
16 myself. AT&T Missouri offers voice mail service to its own customers. However, the
17 calls in this complaint are originated by a Big River customer and terminated to an
18 AT&T Missouri customer. For Big River's voice mail service to be at play here,
19 someone would have to call a Big River customer to get to their voice mail. Those are
20 not the calls in question. Further, voice mail services have been available for decades.
21 Even if Big River's voice mail service is an enhanced service, to my knowledge, no one
22 has ever argued that the availability of voice mail turns a carrier's offering of the ability to
23 make voice telephone calls into an enhanced service.

24 Similarly, while Big River has a website where customers can configure voice
25 mail and calling features, these have nothing to do with the classification of the traffic

1 where a Big River customer places a voice telephone call to an AT&T Missouri
2 customer.

3 **Q. ON PAGE 14 OF MR. HOWE’S TESTIMONY, HE DISCUSSES NINE MORE**
4 **FEATURES THAT PURPORTEDLY MAKE BIG RIVER’S TRAFFIC**
5 **ENHANCED. ARE THESE FEATURES PERTINENT TO THIS COMPLAINT?**

6 A. No. Mr. Howe lists these features, and does not describe them in detail, so I will do my
7 best to address these various features with the limited information at my disposal. As an
8 initial matter, Big River has not shown (and does not contend) that any of these features
9 were actually used when Big River’s customers made the telephone calls at issue here to
10 AT&T Missouri’s customers. And, in any event, these are merely ancillary features not
11 integrated with Big River’s telecommunications services in a way that would make 100%
12 of Big River’s traffic “enhanced.”

13 HD Phone Calls and HD Conferencing appear to use transmission protocol to
14 “clean-up” any background noise to provide a clearer reception. The Commission
15 addressed similar features in the Transcom/Halo proceedings, and rejected the argument
16 they make traffic “enhanced.”⁴ The Softphone App appears to be similar to a Skype
17 program that would allow a Big River number to be used on a smart phone. This too was
18 rejected by the Commission in the Transcom/Halo proceedings for the purposes of
19 avoiding paying access charges.⁵

⁴ *Halo Wireless, Inc. v. Craw-Kan Telephone Cooperative, Inc., et al.*, Case No. TC-2012-0331, *Report and Order*, August 1, 2012, at 44.

⁵ *Halo Wireless, Inc. v. Craw-Kan Telephone Cooperative, Inc., et al.*, Case No. TC-2012-0331, *Report and Order*, August 1, 2012, at 36 (“Halo has challenged these call studies contending that some calls that originate from what appear to be landline numbers could, in some scenarios, actually originate from a wireless device. Based on this, Halo contends that CPNs are unreliable and cannot be used to identify the origination point or originating carrier on any of the calls Halo sends AT&T Missouri. The Commission disagrees.”).

1 Mass Announcement Service appears to be an autodialer function that is being
2 used by school districts, political announcements and 911 PSAPs to deliver emergency
3 notifications. Big River does not claim that the calls to AT&T Missouri's end users used
4 this service and, in any event, Big River does not explain how this feature, which merely
5 transmits information of the user's choosing, is "enhanced."

6 Direct Media would not be a service that would fall into the complaint at hand, as
7 the TDM customer has only one path for voice and there are no subsequent paths for
8 media that could be utilized. While this service may work in an IP-IP environment, there
9 is no way it would work where, as here, calls are terminated on the PSTN in TDM
10 format.

11 Fire Bar is a conference bridge service to a pre-determined list of telephone
12 numbers. While convenient, each leg of the call would be treated as a separate and
13 distinct call for purposes of intercarrier compensation if the calls were terminating on
14 different carrier's networks. There is nothing that would "enhance" the call in this
15 service.

16 Privacy Defender is a terminating service where one customer calls a Big River
17 customer and the Big River customer can screen incoming calls to determine whether
18 they should answer them or not. These calls do not terminate to AT&T Missouri and are
19 therefore not part of this complaint. Moreover, AT&T Missouri offers similar services,
20 such as Call Blocker and Privacy Manager. These are telecommunications services
21 offered under tariff by AT&T Missouri, pursuant to AT&T Missouri's General Exchange
22 Tariff, Section 47.2.8, Original Sheet 4, and Section 47.3.21, Third Revised Sheet 11.2
23 (attached hereto as Schedule MN-1 and MN-2, respectively).

1 Auto Attendant appears to be an interface for the Big River customer to an
2 internet site. Again, these calls are not part of the complaint, since they are terminating
3 to a web site and not an AT&T Missouri end user.

4 Intelligent Routing is like a Speed Calling service that has been available for
5 decades. It is a telecommunications service offered under tariff by AT&T Missouri,
6 pursuant to AT&T Missouri's General Exchange Tariff, Section 47.2.6, 1st Revised Sheet
7 3.1 (attached hereto as Schedule MN-3).

8 **Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

9 **A. Yes.**

No supplement to this
tariff will be issued
except for the purpose
of canceling this tariff.

General Exchange Tariff
Section 47
Original Sheet 4

EASYOPTIONSSM SERVICES

47.2 SERVICE DESCRIPTIONS-(Continued)

47.2.6 Auto Redial

Enables the customer to automatically redial the last outgoing telephone number. When the recalled telephone number is busy, the Telephone Company's equipment will keep trying to call the number being redialed for a maximum of thirty (30) minutes, beginning with the customer's activation of Auto Redial, in an attempt to establish the call. The customer will be signaled with a distinctive ring when the call can be completed.

