Exhibit No.:
Issues: Network and Technical
Witness: Mark Neinast
Type of Exhibit: Direct
Sponsoring Party: Southwestern Bell Telephone Company, d/b/a AT&T Missouri
Case Nos.: TC-2012-0331 and TO-2012-0035

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

Case Nos. TC-2012-0331 and TO-2012-0035

DIRECT TESTIMONY OF MARK NEINAST ON BEHALF OF AT&T MISSOURI

June 4, 2012

AFFIDAVIT OF MARK NEINAST

STATE OF Texas)
) SS
COUNTY OF Collin)

I, Mark Neinast, of lawful age, being duly sworn, depose and state:

1. My name is Mark Neinast. I am Associate Director-Network Regulatory in AT&T's Network Planning and Engineering Department.

2. Attached hereto and made a part hereof for all purposes is my Direct 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

Subscribed and sworn to before me this 1st day of June, 2012.

NOTARY PUBLIC STATE OF TEXAS
PEPE L. PEREA
My Commission Expires
April 2, 2013

Notary Public

My Commission Expires: 04/02/12

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Mark Neinast. My business address is 308 S. Akard, Dallas, Texas 75202.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am an Associate Director – Network Regulatory in AT&T's Network Planning and Engineering Department.

Q. FOR WHICH PARTY ARE YOU PROVIDING THIS TESTIMONY?

A. Southwestern Bell Telephone Company, d/b/a AT&T Missouri.[1]

Q. PLEASE DESCRIBE YOUR JOB RESPONSIBILITIES.

A. My primary responsibility is to represent various AT&T operating companies in the development of network policies, procedures, and plans from a technical and regulatory perspective. I assist in developing corporate strategy associated with 9-1-1, interconnection, switching, Signaling System 7 ("SS7"), call-related databases, and emerging technologies such as Internet Protocol ("IP")-based technologies and services. I am also responsible for representing the company's network organization in negotiations, arbitrations, and disputes with Competitive Local Exchange Carriers ("CLECs") and wireless carriers.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.

A. I have a Bachelor of Science degree in Business Administration from the University of Texas at Dallas, with a double major in Management Information Systems and

[1] In some instances, I use "AT&T" to refer to AT&T incumbent local exchange carriers generally, including but not limited to AT&T Missouri.

Behavioral Management. I have been employed by AT&T for over 36 years, primarily in the network organization. This includes seven years in central offices as a technician. I also spent two years as a training instructor for electronic switching systems and four years managing technicians in central offices and a Network Operations Center ("NOC"). I worked as a staff manager for the North Texas Network Operations Division for five years. In that role, I supported NOC functions and managed major switching system projects. Subsequently, as an Area Manager in a NOC Translations Center for over seven years, I was responsible for managing the switch translations for over 100 switches. I also successfully managed many other major network projects, including over 60 analog-digital switching dial-to-dial and 16 analog-digital 911 conversions, as well as the implementation of Local Number Portability ("LNP") in all of these switching systems.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE STATE PUBLIC UTILITY COMMISSIONS?

A. Yes, I have testified before several state public utility commissions on technical and network issues. These proceedings most often involved the arbitration of interconnection agreements ("ICAs") or disputes regarding claimed breaches of an approved ICA.

Q. HAVE YOU TESTIFIED BEFORE ANY OTHER STATE COMMISSIONS ON THE SUBJECTS YOU WILL ADDRESS IN THIS TESTIMONY?

A. Yes. AT&T and Halo are contesting in a number of other state commissions the same claims AT&T Missouri has asserted here.[2] As of the date of this direct testimony, I have filed testimony in the parallel proceedings in eight other states, reviewed Halo's

[2] As AT&T Missouri witness Scott McPhee explains in his direct testimony, at pages 3-4, this case is distinctive because of the role of the Missouri Enhanced Records Exchange Rule, but AT&T did assert essentially the same claims against Halo in those cases as it asserts here.

testimony in those states where Halo has filed, and testified at the evidentiary hearings in the Wisconsin, Tennessee, South Carolina and Georgia proceedings. As a result, I am well aware of the positions Halo has been advancing on the issues in this case.

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. As AT&T Missouri witness Scott McPhee discusses, Halo and AT&T Missouri are parties to an ICA that allows Halo to deliver only wireless-originated traffic to AT&T Missouri. I will show, from a network and technical perspective, that Halo has been breaching the ICA by sending AT&T Missouri substantial volumes of landline-originated traffic.

I will also show that Halo improperly inserted call detail data on calls it sent AT&T Missouri. Specifically, Halo inserted a certain "Charge Number" into the SS7 call record[3] – even though there is no such number associated with the person who actually made the call, and that person has no relationship with Halo or with the entity to which the Charge Number was assigned. By doing this, Halo made calls appear to be wireless-originated even though they were actually landline-originated (and thus were delivered to AT&T Missouri in breach of the ICA), and to appear local even though they were actually non-local.

Q. WHY DOES IT MATTER THAT HALO IS SENDING AT&T MISSOURI LANDLINE-ORIGINATED TRAFFIC?

A. By breaching the parties' contract in this way, Halo is engaging in an access-charge avoidance scheme. Specifically, and as I will explain, the access charges that Halo

[3] I explain the SS7 system and the associated records below.

should be paying AT&T for interexchange, landline-originated traffic that Halo is delivering to AT&T are higher than the reciprocal compensation charges that apply to local (*i.e.*, intraMTA)[4] wireless-originated traffic. Halo is sending AT&T Missouri large volumes of interexchange, landline-originated traffic that are subject to access charges, but is avoiding the payment of those higher access charges by representing the traffic as local (*i.e.*, intraMTA) wireless-originated traffic.

Q. HAVE ANY REGULATORY AGENCIES MADE DECISIONS ABOUT HALO'S PRACTICES?

A. Yes. The Federal Communications Commission ("FCC"), singling out Halo by name, rejected the arguments that Halo has made in defense of its practices. Assuming that this Commission follows the FCC's lead, the only possible conclusion is that Halo breached its ICA with AT&T Missouri.

In addition, the one state commission that has resolved an AT&T ILEC's claims against Halo as of the date of this testimony resolved the claims in favor of AT&T. AT&T Tennessee brought the same claims against Halo that AT&T Missouri is asserting here, and after considering the parties' pre-hearing briefs, conducting a full evidentiary hearing, and hearing oral argument, the Tennessee Regulatory Authority rejected Halo's positions, decided all the issues in favor of AT&T Tennessee, and granted AT&T Tennessee all the relief it requested, which is the same relief AT&T Missouri requests here.[5]

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[4] I explain below what I mean by "intraMTA."

[5] The TRA's decision is attached to my testimony as Schedule MN-1. As I note below, another state commission, the Pennsylvania Public Service Commission, rejected an argument that is at the core

II. BACKGROUND

Q. DOES AT&T MISSOURI HAVE AN ICA WITH HALO?

A. Yes. Mr. McPhee talks about the ICA. He explains that the ICA permits Halo to send AT&T Missouri only wireless-originated traffic, not landline-originated traffic.

Q. DOES AT&T MISSOURI SEND ANY TRAFFIC TO HALO?

A. I have reviewed our records, which we keep in the ordinary course of our business, and they show that virtually all the traffic the parties exchange is one-way, from Halo to AT&T Missouri. Of the traffic that Halo delivers to AT&T Missouri, some is destined to AT&T Missouri end-users, and some is transported by AT&T Missouri to other carriers for termination to their end-user customers.

Q. DO HALO'S END-USER CUSTOMERS PLACE THE CALLS THAT HALO DELIVERS TO AT&T MISSOURI?

A. No. In fact, Halo has virtually no end-user customers. In a submission it made in the parallel proceeding in Wisconsin on January 11, 2012, Halo stated that it had 35 consumer customers – 24 in Texas and 11 in other states, including just one in Missouri. All the traffic that Halo delivers to AT&T Missouri starts with end users that are served by other providers.

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of Halo's position here, in a case that did not involve Halo or AT&T. Also, in our parallel proceeding against Halo in South Carolina, which is ongoing, the South Carolina Office of Regulatory Staff concluded that Halo is breaching its ICA with AT&T by delivering landline-originated traffic to AT&T, and recommended that the South Carolina Public Service Commission authorize AT&T to stop accepting traffic from Halo. See Schedule MN-2 to this testimony, at p. 10, lines 9-15.

Q. PLEASE DESCRIBE THE TRAFFIC THAT HALO SENDS TO AT&T MISSOURI.

A. The diagram attached to my testimony as Schedule MN-3 depicts the traffic that Halo sends AT&T Missouri. As the diagram shows, the calls originate with end-user customers of various landline and wireless service providers using either landline or wireless equipment.[6]

The calling party makes a call to someone in Missouri who is a customer of either AT&T Missouri or of a third party carrier to which AT&T Missouri delivers traffic. The call is transported, by means unknown to AT&T Missouri, to a company called Transcom,[7] which is very closely affiliated with Halo, as Mr. McPhee details in his testimony. Transcom is an aggregator of traffic from other carriers, and it bills its "core service offering" as "termination services."

Transcom then hands off the call to Halo, which in turn delivers it to AT&T Missouri, either for termination to AT&T Missouri's end-user customer or for delivery to the third party carrier that serves the called party.

Q. WHY IS IT IMPORTANT THAT THE ICA SPECIFIES THAT HALO IS ONLY TO SEND AT&T MISSOURI WIRELESS-ORIGINATED TRAFFIC?

A. Because wireless-originated and landline-originated traffic are supposed to be delivered to AT&T on separate trunks so that AT&T can correctly bill carriers for terminating these different types of traffic on AT&T's network (or so that the terminating carrier can bill

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[6] Note that AT&T Missouri is not saying that *all* the traffic it receives from Halo is landline-originated. Much of it is, however, and that is the breach of the parties' ICA.

[7] Transcom Enhanced Services, Inc.

correctly for traffic that AT&T hands off to third party carriers for termination). AT&T's billing system cannot automatically tell whether a call delivered to AT&T originated as a landline call or a wireless call.[8] As a result, when carriers send traffic to AT&T, different trunks are used to deliver landline traffic and wireless traffic. By having the ICA specify that Halo will send AT&T Missouri only wireless-originated traffic, AT&T knows that Halo should only be using trunks groups allocated for wireless traffic, so that the appropriate billing will apply.

Q. ARE YOU SAYING THAT THE RATE AT&T CHARGES FOR TERMINATING CALLS DELIVERED TO AT&T IS DETERMINED SOLELY BY THE TYPE OF TRUNK THE CALL IS DELIVERED ON?