47.2.7 Priority Call

Provides the customer with a distinctive ring or Call Waiting tone (if the customer has subscribed to Call Waiting), when the customer is called from preselected telephone numbers. The customer can construct or modify the telephone number screening list by dialing a unique code. The Telephone Company's equipment will screen incoming calls against the screening list and provide a distinctive ring for telephone numbers on the list.

47.2.8 Call Blocker

Enables the customer to block calls from preselected telephone numbers and/or the last incoming call (without knowing the number). To block specified telephone numbers, the customer builds a screening list. To block an unknown number after receiving a call, the customer enters a code to add the number to their screening list. If facilities are unavailable to provide incoming call screening via the customer's list, standard call completion will occur. Customers whose telephone numbers are blocked are directed to a Telephone Company recorded announcement.

47.2.9 Call Trace

Enables the customer to initiate a trace of the origin of the last incoming call by dialing an activation code. If a trace is successful, the Telephone Company's equipment will record the incoming call detail (not the conversation). The results of the trace will not be provided to the customer directly. For further action to be taken, the customer should follow the instructions received after a successful trace activation.

**P.S.C. Mo. - No. 35
GENERAL EXCHANGE TARIFF**

Southwestern Bell Telephone
Company d/b/a AT&T Missouri

Section 47
3rd Revised Sheet 11.2
Replacing 2nd Revised Sheet 11.2

EASYOPTIONS® SERVICES

47.2 SERVICE DESCRIPTIONS – (Continued))

47.3.21 Privacy Manager

- A. Privacy Manager enables a customer to appropriately handle incoming calls that have been identified as either "anonymous", "out-of-area", "unavailable", or "private" before their telephone rings. Incoming calls are intercepted and a recording is played informing the caller that the number they have dialed does not accept calls from unidentified telephone numbers. At the tone, the caller will be asked to record their name or the company they represent. If the caller complies, the call will be completed. If the caller chooses not to comply, the call will be disconnected.

- B. After the caller identifies who they are, the customer's telephone will ring and their Caller ID equipment will register a "Privacy Manager" message to indicate they are receiving a screened call. The customer will then hear a recording of the caller's name (or the name of the company they represent). After the caller is identified, the customer may elect one of the following options:
 - 1. Accept the call
 - 2. Decline the call by playing a pre-recorded announcement
 - 3. Decline a sales/telemarketing call by playing a pre-recorded announcement which requests that the solicitors remove the customer's name from their lists and not call again.
 - 4. Send the caller to CallNotes®, Voice Mail, or an answering machine

If no action is taken, the call will be directly forwarded to the customer's voice mail or answering service. If the customer does not have an answering service Call Forwarding-Busy Line/Don't Answer, then Privacy Manager will intercept the call after the sixth ring and advise the caller that the customer is unavailable.

- C. This service is offered subject to the following conditions:
 - 1. The customer must subscribe to Calling Name Delivery and Calling Number Delivery service.
 - 2. The customer's line must be equipped with Touch-Tone
 - 3. In addition to the limitations listed in paragraph 47.1, this service is not available with Private Branch Exchange, Hotel-Motel, ISDN PRI, Multiline Hunting, Series Completion, Reserve Line, and certain Advanced Intelligent Network Services (e.g., Intellinumber, Positive ID and Wide Area Networking Service Option II.
 - 4. Privacy Manager service and Anonymous Call Rejection are mutually exclusive services and cannot be provisioned together on the same line.

(RT)

**P.S.C. Mo. - No. 35
GENERAL EXCHANGE TARIFF**

Southwestern Bell Telephone
Company d/b/a AT&T Missouri

Section 47
1st Revised Sheet 3.1
Replacing Original Sheet 3.1

Original Sheet 3.1 was formerly Original Sheet 3.01 (AT)

EASYOPTIONS® SERVICES

47.2 SERVICE DESCRIPTIONS – (Continued)

47.2.3 Call Waiting ID Options – (Continued)

2. Call Waiting ID Options is offered subject to the following limitations:

- a. Customers must also subscribe to Call Waiting and Caller ID Name and Number, and Call Waiting ID.
- b. Customers wishing to route new calls to a voice mailbox must also subscribe to voice mail and the appropriate call forwarding service.
- c. Customers are responsible for furnishing their own compatible CPE, which should include the functionality necessary to execute the features of Call Waiting ID Options.
- d. Available only where central office facilities permit.

47.2.4 Call Forwarding

Enables the customer to transfer all incoming calls to another telephone number within the exchange or on the Long Distance Telecommunications Network. The Call Forwarding customer is responsible for the payment of charges (e.g. toll charges) for each call between his Call Forwarding-equipped telephone and the telephone to which the call is being forwarded.

47.2.5 Three-Way Calling

Enables a customer to add a third party to an existing call without operator assistance, thereby establishing a three-way conversation.

47.2.6 Speed Calling

Enables a customer to place calls to other telephone numbers by dialing a code rather than the complete telephone number. The 8-code capacity and/or the 30-code capacity may be provided on the same line; however, duplicate code capacities may not be provided. The combination of code capacities is not available on multiline hunting lines.(1)

(RT)

(1) Speed Calling 8 (business) and Speed Calling 30 (residence) are available only to existing customers at existing locations.