A. No. The type of trunk the traffic is delivered on tells AT&T Missouri which type of boundaries to use to separate local calls from non-local calls (MTA boundaries for wireless calls; local calling areas for landline calls).[9] The originating and terminating

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[8] In the past, one generally knew that a given NPA-NXX (the first six digits of a ten-digit phone number, with the area code first) was either a wireless NPA-NXX or a landline NPA-NXX, because a database known as the Local Exchange Routing Guide ("LERG") defined it as one or the other. With the advent of wireless number portability, however, the NPA-NXX no longer accurately indicates in every instance whether a given call originated on a wireless or landline network. Hence, the only practicable way that AT&T, as the terminating carrier, can know whether calls are wireless-originated or landline-originated is by segregating the traffic on separate trunk groups. (As I discuss below, it is possible to determine, by consulting the Local Number Portability data base, whether a given ten-digit phone number belongs to a landline carrier or a wireless carrier, but that process cannot be used for normal billing purposes.)

[9] Mr. McPhee discusses principles of intercarrier compensation in his testimony. In a nutshell, *wireless* traffic is considered "local," and thus subject to reciprocal compensation charges, if it is ***intra***MTA, that is, if it originates and terminates in the same ***Major Trading Area ("MTA")***. Wireless traffic is considered non-local, and thus subject to access charges, which are typically higher than reciprocal compensation charges, if it is ***inter***MTA, that is, if it originates in one MTA and terminates in another. *Landline calls*, in contrast, are considered local, and thus subject to reciprocal compensation, if they originate and terminate in the same ***local calling area***, and are considered non-local, and thus subject to access charges, if they originate in one local calling area and terminate in another. Thus, for purposes of intercarrier compensation, an MTA is the wireless equivalent of a local calling area in the landline world. An MTA, however, is much bigger than a local calling area; the entire United States is divided into only 51 MTAs.

NPA-NXXs of the call are then used to determine, based on an end-to-end analysis, whether the call is local or non-local based on the type of geographic boundaries that apply to that type of traffic. In other words, AT&T first has to establish that all the traffic it receives over a specific trunk group is either wireless or landline. Only then can AT&T determine the appropriate intercarrier compensation rate (local or non-local) to apply based on the originating NPA-NXX and terminating NPA-NXX.

Q. ARE THE TRUNKS THAT HALO IS USING TO SEND TRAFFIC TO AT&T MISSOURI RESERVED FOR WIRELESS TRAFFIC ONLY?

A. Yes. And as a result, Halo has been billed for the traffic as if it is all wireless traffic.

III. HALO'S SENDING OF LANDLINE-ORIGINATED TRAFFIC

Q. HAS AT&T MISSOURI ANALYZED THE TRAFFIC HALO IS SENDING IT TO DETERMINE WHETHER, AS REQUIRED BY THE ICA, ALL THE TRAFFIC IS WIRELESS-ORIGINATED?

A. Yes.

Q. WHAT PROMPTED AT&T TO ANALYZE HALO'S TRAFFIC?

A. Not long after Halo started sending AT&T traffic, we noticed three unusual characteristics of the traffic: First, AT&T's billing records showed that the volume of traffic Halo was delivering to AT&T was growing extraordinarily rapidly. The rate of growth was far greater than what one would expect from what was supposed to be a start-up, rural wireless carrier, which is what we understood Halo represented itself to be.

Second, while the volumes of traffic that Halo was delivering were growing rapidly, there was practically no traffic at all going the other way – from AT&T end users to Halo or any Halo customers. Again, this would not be expected of a normal wireless

service provider, since calls are made to cell phones just as they are made from cell phones.

Third, 100% of the traffic that Halo was delivering to AT&T was represented as intraMTA (local wireless), based on the call data Halo was providing in the SS7 signals it sent. This, too, was striking, because one would expect incoming calls to be a mix of interMTA (toll wireless) and intraMTA calls (local wireless).

These observations aroused our suspicion about what Halo was actually doing and whether it was trying to avoid access charges. We therefore began to review the data more closely in order to determine exactly what Halo was doing.

Q. WHY DID AT&T'S INITIAL OBSERVATIONS SUGGEST THAT HALO MIGHT BE TRYING TO AVOID ACCESS CHARGES?

A. Access charge avoidance schemes are nothing new. We have seen such schemes often over the years, so we are attuned to traffic patterns that indicate they may be in play.

The very fast growth in Halo's traffic, while not typical of a genuine start-up wireless service provider, was to be expected of a company serving as a provider of least cost routing (a term I explain below) for other carriers. Likewise, the fact that we had virtually no end user customers making calls to Halo customers, while unheard of for a real wireless service provider, was not surprising if Halo was essentially a low-cost traffic terminator. And the only plausible explanation for the fact that all of Halo's traffic was being presented as intraMTA (local wireless) traffic was that Halo was trying to avoid the access charges that would apply to interMTA traffic (toll wireless) – or to interexchange (toll) landline traffic.

Q. YOUR LAST ANSWER REFERRED TO "LEAST COST ROUTING." WHAT IS THAT?

A. Many toll calls, after being originated, traverse several different networks before termination to an end user. The hand-off from one network to the next is instantaneous and seamless, so that the end-user customers, as well as the originating and terminating carrier, are unaware of the multiple handoffs that may be occurring. Interexchange carriers ("IXCs"), wireless providers and voice over Internet Protocol ("VoIP") providers are all searching for means to deliver traffic for termination at the lowest possible cost. As a result, a number of carriers offer wholesale transport and termination using "least cost routing," *i.e.*, the cheapest available routing. Some of these carriers engage in access charge avoidance; by dramatically lowering their termination costs, they are able to offer termination service at low rates that are attractive to their customers. It appears that that is what we are dealing with here.

Q. WHEN AT&T TOOK A CLOSER LOOK AT HALO'S TRAFFIC, WHAT DID IT FIND?

A. We discovered that many of the calls Halo is sending AT&T (perhaps most of them, in fact) are not wireless-originated, but instead were landline-originated, contrary to the ICA.

Q. WHO PERFORMED THE CLOSE ANALYSIS OF HALO'S TRAFFIC THAT SHOWED THAT HALO IS SENDING AT&T MISSOURI SUBSTANTIAL VOLUMES OF LANDLINE-ORIGINATED TRAFFIC?

A. I performed the analyses in collaboration with my colleague, Stanley Mensinger.

Q. PLEASE DESCRIBE IN GENERAL TERMS HOW YOU AND MR. MENSINGER PERFORMED THE ANALYSES.

A. We performed three analyses: one for the one-week period starting March 6, 2011; one for the one-week period starting September 11, 2011; and one for the four-week period starting February 26, 2012. We looked at the traffic Halo sent AT&T Missouri during each of the three study periods by examining the SS7 information on the traffic.

Q. WHAT DO YOU MEAN BY SS7 INFORMATION?

A. When an end user places a call, the telecommunications network must set up the transmission path over which that call will be carried, maintain that transmission path during the duration of the call, and "tear down" that transmission path once the call is over. In order to do this, signaling messages containing information necessary to set up, maintain, and tear down the transmission path for a given call must be sent back and forth between the voice switches that are involved in carrying that call. SS7 (which stands for Signaling System 7) information embedded in these signals provides detail about where a call originated and terminated and the carriers on each end.

Q. WHAT SS7 INFORMATION PROVIDES THAT DETAIL?

A. The intercarrier compensation rate that applies to a call is determined by its originating and terminating end-points, which, as I explained above, normally can be determined by comparing the originating NPA-NXX and terminating NPA-NXX. Under current industry practices, the originating NPA-NXX is taken from the telephone number of the originating caller, which is referred to as the Calling Party Number, or "CPN."[10] The

[10] When a call is initiated, SS7 signaling sends information about that call to the terminating switch. Some of this information shows up in "fields" that are reflected on the Initial Address Message ("IAM"), which is sent each time a call is set up between switches. One of the fields is "Calling Party Number," or

terminating NPA-NXX is taken from the telephone number of the called party. These two fields in the SS7 message determine the rating of the call for purposes of intercarrier compensation.

Q. WHAT STEPS DID YOU AND MR. MENSINGER TAKE TO ANALYZE THE CALLS SENT BY HALO TO DETERMINE WHETHER THEY WERE LANDLINE-ORIGINATED OR WIRELESS-ORIGINATED?

A. For each of the studies, we took the following steps:

1. For each call, we first identified the 10-digit Calling Party Number ("CPN") of the calling party (which is one of the SS7 data fields on each call).
2. We then looked in the Local Exchange Routing Guide ("LERG")[11] to find the carrier that holds the NPA-NXX code for that originating CPN.
3. Because telephone numbers can be ported (*i.e.*, transferred from one carrier to another), we then looked at the Local Number Portability ("LNP") database to see whether the originating number had been ported to some carrier other than the one that owned the NPA-NXX.
4. At that point, we knew who the originating carrier was. Based on the type of originating carrier (wireless or landline, as specified by the originating

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"CPN." CPN is normally associated with Caller ID service, but it also has other uses. For example, telecommunication carriers use the CPN field in their billing systems for intercarrier compensation to determine whether a call is interMTA or intraMTA (or interexchange or intraexchange for landline calls).

[11] The LERG is a national routing database that stores information necessary to properly route traffic throughout the United States. It displays, for each NPA-NXX, the carrier to which that NPA-NXX is assigned, the tandem switch for routing interexchange and local traffic, and other pertinent information.

carrier in the LERG), we also knew whether the call was a landline-originated call or a wireless-originated call.

5. We could also determine, based on the end-points of the call and type of call, which intercarrier compensation rate should have applied (*i.e.*, reciprocal compensation or access charges). Our focus, however, was on whether traffic was landline-originated or wireless-originated.

Q. WHAT TOOLS DID YOU USE TO PERFORM THIS ANALYSIS?

A. The process I just described was automated. We used billing records produced by the switch and created special reports for traffic that Halo sent to AT&T Missouri beginning in March, 2011 and thereafter on a periodic basis. Because all of the calls in question terminated through an AT&T Missouri tandem switch, the only thing to determine was where each call originated and the type of carrier that served the originating end-user. Using the process described above, calls were sorted out and we identified the originating carrier for each call and determined whether it was a wireless or landline carrier.

Q. WHAT DID YOUR ANALYSIS REVEAL?

A. During the one-week period in March of 2011 that we examined, 22% of the calls that Halo sent AT&T Missouri were landline-originated, in breach of the ICA. During the one-week study period in September of 2011, the percentage of landline-originated calls was 56%. Finally, during the most recent study period, the four-week period starting in February of 2012, 66% of the calls that Halo sent AT&T Missouri were landline-originated, in breach of the ICA. These results are reflected in Schedule MN-4 to my testimony.

Q. PLEASE EXPLAIN SCHEDULE MN-4.

A. The data is broken down into the categories that are used for intercarrier compensation, namely intrastate versus interstate and intraMTA versus interMTA. The data also distinguishes between traffic delivered to AT&T Missouri for termination to its end-user customers and traffic delivered to AT&T Missouri for delivery to third-party carriers. For example, the table shows that for the data captured during the 2012 study period, 71% of the traffic that Halo delivered to AT&T for delivery to third party carriers was landline-originated, while 60% of the traffic that Halo delivered to AT&T for delivery to its end users was landline-originated. When all the traffic is taken into account, the landline figure for that period is 66%.

To give an idea of the data that was examined and the types of interexchange landline calls we found in our analysis, Schedule MN-5 provides details on a sample of 50 landline-originated calls sent by Halo to AT&T Missouri.

Q. HOW DO YOU KNOW YOUR DATA IS ACCURATE?

A. We know the data is accurate because it is based on SS7 signaling data, which is the same data used for call delivery. In other words, it is the system that the entire industry uses. It is a very mature system that is highly accurate and is relied upon within the industry throughout the United States and other countries where SS7 is deployed.

Q. DO YOU ATTACH SIGNIFICANCE TO THE FACT THAT DURING THE MORE RECENT, FOUR-WEEK PERIOD, THE PERCENTAGE OF LANDLINE-ORIGINATED TRAFFIC WAS HIGHER THAN IT WAS DURING THE EARLIER PERIODS?

A. The higher percentage may give a more accurate reading, because the study period with the higher percentage was longer. I attach no great significance to this, however, because

the real point is that Halo is breaching the ICA by sending AT&T Missouri significant volumes of landline-originated traffic, and even the relatively lower percentage for the earlier period – 22% – is sufficient to demonstrate that point.

Q. IN OTHER PROCEEDINGS, HALO HAS SUGGESTED THAT THE ACTUAL PERCENTAGE OF LANDLINE-ORIGINATED CALLS MAY BE LOWER THAN YOUR ANALYSES REFLECT FOR VARIOUS REASONS. HOW DO YOU RESPOND TO THAT SUGGESTION?

A. I will address Halo's specific claims below, but in general, what matters in this case is the fact that Halo is sending AT&T Missouri significant volumes of landline-originated calls, in violation of the parties' ICA. Whether the percentage is 60% or 50% or 40% makes no difference. If AT&T were asking the Commission to quantify the access charges Halo owes AT&T for this traffic, precision would make a difference – but AT&T is not asking for that in this case. Even if there were any significant imprecision in our numbers – and I am confident there is not – the fact remains that Halo is sending AT&T Missouri substantial volumes of landline-originated traffic in violation of the ICA.

Q. HAS HALO DENIED THAT FACT?

A. No, it has not. Halo has quibbled about AT&T's calculations, but Halo has never denied that it is delivering many calls to AT&T that were initiated by end users on landline equipment.

Q. WHAT ARE HALO'S QUIBBLES ABOUT AT&T'S CALCULATIONS?

A. Halo observes that some of the calls that we identified as landline may have originated on a wireless device using an Internet Protocol ("IP") application like Skype or GoogleVoice. Such calls, Halo states, may signal a landline number of a company like Level 3 or Bandwidth.com, even though the person that originates the communication

does so on a wireless device. To the extent that our analysis counts such calls as landline-originated, Halo argues, we have overstated the percentage of landline-originated calls.

Q. IS HALO CORRECT ABOUT THAT?

A. No, because under current industry standards, the determinant of whether a carrier is landline or wireless is the LERG. Every carrier identifies in the LERG whether each NPA-NXX assigned to that carrier is wireless or landline, and when our analysis treated a call as landline, that means that the carrier that holds the NPA-NXX for that call identified the NPA-NXX as landline. Thus, our analysis complied with industry standards, and *properly* treated as landline-originated a call that originated on wireless equipment only when the holder of the NPA-NXX for that call identified the NPA-NXX as landline.

Q. EVEN THOUGH AT&T DISAGREES WITH HALO'S ARGUMENT ABOUT IP-ORIGINATED CALLS, DID YOU DO ANYTHING IN YOUR ANALYSIS TO TAKE HALO'S POINT INTO ACCOUNT?

A. Yes. Just for the sake of argument, we re-ran our numbers treating ***all*** calls that showed originating Level 3 or Bandwidth.com numbers as wireless rather than landline. By doing this, we gave Halo an enormously over-generous benefit of the doubt, not only because Halo's point about IP calls is mistaken, but also because not all Level 3 and Bandwidth.com calls originate on wireless equipment.

Q. WHAT EFFECT DID THIS ADJUSTMENT HAVE ON THE NUMBERS?

A. As I said before, for the data captured during the three periods we analyzed, 22%, 56% and 66%, respectively, of the calls Halo delivered to AT&T Missouri were landline-

originated (in breach of the ICA) – treating calls as landline-originated or wireless-originated in accordance with the way carriers designate themselves in the LERG. When we re-ran the numbers treating all the Level 3 and Bandwidth.com calls as wireless-originated (even though not all them were), those percentages reduced to 20%, 49% and 61%, respectively. In other words, even giving Halo an overly generous benefit of the doubt, a very substantial percentage of the traffic Halo delivered was landline-originated, in violation of the ICA. This is reflected in Schedule MN-6 to my testimony.

Q. HAS HALO RAISED ANY OTHER CRITICISMS OF YOUR ANALYSIS?

A. Yes. Halo claims that our analysis mistakenly assumes that the originating and terminating NPA-NXXs of a call are determinative of the geographic location of the calling party and the called party. In particular, Halo has pointed to FX or virtual NXX numbers, which a customer can obtain so that people can call the customer by dialing a local call even though the customer and the callers are in different local calling areas.[12]

Q. HOW DO YOU RESPOND TO THIS CRITICISM?

A. It is true, as Halo has pointed out, that the NPA-NXX does not in each and every instance accurately reflect actual geographic location. Nonetheless, NPA-NXX is the most reliable indicator we have in the telecommunications industry; it is accurate for the vast majority of calls; and it is standard, accepted practice in the industry to use NPA-NXX as a proxy for geographic location for landline calls. And again, even if we accept that there are occasional instances in which the NPA-NXXs on the call data that we analyzed do

[12] For example, a business in Jefferson City that wants to attract callers from Columbia might obtain a Columbia phone number for one of its landline phones in Jefferson City, so that Columbia callers can reach the business by dialing a "local" call. In that scenario, the business's NPA-NXX does not accurately reflect the business's geographic location.

not correlate with actual geographic location, that does not change the fact – a fact that Halo does not dispute – that much of the traffic that Halo is delivering to AT&T Missouri is calls that are initiated by an end user using landline equipment – not wireless equipment as the ICA requires.

Q. IF HALO DOES NOT DENY THAT IT IS SENDING AT&T MISSOURI SUCH TRAFFIC, HOW DOES HALO JUSTIFY THIS APPARENT BREACH OF THE PARTIES' ICA?

A. Halo makes the following argument: According to Halo, Transcom, Halo's collaborator from which Halo receives all the traffic it sends AT&T, is an Enhanced Service Provider ("ESP"), because it enhances the audio quality of the calls it terminates through Halo. Based on the premise that Transcom is an ESP, Halo argues that every call that passes through Transcom actually terminates with Transcom, which then "originates a further communication," which Transcom delivers to Halo, which in turn hands it off to AT&T.

Halo asserts that the Transcom equipment that supposedly originates this further communication is wireless equipment that is located in the same MTA as the AT&T switch where Halo hands the traffic to AT&T. From this Halo draws two conclusions: First, that the call that Halo delivers to AT&T is actually wireless-originated (and thus in compliance with the Halo/AT&T ICA) because it is originated by Transcom's wireless equipment – even if the communication was actually initiated by some other carrier's end-user customer on a regular landline phone. And second, that the call is subject to reciprocal compensation, and not access charges, because it originates (at the Transcom equipment) and terminates in the same MTA and is thus an intraMTA call.

Q. IS HALO'S DEFENSE VALID?

A. No. But before I explain why, I want to make sure it is clear what the traffic at issue looks like. To do that, I refer to Schedule MN-7 to this testimony, which illustrates such a call in simplified form. As the illustration shows, we have a person in California using a landline phone to call someone in St. Louis – let's say it's a girl calling her grandmother. The girl dials her grandmother in the familiar way – "1" followed by the area code (NPA) and her grandmother's seven-digit phone number (starting with the NXX). The call eventually is transported to Transcom equipment located in the same MTA as the grandmother. Transcom hands the call off to Halo, which in turn delivers the call to AT&T Missouri for termination to its customer, the grandmother.[13]

This is a standard, run-of-the mill landline long distance call for which AT&T Missouri is entitled to access charges. Halo, however, is saying that when the call hits Transcom, it terminates there, because Transcom is supposedly an ESP, and that Transcom originates a further communication, which Halo terminates to AT&T Missouri. Because this "further communication" "originates" on Transcom's wireless equipment, Halo contends, it is a wireless call, and because the Transcom equipment is in the same MTA as the AT&T switch to which the call is delivered, it is, according to Halo, an intraMTA wireless call to which reciprocal compensation, rather than access charges, applies.

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[13] Neither the girl nor the grandmother, of course, has any idea that Transcom or Halo has anything to do with this call; unbeknownst to them, the carrier that transports the call from California to Missouri (perhaps an IXC) – which would have to pay access charges to AT&T Missouri if it delivered the call directly to AT&T Missouri – has an arrangement with Transcom pursuant to which it instead hands the call to Transcom, which will have the call terminated for a lower rate (in this case, as a result of an access-avoidance scheme).

Q. DO YOU ACCEPT ANY PART OF HALO'S ARGUMENT?

A. Solely for the sake of discussion, I assume that Transcom's connection with Halo is wireless, and that Transcom has wireless equipment in the same MTA where Halo hands the call off to AT&T, although I have no way to independently verify that those things are true. Even so, Halo's argument that the girl's call to her grandmother terminates at Transcom and that Transcom then originates a new and somehow different call to Grandma does not hold water.

Q. WHY NOT?

A. In the first place, Halo's position has been rejected by the two regulatory bodies that have considered it – the FCC and the Tennessee Regulatory Authority. In addition, the Pennsylvania Public Utility Commission, in a case that did not involve Halo, rejected a claim that Transcom is an ESP, and the South Carolina Office of Regulatory Staff, in the current proceeding between AT&T and Halo in that state, concluded, contrary to Halo's position, that Halo is not an end user and "cannot be classified as an originating or terminating end user."[14]

Q. WHAT DID THE FCC SAY ABOUT HALO'S POSITION?

A. Mr. McPhee addresses that, and I do not want to duplicate his discussion. In short, though, Halo presented the FCC with the same arguments it is making in these proceedings and the FCC, in its November, 2011, *Connect America Fund* decision on intercarrier compensation and related matters, rejected those arguments and ruled that a call is considered to be originated by a CMRS provider only if the calling party initiating

[14] Schedule MN-2, at p. 5, lines 15-18.

the call has done so through a CMRS provider.[15] Accordingly, the FCC further stated that "***the 're-origination' of a call over a wireless link in the middle of the call path does not convert a wireline-originated call [i.e., a landline-originated call] into a CMRS-originated call for purposes of reciprocal compensation and we disagree with Halo's contrary position***."[16]

Q. STARTING ON PAGE 18 OF THIS TESTIMONY, YOU SUMMARIZED HALO'S ATTEMPT TO EXPLAIN THAT IT IS NOT BREACHING THE PARTIES' ICA EVEN THOUGH IT IS DELIVERING TRAFFIC TO AT&T THAT WAS INITIATED ON LANDLINE EQUIPMENT. DOES HALO'S ARGUMENT DEPEND ON TRANSCOM BEING AN ESP?

A. Yes. Halo's argument depends on two propositions: (1) that Transcom is an ESP, and (2) because Transcom is an ESP, the calls at issue somehow "originate" with Transcom. Halo must establish both of these propositions to prevail but, as I explain below, AT&T believes it can establish neither.

Q. WHAT IS AT&T'S POSITION ON THOSE TWO PROPOSITIONS?

A. That Transcom is not an ESP, *and* even if Transcom were an ESP, it would make no difference because the traffic that passes through Transcom is not originated by Transcom.

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15 *Connect America Fund*, FCC 11-161, 2011 WL 5844975 (rel. Nov. 18, 2011), ¶ 1006.

16 *Id.* (emphasis added).

Q. LET'S ADDRESS THE FIRST OF THE TWO PROPOSITIONS FIRST. DID THE FCC DECIDE THAT TRANSCOM WAS NOT AN ESP?

A. No, the FCC did not address that question. As I read the FCC's discussion, the FCC took at face value Halo's representation that Transcom is an ESP and decided that that makes no difference – there is no second call origination.

Q. WHAT IS THE BASIS FOR AT&T'S POSITION THAT TRANSCOM IS NOT AN ESP?

A. That is ultimately a legal question. I am aware that there is a well-developed body of law that addresses what is and what is not an enhanced service, and I do not purport to be an expert on that law. AT&T Missouri will discuss that law in its brief.

That said, I do have a working understanding, based on my years of experience in the industry, as to what constitutes an enhanced service, and that understanding matches what counsel tells me the law says. I will express my own view on the matter, with the recognition that AT&T Missouri will demonstrate later that the legal authorities, which should be determinative, support that view.

I have seen no evidence that Transcom provides enhanced services. Halo claims that Transcom does things to the telephone calls it carries to make them clearer. But I do not believe that qualifies Transcom's service as an "enhanced" service. Certainly, Transcom is not making available additional information that is added to the call (the "enhancement"), which is the type of enhanced service I am familiar with. Halo has claimed Transcom makes non-trivial changes to user-supplied information, but when asked to identify these alleged changes, Halo and Transcom can only point to examples of how Transcom makes a call clearer, by allegedly eliminating background and white

noise. Another supposed enhancement is a Comfort Noise Generator, which is commonly used to provide background noise to an end user during moments of silence when packets are not being sent over the network, so they are not confused that the call has ended. Certainly, since its inception the phone industry has been attempting to make calls more clear, but this type of improvement does not make a vanilla voice service an enhanced service. No evidence has been presented in any of the parties' proceedings that Transcom is fundamentally changing the character of a telephone service. And there is likewise no evidence that any of the end users who make the calls that pass through Transcom are aware of the alleged "enhancements" – or were even aware that Transcom exists. Regardless of what Transcom does or does not do, the actual originating party that placed a call destined for someone in Missouri is totally unaware that their call was routed in this manner, and Transcom did not offer that party any enhancement.

Q. DID THE TENNESSEE REGULATORY AUTHORITY DECIDE WHETHER TRANSCOM IS AN ESP?

A. Yes. In its decision earlier this year that resolved in AT&T Tennessee's favor all the issues presented in this case, the TRA specifically held that "Transcom Is Not an Enhanced Service Provider,"[17] and it devoted two and a half pages of its decision to explaining the basis for that conclusion.[18] Among the points that the TRA made were these:

- The "FCC has held that services are not 'enhanced' when customers use the same dialing method for allegedly 'enhanced' calls that they would for any other call,

[17] Schedule MN-1 at 20.

[18] *Id.* at 20-22.

or where the alleged 'enhancement' was made 'without the advance knowledge or consent of the 'customer' that placed the call and the customer is not provided with the 'capability' to do anything other than make a telephone call."[19]

- "[T]he record . . . indicates that Transcom provides no services to actual end-users and does not offer any enhancements discernible to the person that actually places the call."[20]
- "The record also supports the conclusion that end-users are completely unaware that Transcom is even involved in call delivery."[21]
- "Despite [Halo's] claim of computer processing of data, Transcom only reduces background noise and inserts 'comfort noise' in periods of silence so that those periods of silence are not mistaken for the end of a call. . . . The alleged 'enhancements' . . . are simply processes to improve the quality of the call. Telecommunications networks have been routinely making those types of improvements for years . . . yet none of these processes are deemed 'enhancements' in the sense of an ESP."[22]

The TRA's reasons for finding that Transcom is not an ESP are essentially the same as mine, which are set forth above and to which I testified in that case.

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19 *Id.* at 20-21.

20 *Id.* at 21.

21 *Id.*

22 *Id.* at 21-22 (citations omitted).

Q. YOU MENTIONED A DECISION BY THE PENNSYLVANIA PUBLIC UTILITY COMMISSION THAT SUPPORTS AT&T'S POSITION. WHAT DID THE PENNSYLVANIA COMMISSION DECIDE?

A. The Pennsylvania PUC's decision came in a case that did not involve Halo, but that involved a carrier called Global NAPs. Global NAPs, much like Halo here, argued that "Transcom's removal of background noise, the insertion of white noise, the insertion of computer developed substitutes for missing content, and the added capacity for the use of short codes to retrieve data during a call all constitute 'enhancements' to the traffic that Transcom passes on to GNAPs."[23] The Pennsylvania Commission rejected that argument, stating, "[W]e find that Transcom does not supply GNAPs with 'enhanced' traffic under applicable federal rules. Consequently, such traffic cannot be exempted from the application of appropriate jurisdictional carrier access charges."[24]

Q. IS THERE ANY ADDITIONAL BASIS FOR THE CONCLUSION THAT TRANSCOM IS NOT AN ESP?

A. As AT&T Missouri witness McPhee notes, Transcom has stated on its website that the company's "core service offering" is "voice termination services."[25] Also telling is the fact that the Transcom webpage entitled "Products and Services" did not make even a single mention of enhanced services. It is hard to believe that a real Enhanced Service

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[23] *Palmerton Tel. Co. v. Global NAPs South*, Docket No. C-2009-2093336, 2010 Pa. PUC LEXIS 245, *59 (Pa. Pub. Util. Comm'n March 16, 2010).

[24] *Id.*, *62.

[25] See Direct Testimony of J. Scott McPhee on behalf of AT&T Missouri, at 8, line 15, - 9, line 18.

Provider would not make even a passing reference to enhanced services on the webpage that describes its products and services.[26]

Similarly, I learned from Transcom during the parallel proceeding in Wisconsin to which AT&T, Halo and Transcom were parties that none of Transcom's written marketing materials makes any mention of the supposed "enhancements" that Transcom claims it provides, and that Transcom's contracts with its customers also make no mention of any such enhancements, and do not require Transcom to provide the enhancements. Again, it is hard to believe that what Transcom is selling is enhanced services when its contracts with its customers do not require Transcom to provide enhanced services.

All of these facts support my view that whatever Transcom is doing to the audio quality of the calls it processes is merely incidental to the transmission of the underlying telecommunications services. I understand from counsel that the FCC has made clear that services like Transcom's that are merely incidental to a telecommunications service, and that do not alter the fundamental character of the service, are not enhanced services. I am not asking the Commission to take my word for that; AT&T Missouri will discuss the law in legal submissions.

[26] As Mr. McPhee explains, Transcom recently changed its website to better comport with the Halo/Transcom litigation position. I attach no significance to that tactical move, however – except to note that it shows Halo and Transcom recognized that the website's truthful representation of the fact that Transcom is not selling enhanced services was hurting Transcom and Halo in proceedings like this one.

Q. NOW LET'S ADDRESS THE SECOND OF THE TWO PROPOSITIONS UPON WHICH HALO BASES ITS ARGUMENT THAT IT IS NOT BREACHING THE ICA. IF TRANSCOM WERE AN ESP, WOULD IT FOLLOW THAT THE CALLS HALO IS DELIVERING TO AT&T MISSOURI ORIGINATE WITH TRANSCOM, AS HALO CONTENDS?

A. No. As I explained, even if Transcom were an ESP, which it is not, Halo's theory would still fail, because Transcom is not originating a "further communication," as Halo has claimed. In fact, no calls are originated by Halo or Transcom. Calls – including large numbers of landline-originated calls – merely pass through Transcom on the way to Halo, and since Transcom has some wireless equipment, Halo pretends that the call has magically morphed from landline-originated to wireless-originated and from a toll call to a local call. Passing the call through some entity that the actual caller does not even know exists does not re-originate a call or originate a new call.

Q. IS THE UNDERSTANDING THAT YOU JUST EXPRESSED SUPPORTED BY THE APPLICABLE LAW?

A. I am informed by counsel that it is. And indeed, this is another legal question that AT&T Missouri will address in its briefs. I do not purport to be the master of the various FCC decisions that AT&T will cite in its briefs on this point, but I am aware that they comport with my view that Transcom is not originating calls.

IV. HALO'S MANIPULATION OF CHARGE NUMBERS

Q. HOW DID HALO MANIPULATE THE CHARGE NUMBERS OF THE TRAFFIC IT SENT AT&T?

A. Until the end of 2011, Halo improperly inserted an unauthorized Charge Number ("CN") in the call data that it sent AT&T in the SS7 message for each call. This made landline-originated calls appear to be wireless-originated calls and non-local calls appear to be local calls, which impeded AT&T's ability to bill the correct intercarrier compensation rate on Halo's traffic. Halo ceased this practice on December 29, 2011, but that does not explain or excuse its prior behavior.

Q. PLEASE DISCUSS CN AND HOW IT WORKS TOGETHER WITH CPN.

A. CN, like CPN (Calling Party Number), is a field in the information stream in an SS7 message. For the vast majority of calls there is no CN in the SS7 message, and the CPN is used to determine the rating for the call, as I described above. On some calls, however, the call data also includes a Charge Number, which is used to identify the customer responsible for paying for the call. In the vast majority of calls where there is a CN, the CN is identical to the CPN, in which event billing systems use the CPN to determine the proper intercarrier compensation rate for the call.

In some instances, however, the CN is different from the CPN. For example, a company using a PBX[27] to serve a large number of individual business lines typically wants to use a single master billing telephone number for all long distance calls. For such a company, the company's CN (say, its general line) will be used as the master

[27] A PBX (Private Branch Exchange) is similar to a small switch that a large business end-user may have on its premises to handle the company's calls.

billing number for all the lines served by the PBX. The company may then use the individual CPN to assign to each department within the company financial responsibility for all calls made by that department's lines. For example, 573-555-1000 might be the CN for all numbers in the range 573-555-1000 to 573-555-1999. Then, any time one of the PBX stations, 573-555-1000 to 573-555-1999, makes a long distance call, telephone number 573-555-1000 is populated in the CN field so that IXCs would bill the master number instead of the actual CPN. This is an accepted practice across the industry and service providers have agreed upon billing system rules to accommodate this. Thus, when CN is used and is different from the CPN, AT&T's billing systems use the number in the CN field to determine what number will be charged for the call, and ignore the number in the CPN field. This too is the accepted industry practice.

Q. DID HALO FOLLOW THE INDUSTRY PRACTICE?

A. No. Instead, Halo routinely inserted a CN into the call record for each call. Specifically, (i) on the vast majority of calls, where there is no CN, Halo inserted a CN on its own, and (ii) on that small number of calls where there is a CN, Halo changed the CN from what it originally was. In both situations, Halo inserted a CN that Halo states is assigned to Transcom. Indeed, Halo inserted the same CN on every call it sent AT&T in a given MTA. By doing this, Halo doubly disguised the nature of calls: first, Halo made all calls appear wireless even though many of them were originated by a landline caller; second, Halo made all calls appear to be local even though many were non-local (either interMTA if wireless or interexchange if landline). Disguising calls in this way is contrary to industry practices and makes it very difficult for AT&T to properly bill for terminating calls sent by Halo. Schedule MN-8 to my testimony provides a sample of

SS7 data depicting Halo-terminated calls where Halo inserted Transcom's CN into the call data even though the call originated with no CN; this is in the top table on Schedule MN-8. For comparison, I also show what AT&T typically sees from a typical CMRS carrier in that carrier's SS7 records; this is in the bottom table on Schedule MN-8. This comparison demonstrates how Halo's behavior is drastically different from the norm.

Q. YOU SAY THAT HALO WAS DISGUISING THE TRUE NATURE OF ITS TRAFFIC, BUT WASN'T AT&T ABLE TO DISCERN THE TRUE NATURE OF THE TRAFFIC BY LOOKING AT THE ORIGINATING CPN AND USING THE PROCESS YOU AND MR. MENSINGER USED FOR YOUR CALL ANALYSES?

A. Yes, but that was because we performed additional, special analyses of the data. We do not generate our bills to Halo by manually reviewing millions of bits of SS7 data. We use our mechanized billing systems to generate our bills to Halo, and Halo was disguising the true nature of its traffic *from our billing systems*.

V. DISCONTINUATION OF SERVICE TO HALO

Q. ARE YOU AWARE THAT AT&T MISSOURI IS ASKING THE MISSOURI COMMISSION TO AUTHORIZE AT&T MISSOURI TO DISCONTINUE SERVICE TO HALO – TO STOP ACCEPTING TRAFFIC FROM HALO, IN OTHER WORDS?

A. Yes, I am.

Q. DO YOU HAVE ANY EXPERIENCE WITH WHAT HAPPENS WHEN AN AT&T ILEC DISCONTINUES SERVICE TO ANOTHER CARRIER?

A. I do. In fact, I was involved in implementing AT&T's termination of service to Halo in Tennessee when the TRA authorized AT&T to take that step.

Q. IF THE COMMISSION AUTHORIZES AT&T MISSOURI TO STOP ACCEPTING TRAFFIC FROM HALO AND AT&T DOES SO, WHAT IMPACT WILL THAT HAVE ON MISSOURI CONSUMERS OF TELECOMMUNICATIONS SERVICES?

A. Based on my years of telecommunications experience in general and on our experience in Tennessee in particular, I would expect it to have no discernible effect on Missouri consumers.

Q. PLEASE ELABORATE.

A. First, and most important, no one in Missouri is going to lose dial tone – the ability to make calls – and there will be no impact whatsoever on emergency services. Recall that Halo has virtually no end-user consumer customers in Missouri – all we are talking about is traffic that comes from Halo to AT&T Missouri, either for termination to AT&T Missouri's local exchange customers or for delivery to other carriers.

Q. BUT WHEN PEOPLE MAKE CALLS THAT WOULD BE ROUTED THROUGH TRANSCOM/HALO TO AT&T MISSOURI, SUCH AS THE GIRL CALLING HER GRANDMOTHER IN YOUR ILLUSTRATION, WILL THOSE CALLS COMPLETE?

A. I was confident that the answer to that question was yes before we discontinued service to Halo in Tennessee, and our Tennessee experience confirmed that that was correct.

Q. WHAT WAS THE BASIS FOR YOUR BELIEF BEFORE AT&T DISCONTINUED SERVICE TO HALO IN TENNESSEE?

A. Many carriers have switches that are programmed to find alternative routing if a call fails to complete via the primary route. To the extent that the carriers that pass traffic to Transcom fall into that category, the calls will complete, with no complications. Assume, for example, that Carrier X has direct connections with AT&T Tennessee and used to deliver substantial volumes of access traffic to AT&T Tennessee over those direct

connections. Assume further that Carrier X started routing its access traffic through Halo to AT&T Tennessee in order to get the benefit of Halo's least cost routing. This would have significantly reduced the volumes of traffic Carrier X sent directly to AT&T Tennessee, but those direct connections remained in place.

What would happen, then, when AT&T Tennessee, having received approval from the TRA, discontinues service to Halo? If Carrier X's switches were programmed as many carriers' switches are, they would route Carrier X's traffic directly to AT&T Tennessee when the routing through Halo fails. And this of course happens instantaneously, and is transparent to the end-users. From the point of view of the girl and her grandmother, nothing has happened – the girl dials her grandmother's number and the call completes, just as it always did.

Q. BUT WHAT ABOUT CARRIERS THAT DIDN'T PRE-PROGRAM THEIR SWITCHES TO RE-ROUTE THE TRAFFIC?

A. With a few hours' work reprogramming their switches, those carriers can achieve the same result; the only difference is that they have to take measures promptly when they learn that Halo can no longer complete their calls to the AT&T ILEC, or will soon become unable to do so. In Tennessee, my expectation was that the carriers that deliver traffic to Halo (particularly carriers, if any, with switches that were not already programmed to reroute traffic as I described above) were monitoring the case, and would do the appropriate reprogramming before we actually cut off Halo. Or if those carriers were not monitoring the case, I expected that Halo (like any responsible carrier when it sees the writing on the wall) would give them advance notice that they should reprogram their switches or, at worst, that there might be a slight delay between our termination of

service to Halo and the implementation of measures to make sure that all calls completed. So, for all of these reasons, I expected that when we terminated service to Halo in Tennessee, there would be little or no effect on the completion of incoming calls.

Q. YOU SAID EARLIER THAT YOUR ACTUAL EXPERIENCE IN TENNESSEE CONFIRMED YOUR EXPECTATIONS. PLEASE EXPLAIN.

A. In order to determine whether there were blocked calls as a result of AT&T Tennessee discontinuing its service to Halo, I consulted AT&T's Global Network Operations Center, which monitors the AT&T network. The Center has the ability to monitor AT&T's trunk groups for any blocked calls, and the person I spoke with told me there had been no problems with blocked calls on AT&T Tennessee's network. This confirmed that the calls that carriers were previously passing through Transcom/Halo to AT&T Tennessee found alternate routes for completion.

Q. DO YOU EXPECT ANYTHING DIFFERENT TO OCCUR IN MISSOURI IF THE MISSOURI COMMISSION AUTHORIZES AT&T TO DISCONTINUE SERVICE TO HALO (I.E., EITHER TO BLOCK TRAFFIC UNDER THE MISSOURI ENHANCED RECORDS EXCHANGE RULE OR TO CEASE PERFORMANCE UNDER THE ICA)?

A. No. AT&T Missouri has previously blocked Halo's traffic for a number of RLECs who requested AT&T Missouri to do so pursuant to the Commission's Enhanced Records Exchange ("ERE") Rules. Those blocks occurred in the Spring and Summer of 2011, prior to Halo's filing for bankruptcy. To the best of our knowledge, Halo/Transcom has found alternative ways to terminate this traffic.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

BEFORE THE TENNESSEE REGULATORY AUTHORITY

NASHVILLE, TENNESSEE

January 26, 2012

IN RE:	)	
	)	**DOCKET NO.**
BELLSOUTH TELECOMMUNICATIONS LLC D/B/A AT&T TENNESSEE V. HALO WIRELESS, INC.	)	**11-00119**
	)	

ORDER

This matter came before Chairman Kenneth C. Hill, Director Sara Kyle and Director Mary W. Freeman of the Tennessee Regulatory Authority ("Authority" or "TRA"), the voting panel assigned to this docket, at a regularly scheduled Authority Conference held on January 23, 2012 for consideration of the *Complaint* filed by BellSouth Telecommunications, LLC d/b/a AT&T Tennessee ("AT&T") against Halo Wireless, Inc. ("Halo") and Halo's *Motion to Dismiss Complaint With Prejudice.*

TRAVEL OF THE CASE

On July 26, 2011, AT&T filed a *Complaint* against Halo, pursuant to 47 U.S.C. § 252 and TRA Rule 1220-1-2-.02, requesting that the TRA issue an order "allowing it to terminate its wireless Interconnection Agreement ("ICA") with Halo based on Halo's material breaches of that ICA."[1] The *Complaint* also states that AT&T "seeks an Order requiring Halo to pay AT&T Tennessee the amounts Halo owes" as a result of "an access charge avoidance scheme."[2] On August 10, 2011, Halo filed a Suggestion of Bankruptcy informing the TRA that "on August 8, 2011 Halo filed a voluntary petition under Chapter 11 of Title 11 of the United States Code in the

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[1] *Complaint*, p. 1 (July 26, 2011).
[2] *Id.*

United States Bankruptcy Court for the Eastern District of Texas (Sherman Division)" ("Bankruptcy Court").[3] Accordingly, Halo stated, "the automatic stay is now in place" and "prohibits further action against [Halo] in the instant proceeding."[4]

On August 19, 2011, Halo filed a notice of removal to federal district court, which references a separate notice of removal and states that this matter has been removed to the United States District Court for the Middle District of Tennessee, Nashville Division ("District Court") "pursuant to 28 U.S.C. § 1452 and Rule 9027 of the Federal Rules of Bankruptcy Procedure."[5] On November 10, 2011, AT&T filed a letter informing the TRA that it may now hear this matter, the District Court having remanded it to the TRA and the Bankruptcy Court having lifted the automatic stay on a limited basis. AT&T requested that this matter be placed on the agenda for the Authority Conference scheduled for November 21, 2011 "for appointing a Hearing Officer and other action as necessary."[6] On November 17, 2011, Halo filed a *Motion to Abate*, in which Halo requested that the TRA "abate" this proceeding until conclusion of Halo's appeal of the Bankruptcy Court's October 26, 2011 Order to the United States Court of Appeals for the Fifth Circuit.

At the regularly scheduled Authority Conference held on November 21, 2011, the Authority voted unanimously to deny the *Motion to Abate* and to convene a contested case in this matter and appoint Chairman Kenneth C. Hill as Hearing Officer to handle any preliminary matters, including entering a protective order, ruling on any intervention requests, setting a procedural schedule, and addressing other preliminary matters.[7] Immediately following the Authority Conference, the Hearing Officer convened a scheduling conference in this matter.

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[3] *Suggestion of Bankruptcy*, p. 1 (August 10, 2011).
[4] *Id.* at 2.
[5] *Notice of Removal to Federal Court*, p. 1 (August 19, 2011).
[6] Letter from Joelle Phillips to Chairman Kenneth C. Hill (November 10, 2011).
[7] *Order Denying Motion to Abate, Convening a Contested Case and Appointing a Hearing Officer* (December 19, 2011).

On December 1, 2011, Halo filed *Halo Wireless, Inc.'s Partial Motion to Dismiss and Answer to the Complaint of BellSouth Telecommunications, LLC d/b/a AT&T Tennessee* ("*Partial Motion to Dismiss*"), and AT&T filed its response to Halo's motion on December 8, 2011. The Hearing Officer heard arguments from AT&T and Halo (collectively, "the Parties") on the *Partial Motion to Dismiss* on December 12, 2011, and issued an order denying the *Partial Motion to Dismiss* on December 16, 2011.[8] The Parties submitted pre-filed direct testimony of their witnesses on December 19, 2011, and pre-filed rebuttal testimony on January 3, 2012. In addition, the Parties submitted pre-hearing memoranda on January 6, 2012.

MOTION TO DISMISS COMPLAINT WITH PREJUDICE

After business hours on Friday, January 13, 2012, Halo filed *Halo Wireless, Inc.'s Notice of May 16, 2006 Order Confirming Plan of Reorganization of Transcom Enhanced Services and Motion to Dismiss Complaint With Prejudice* ("*Motion to Dismiss Complaint With Prejudice*"). At the beginning of the Hearing on January 17, 2012, Chairman Hill addressed the *Motion to Dismiss Complaint With Prejudice*, giving AT&T an opportunity to respond and setting the matter for consideration during the January 23, 2012 Authority Conference. AT&T filed *BellSouth Telecommunications, LLC dba AT&T Tennessee's Response to Halo Wireless, Inc's Motion to Dismiss Complaint With Prejudice* ("*Response*") on January 19, 2012.

As more fully explained in the discussion of AT&T's *Complaint* below, Halo's business plan is centered on their assertion that Transcom Enhanced Services, Inc. ("Transcom") is an Enhanced Service Provider ("ESP"). In its *Motion to Dismiss Complaint With Prejudice,* Halo requests that the TRA dismiss AT&T's *Complaint* with prejudice on the grounds that during

[8] *Order Denying Motion to Dismiss* (December 16, 2011).

Transcom's 2005 bankruptcy proceeding,[9] BellSouth/AT&T Corporation were creditors/parties in interest.[10] In the Transcom Bankruptcy Court's April 28, 2005 Memorandum Opinion, the Court concluded that "[Transcom]'s service is an enhanced service, not subject to payment of access charges."[11] Some of the creditors appealed the April 28, 2005 order to the United States District Court for the Northern District of Texas, Dallas Division ("Transcom District Court"), but the Transcom District Court dismissed the appeal as moot and vacated the bankruptcy court's Order and Memorandum Opinion.[12] However, the Transcom Bankruptcy Court entered an order on May 16, 2006 confirming Transcom's bankruptcy plan.[13] In this Confirmation Order, the Transcom Bankruptcy Court again stated that Transcom's services are not subject to access charges, but rather qualify as information services and enhanced services that must pay end-user charges.[14] No creditor appealed the May 16, 2006 Order.[15] Halo argues that because this Confirmation Order is binding, AT&T cannot challenge Transcom's status as an ESP.[16] In addition, Halo asserts that *res judicata* or collateral estoppel bars the claims that have been litigated in the bankruptcy court.

To assert a *res judicata* defense, a party must establish: 1) the parties must be identical in both suits; 2) the prior judgment must have been rendered by a court of competent jurisdiction; 3) there must have been a final judgment on the merits; and 4) the same cause of action must be involved in both cases.[17] Halo claims that these standards are satisfied because 1) BellSouth was a party to the Transcom bankruptcy case and litigants who have a close and significant relationship (e.g. Transcom/Halo) satisfy the "identical parties" test; 2) the Transcom Bankruptcy Court had

[9] Transcom filed a voluntary petition for Chapter 11 bankruptcy in the United States Bankruptcy Court for the Northern District of Texas, Dallas Division, ("Transcom Bankruptcy Court") on February 18, 2005 in Case No. 05-31929-HDH-11 ("Transcom bankruptcy"). *See Motion to Dismiss Complaint With Prejudice*, p. 2, ¶ 3 (January 13, 2012).
[10] *Motion to Dismiss Complaint With Prejudice*, p. 2, ¶ 4 (January 13, 2012).
[11] *Id.* at 3, ¶ 7.
[12] *Id.*
[13] *Id.* at 4, ¶ 10.
[14] *Id.*
[15] *Id.* at 4, ¶ 11.
[16] *Id.* at 6, ¶ 14.
[17] *Id.* at 6, ¶ 17, *citing Osherow v. Ernst & Young, LLP* (*In re Intelogic Trace, Inc.*), 300 F.3d 382, 386 (5th Cir. 2000).

jurisdiction over the 2006 Confirmation Order; 3) the 2006 Confirmation Order is final; and 4) the two actions are based on the same nucleus of operative facts, because the primary issue in both proceedings is whether Transcom provides enhanced services.[18]

Collateral estoppel precludes a party from litigating an issue already raised in an earlier action if: 1) the issue at stake is identical to the one involved in the earlier action; 2) the issue was actually litigated in the prior action; and 3) the determination of the issue in the prior action was a necessary part of the judgment in that action.[19] Halo asserts that 1) AT&T's *Complaint* confronts the authority with an identical issue to that raised in the 2006 Transcom Bankruptcy Court's Confirmation Order, i.e. that Transcom is an ESP not subject to access charges; 2) the issue was litigated in 2006 in the Transcom bankruptcy proceeding; and 3) the determination that Transcom is an ESP was a necessary part of the Confirmation because if it were not, the Plan would not have been feasible and the Confirmation would have been denied.[20]

AT&T opposes the *Motion to Dismiss Complaint With Prejudice* on the grounds that the Motion is at odds with the Federal Communications Commission's ("FCC") *Connect America Fund* Order.[21] AT&T argues that none of the Transcom bankruptcy court proceedings or other earlier proceedings cited by Halo is binding on either AT&T or the Authority.[22] None of the Transcom Bankruptcy Court orders states or suggests that Transcom actually is an end-user, and none of them implies or says anything about the termination or origination of calls.[23] Rather, an ESP is treated as

[18] *Motion to Dismiss Complaint With Prejudice*, pp. 7-8, ¶¶ 18-26 (January 13, 2012).
[19] *Id.* at 10, ¶ 28, *citing Petro-Hunt, L.L.C. v. U.S.*, 365 F.2d 385, 397 (5th Cir, 2004).
[20] *Id.* at 10-11, ¶¶ 27-30.
[21] *Response*, p. 1 (January 19, 2012); *See Report and Order and Further Notice of Proposed Rulemaking, In the Matter of Connect America Fund; A National Broadband Plan for Our Future; Establishing Just and Reasonable Rates for Local Exchange Carriers; High-Cost Universal Service Support; Developing an Unified Intercarrier Compensation Regime; Federal-State Board on Universal Service; Lifeline and Link-Up; Universal Service Reform – Mobility Fund*, WC Docket Nos. 10–90, 07–135, 05–337, 03–109; GN Docket No. 09–51; CC Docket Nos. 01–92, 96–45; WT Docket No. 10–208; FCC 11–161, __ FCC Rcd __ ("*Connect America Fund Order*") (November 18, 2011).
[22] *Response*, p. 3 (January 19, 2012).
[23] *Id.* at 4.

an end-user for the purpose of being exempted from access charges, nothing more.[24] Further the exemption applies only to ESPs, not carriers (like Halo) that transport calls for ESPs.[25] AT&T asserts that the Authority rejected Halo's *res judicata* and collateral estoppel arguments when it rejected Halo's *Partial Motion to Dismiss*.[26] AT&T further asserts that *res judicata* and collateral estoppel cannot apply because: 1) the main order Halo relies upon was vacated by the federal district court; 2) the bankruptcy cases involved Transcom, not Halo, and therefore were not between identical parties; 3) the Transcom bankruptcy cases did not involve the same cause of action as this case, since this case involves claims for Halo's breach of a contract that was not even formed until after the bankruptcy cases, while the bankruptcy cases involved the issue of whether Transcom was subject to access charges; and 4) the issue in this case (whether Transcom must be deemed to originate or re-originate calls) was never raised, much less decided, in the bankruptcy cases.[27]

The Authority agrees with AT&T that neither *res judicata* nor collateral estoppel applies in this case. The panel finds that *res judicata* does not apply because the Transcom bankruptcy case and this docket do not involve identical parties and this is a breach of contract case and, therefore, is not the same cause of action. The panel also finds that collateral estoppel does not apply because the issue in this case - the origination or re-origination and termination of Halo's calls – was not raised in the Transcom bankruptcy case. Based on these findings, the Authority concludes unanimously that Halo's *Motion to Dismiss Complaint With Prejudice* should be denied.

THE HEARING

A Hearing in this matter was held before the voting panel of Directors assigned to this docket on January 17, 2012. The Hearing was publicly noticed by the Hearing Officer on

[24] *Id.*
[25] *Id.* at 4, n. 8.
[26] *Id.* at 3, n. 6.
[27] *Id.*

December 16, 2011 and January 12, 2012. Participating in the Hearing were the following parties and their respective counsel:

> **For BellSouth Telecommunications, LLC d/b/a AT&T Tennessee – Joelle Phillips, Esq.**, 333 Commerce Street, Suite 2101, Nashville TN 37201 and **J. Tyson Covey, Esq.**, Mayer Brown, LLP, 71 S. Wacker Drive, Chicago, IL 60606.
>
> **For Halo Wireless, Inc. – Paul S. Davidson, Esq.**, Waller Lansden Dortch & Davis, LLP, 511 Union Street, Suite 2700, Nashville, TN 37219; **Steven H. Thomas, Esq.** and **Jennifer M. Larson, Esq.**, McGuire, Craddock & Strother, P.C., 2501 N. Harwood, Suite 1800, Dallas, TX 75201; **W. Scott McCollough, Esq.**, McCollough/Henry PC, 1250 S. Capital of Texas Highway, Bldg. 2-235, West Lake Hills, TX 78746.

During the Hearing, the Authority heard testimony from AT&T witnesses J. Scott McPhee and Mark Neinast. Russ Wiseman and Robert Johnson testified for Halo.

AT&T'S *COMPLAINT*

In its *Complaint*, AT&T seeks to terminate its wireless ICA with Halo because Halo has violated the ICA by sending AT&T large volumes of traffic that does not originate on a wireless network. AT&T further asks the TRA to order Halo to pay it the amounts that it owes AT&T. AT&T asserts that the TRA has jurisdiction over this matter, because it involves (1) violations of an ICA entered into under 27 U.S.C. §§ 251 and 252 that was approved by the Authority and (2) violations of AT&T Tennessee's state tariffs.[28] The *Complaint* contains four counts:

Count 1 - Breach of ICA: Sending Wireline-Originated Traffic to AT&T Tennessee: AT&T charges that Halo sends AT&T traffic that is wireline-originated, interstate, interLATA or intraLATA toll traffic and that Halo disguises it as local traffic to avoid access charges that apply to such traffic. AT&T asks the TRA to order Halo to terminate the Parties' ICA for this breach or, in

[28] *Complaint*, p. 3 (July 26, 2011).

the alternative, to order Halo to cease and desist from sending wireline-originated traffic not authorized by the ICA to AT&T.[29]

Count 2 - Breach of ICA: Alteration or Deletion of Call Detail: AT&T alleges that Halo consistently alters the Charge Number ("CN"), which prevents AT&T from properly billing Halo based on where the traffic originated. AT&T requests that the Authority authorize it to terminate the Parties' ICA, or, in the alternative, to order Halo to cease and desist from altering the CN on traffic that it delivers to AT&T.[30]

Count 3 – Payment for Termination of Wireline-Originated Traffic: The wireline-originated traffic that Halo previously sent to AT&T is not governed by the Parties' ICA but is instead subject to tariffed switched access charges. AT&T therefore asks the Authority to order Halo to pay all access charges due to AT&T within thirty days of the Authority's order.[31]

Count 4 – Breach of ICA: Non-payment for Facilities: AT&T asks the TRA to order Halo to pay it for transport facilities that AT&T has provided but for which Halo has refused to pay.[32]

POSITIONS OF THE PARTIES

The Parties have set forth their arguments in full in the record of this docket, in their pre-hearing memoranda and in the presentation of their cases at the Hearing. The following section is intended as a *brief* summary of the positions of AT&T and Halo in this matter.

Position of AT&T Tennessee

AT&T asserts that Halo has engaged in three separate types of breaches of the Parties' ICA.[33] Although the ICA requires Halo to send only wireless-originated traffic to AT&T, 74% of

[29] *Id.* at 3-4.
[30] *Id.* at 4-5.
[31] *Id.* at 5-6.
[32] *Id.* at 6.
[33] *Pre-hearing Memorandum of BellSouth Telecommunications, LLC dba AT&T Tennessee*, p. 1 (January 6, 2012).

the traffic Halo sends to AT&T is landline-originated traffic.[34] According to AT&T, Halo's contention that it is not breaching the ICA is based on a "wireless in the middle" theory, where Transcom is an ESP; ESPs are treated as end-users; and Transcom must be deemed to "re-originate" every call that passes through Transcom to Halo.[35]

AT&T argues that the FCC has expressly rejected Halo's theory in the *Connect America Fund Order*, where the FCC singled out Halo by name.[36] The FCC rejected Halo's theory that calls that begin with an end-user dialing a call on a landline network can be "re-originated" as wireless calls by passing through an ESP with wireless equipment in the middle of the call. [37] Further, the ESP exemption from access charges applies only to ESPs themselves, not to carriers like Halo that serve them.[38] AT&T asserts, however, that Transcom is not an ESP because reducing background noise and inserting "comfort noise" in periods of silence do not alter the fundamental character of the service from the end-user's perspective.[39]

AT&T argues that its call study showing 74% of the calls Halo sends to AT&T are landline-originated is reliable. Further, Halo does not deny that at least some of its calls it sends to AT&T are landline or IP-originated,[40] which results in a breach of the ICA.[41]

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[34] *Id.* at 5. The terms "wireline" and "landline" are used interchangeably in the parties' testimony. For background, federal law specifies that wireless calls that originate and terminate within the same Major Trading Area ("MTA") are "local calls" and subject to reciprocal compensation rates. Calls exchanged between end-users in different MTAs are considered "InterMTA" and are subject to tariffed interstate or intrastate access charges, which are higher than reciprocal compensation rates. Calls that originate from landline telephones are considered "local" if they both originate and terminate within the same local exchange area. Intercarrier compensation rates for intra-exchange calls are set by the landline ICA; the rates for intrastate inter-exchange calls are set by the state access tariff, and the rates for interstate inter-exchange calls are set by the FCC access tariff. *See* J. Scott McPhee, Pre-filed Direct Testimony, p. 9 (December 19, 2011).

[35] *Id.*

[36] *Pre-hearing Memorandum of BellSouth Telecommunications, LLC dba AT&T Tennessee*, p. 6 (January 6, 2012).

[37] *Id.* at 7.

[38] *Id.* at 9.

[39] *Id.* at 10-11.

[40] The term "IP" refers to Internet Protocol.

[41] *Id.* at 11-12.

AT&T asserts that Halo also breached the ICA by inserting false charge numbers; specifically, Halo inserts a Transcom Charge Number ("CN") on every call, and the effect is that every call appears local.[42]

AT&T alleges that Halo is breaching the ICA by refusing to pay for interconnection facilities it obtains from AT&T. Because 100% of the traffic between the Parties is traffic that Halo terminates on AT&T's network, Halo is responsible for 100% of the cost of the interconnection facility under the Parties' wireless ICA.[43]

Position of Halo Wireless, Inc.

Halo asserts that it is not in breach of the ICA and AT&T is not entitled to "significant amounts of money" from Halo for the traffic at issue.[44] Halo further asserts that it has a valid and subsisting Radio Station Authorization from the FCC authorizing Halo to provide wireless service as a common carrier and to operate stations in the "3650-3700" MHz band,[45] and is therefore governed exclusively by federal law.[46] Halo argues that the FCC has exclusive jurisdiction over federal licensing and that a state commission cannot take any action that would amount to a suspension or revocation of a federal license.[47]

Halo provides Commercial Mobile Radio Service ("CMRS") and sells telephone exchange service to Transcom, which is a high volume customer.[48] Halo asserts that Transcom is an ESP because it changes the information content of every call that passes through its system and also

[42] *Id.* at 12-13.
[43] *Id.* at 14-15.
[44] *Halo Wireless, Inc.'s Pre-hearing Memorandum*, p.1 (January 6, 2012).
[45] Russ Wiseman Pre-filed Direct Testimony, p. 2 (December 19, 2011).
[46] *Halo Wireless, Inc.'s Pre-hearing Memorandum*, p. 2 (January 6, 2012).
[47] *Id.* at 2-3.
[48] *Id.* at 1.

offers enhanced capabilities.[49] Transcom is an end-user, not a carrier.[50] Therefore, Halo argues that it is a CMRS carrier selling wireless telephone exchange service to an ESP end-user and its traffic is not wireline-originated.[51] All of the calls received from Transcom within a particular MTA are terminated in the same MTA, so that all of the traffic is subject to local charges in the ICA. [52]

Halo argues that it does not alter or delete call detail in violation of the ICA.[53] Halo populates the CN parameter with the Billing Telephone Number ("BTN") of its end-user customer - Transcom.[54] AT&T alleges improper modification of signaling information related to the CN parameter, but the basis of this claim once again results from the assertion that Transcom is a carrier rather than an end-user.[55] Halo is exactly following industry practice applicable to an exchange carrier providing telephone exchange service to an end-user, and in particular a communications-intensive business end-user with sophisticated Customer Premises Equipment ("CPE").[56]

Halo asserts that it does not owe facilities charges to AT&T.[57] Under the ICA, AT&T may only charge for interconnection facilities when AT&T-provided facilities are used by Halo to reach the mutually agreed Point of Interconnection ("POI").[58] Under the terms of the ICA, the POI is where Halo's network ends.[59] AT&T is attempting to shift cost responsibility for what it calls facilities" to Halo when the ICA assigns responsibility to AT&T because the "facilities" are all on AT&T's side of the POI.[60]

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[49] *Id.*
[50] *Id.* at 4.
[51] *Id.* at 4-6.
[52] *Id.* at 1.
[53] *Id.* at 6-8.
[54] *Id.* at 8.
[55] *Id.*; *see also* Russ Wiseman Pre-filed Direct Testimony pp. 26-28 (December 19, 2011).
[56] *Id.*
[57] *Id.* at 9-14.
[58] *Id.* at 9.
[59] *Id.*
[60] *Id.* at 14.

FINDINGS AND CONCLUSIONS

Jurisdiction

Throughout these proceedings, Halo has raised objections and challenged the jurisdiction of the Authority to consider the *Complaint* in this matter. The Authority finds that it has jurisdiction to consider the *Complaint* pursuant to both federal and state law. The Authority approved the interconnection agreement between AT&T Tennessee and Halo by order dated June 21, 2010 in TRA Docket No. 10-00063.[61] Interconnection agreements are reviewable and enforceable by the Authority pursuant to 47 U.S.C. § 252 and, in instances where the "market regulation" statute applies, are enforceable pursuant to Tenn. Code Ann. § 65-5-109(m). Further, the Authority has jurisdiction over complaints concerning telecommunications service providers who have elected "market regulation" such as AT&T, pursuant to Tenn. Code Ann. § 65-5-109(m). Halo did not object to the Authority's jurisdiction to approve the interconnection agreement that now lies at the center of this dispute.[62]

The District Court, in its Order remanding this matter back to the Authority, also recognized the TRA's jurisdiction over the interpretation of the ICA. The District Court explained the respective roles of the Court and the Authority, stating:

> The Telecommunications Act of 1996 ("the Act") requires that all ICAs be approved by a state regulatory commission before they become effective. State commissions such as the TRA have authority to approve and disapprove interconnection agreements, such as the one at issue herein. 47 U.S.C. § 252(e)(1). That authority includes the authority to interpret and enforce the provisions of agreements that the state commissions have approved. *Southwestern Bell Telephone Co. v. Public Utility Comm'n of Texas*, 208 F.3d 475, 479 (5th Cir. 2000); *Millennium One Communications, Inc. v. Public Utility Comm'n of Texas*, 361 F.Supp.2d 634, 636 (W.D. Tex. 2005). Federal district courts have jurisdiction to review interpretation

[61] *See In Re: Petition For Approval Of The Interconnection Agreement and Amendment Thereto Between BellSouth dba AT&T Tennessee and Halo Wireless, Inc.*, Docket No. 10-00063, *Order Approving the Interconnection Agreement and Amendment Thereto* (June 21, 2010).

[62] *See In Re: Petition for Approval of the Interconnection Agreement and Amendment Thereto Between BellSouth dba AT&T Tennessee and Halo Wireless, Inc.*, Docket No. 10-00063.

and enforcement decisions of the state commissions. *Id.; Southwestern Bell* at p. 480, 47 U.S.C. § 252(e)(6). Here, as noted above, there is no state commission determination to review.

In *Central Telephone Co. of Virginia v. Sprint Communications Co. of Virginia, Inc.*, 759 F.Supp.2d 772 (E.D. Va. 2011), the court held that federal district courts have federal question jurisdiction to interpret and enforce an ICA, pursuant to 28 U.S.C. § 1331. *Id. at 778; see also BellSouth Telecommunications, Inc. v. MCImetro Access Transmission Servs., Inc.*, 317 F.3d 1270, 1278-79 (11th Cir. 2003) (federal courts have jurisdiction under Section 1331 to hear challenges to state commission orders interpreting ICAs because they arise under federal law) and *Michigan Bell Telephone Co. v. MCI Metro Access Transmission Servs.*, 323 F.3d 348, 353 (6th Cir. 2003)(federal courts have jurisdiction to review state commission orders for compliance with federal law). Although these cases involved state commission orders, their holdings provide guidance on this issue.

Based on the reasoning in the above-cited cases, the Court finds that it has subject matter jurisdiction to hear this matter, pursuant to 28 U.S.C. § 1331 because the ICAs arise under federal law. As stated in *Verizon Maryland*, ICAs are federally mandated agreements and to the extent the ICA imposes a duty consistent with the Act, that duty is a federal requirement. *Verizon Maryland, Inc. v. Global NAPS, Inc.*, 377 F.3d 355, 364 (4th Cir. 2004).

The fact that this Court has jurisdiction does not end the matter, however. The fact that the Court *could* hear this action does not necessarily mean the Court *should* hear this action. Although the Act details how parties, states and federal courts can draft and approve ICAs, it is silent on how and in what fora parties can enforce ICAs. *Global NAPS, Inc. v. Verizon New England Inc.*, 603 F.3d 71, 83 (1st Cir. 2010). Because the Act does not specifically mandate exhaustion of state action, whether to construe the Act as prescribing an exhaustion requirement is a matter for the Court's discretionary judgment. *Ohio Bell Tel. Co., Inc. v. Global NAPS Ohio, Inc.*, 540 F.Supp.2d 914, 919 (S.D. Ohio 2008).

The Third Circuit Court of Appeals has held that interpretation and enforcement actions that arise after a state commission has approved an ICA must be litigated in the first instance before the relevant state commission. *Core Communications, Inc. v. Verizon Pennsylvania, Inc.*, 493 F.3d 333, 344 (3d Cir. 2007). A party may then proceed to federal court to seek review of the commission's decision. *Id.* Citing *Core,* a district court in Ohio has also held that a complainant is required to first litigate its breach-of-ICA claims before the state commission in order to seek review in the district court. *Ohio Bell,* 540 F.Supp.2d at 919-920 (citing cases from numerous district courts).

On the other hand, in *Central Telephone,* the court held that a party to an ICA is not required to exhaust administrative remedies by bringing claims for breach of an ICA first to a state commission. *Central Telephone,* 759 F.Supp.2d at 778 and 786.

> The Court agrees with the reasoning of the *Core* and *Ohio Bell* opinions. The Act provides for judicial review of a "determination" by the state commission. Until such determination is made, the Court cannot exercise this judicial review. *See Ohio Bell,* 540 F.Supp.2d at 919. As the *Core* court stated: "a state commission's authority to approve or reject an interconnection agreement would itself be undermined if it lacked authority to determine in the first instance the meaning of an agreement that it has approved." *Core,* 493 F.3d at 343 (citing *BellSouth Telecommunications,* 317 F.3d at 1278, n.9).[63]

The Authority is mindful, however, of the restrictions placed upon these proceedings by the Order of the Bankruptcy Court. In an Order issued on October 26, 2011, the Bankruptcy Court ruled that "pursuant to 11 U.S.C. § 362(b)(4), the automatic stay imposed by 11 U.S.C. § 362 . . . is not applicable to currently pending State Commission Proceedings," including proceedings brought by AT&T.[64] However, the Bankruptcy Court further stated that

> any regulatory proceedings . . . may be advanced to a conclusion and a decision in respect of such matters may be rendered; provided however, that nothing herein shall permit, as part of such proceedings:
>
> A. liquidation of the amount of any claim against the Debtor; or
>
> B. any action which affects the debtor-creditor relationship between the Debtor and any creditor or potential creditor.[65]

Therefore, nothing in this Order is intended to permit as part of these proceedings the liquidation of the amount of any claim against Halo or to affect the debtor-creditor relationship between the Parties beyond that permitted in the Bankruptcy Court's October 26, 2011 Order.

AT&T's *Complaint* - Count 1

Count 1 of the *Complaint* alleges that Halo has breached the ICA by impermissibly sending traffic originating from wireline telephones to AT&T, although the interconnection agreement only

[63] *BellSouth Telecommunications, Inc. v. Halo Wireless, Inc,* Case No. 3-11-0795, M.D. Tenn., *Memorandum*, pp. 4-6 (November 1, 2011).
[64] *In re: Halo Wireless, Inc.*, Case No. 11-42464, Bkrtcy. E. D. Tex., *Order Granting Motion of the AT&T Companies to Determine Automatic Stay Inapplicable and for Relief from the Automatic Stay*, p. 1 (October 26, 2011).
[65] *In re: Halo Wireless, Inc.*, Case No. 11-42464, Bkrtcy. E. D. Tex., *Order Granting Motion of the AT&T Companies to Determine Automatic Stay Inapplicable and for Relief from the Automatic Stay*, p. 2.

permits Halo to send AT&T traffic that originates from wireless networks. The applicable language from the interconnection agreement reads:

> Whereas, the Parties have agreed that this Agreement will apply only to (1) traffic that originates on AT&T's network or is transited through AT&T's network and is routed to Carrier's wireless network for wireless termination by Carrier; and (2) traffic that originates through wireless transmitting and receiving facilities before [Halo] delivers traffic to AT&T for termination by AT&T or for transit to another network.[66]

The Authority interprets the language of the ICA to require Halo only to deliver traffic that has originated through wireless transmitting and receiving facilities. Thus, evidence that Halo has delivered wireline-originated traffic will result in a finding that Halo has breached the ICA.

The Authority has reviewed Halo's *ex parte* filings with the FCC in the *Connect America Fund* docket, where the description of Halo and Transcom's operations is the same as that which has been presented to the TRA in this proceeding. Indeed, reviewing the *ex parte* filings made by Halo makes it clear that the FCC was aware of Halo's assertion that it provided service to ESPs and used wireless technology. In the resulting *Connect America Fund Order,* the FCC addressed and rejected Halo's assertion that traffic from its customer Transcom is wirelessly originated. The *Connect America Fund Order* states:

> We first address a dispute regarding the interpretation of the intraMTA rule. Halo Wireless (Halo) asserts that it offers "Common Carrier wireless exchange services to ESP and enterprise customers" in which the customer "connects wirelessly to Halo base stations in each MTA." It further asserts that its "high volume" service is CMRS because "the customer connects to Halo's base station using wireless equipment which is capable of operation while in motion." Halo argues that, for purposes of applying the intraMTA rule, "[t]he origination point for Halo traffic is the base station to which Halo's customers connect wirelessly." On the other hand, ERTA claims that Halo's traffic is not from its own retail customers but is instead from a number of other LECs, CLECs, and CMRS providers. NTCA further submitted an analysis of call records for calls received by some of its member rural LECs from Halo indicating that most of the calls either did not originate on a CMRS line or were not intraMTA, and that even if CMRS might be used "in the middle,"

[66] J. Scott McPhee, Pre-filed Direct Testimony, pp. 6-7 (December 19, 2011).

> this does not affect the categorization of the call for intercarrier compensation purposes. These parties thus assert that by characterizing access traffic as intraMTA reciprocal compensation traffic, Halo is failing to pay the requisite compensation to terminating rural LECs for a very large amount of traffic. Responding to this dispute, CTIA asserts that "it is unclear whether the intraMTA rules would even apply in that case."[67]

After clearly describing the operations of Halo, including its use of wireless technology and relationship with Transcom, the FCC found that calls are not originated by Transcom and that wireline originated calls are not reclassified as wireless calls because of a wireless link in the middle of the call path. The FCC in the *Connect America Fund Order* continues:

> We clarify that a call is considered to be originated by a CMRS provider for purposes of the intraMTA rule only if the calling party initiating the call has done so through a CMRS provider. Where a provider is merely providing a transiting service, it is well established that a transiting carrier is not considered the originating carrier for purposes of the reciprocal compensation rules. Thus, we agree with NECA that the "re-origination" of a call over a wireless link in the middle of the call path does not convert a wireline-originated call into a CMRS-originated call for purposes of reciprocal compensation and we disagree with Halo's contrary position.[68]

The Authority agrees with the FCC's rejection of Halo's assertions and finds that the "re-origination" of a call over a wireless link in the middle of the call path does not convert a wireline-originated call into a wireless-originated call for purposes of reciprocal compensation.

Nor does Halo deny that it is sending traffic that originated on the wireline PSTN.[69] In response to the question, "Do you admit that some of the communications in issue actually started on other networks?" Halo's witness Mr. Wiseman responds "Most of the calls probably did start on other networks before they came to Transcom for processing. It would not surprise me if some of them started on the PSTN."[70]

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[67] *Connect America Fund Order,* ¶ 1005 *(footnotes omitted).* The term "CLEC" refers to Competitive Local Exchange Carrier.
[68] *Connect America Fund Order,* ¶ 1006 *(footnotes omitted).*
[69] The term "PSTN" refers to the Public Switched Telephone Network, which means the calls were originated on the landline network.
[70] Russ Wiseman, Pre-filed Direct Testimony, p. 14 (December 19, 2011).

AT&T's traffic study also demonstrates that Halo has delivered wireline traffic to AT&T. AT&T estimates that about 74% of the traffic Halo sends to AT&T originates on the networks of landline carriers.[71] Even though Halo does not deny it has likely sent wireline traffic to AT&T, it contests the accuracy of AT&T's traffic study. Halo's arguments against AT&T's traffic study are: (1) that telephone numbers are an unreliable indictor of who originates a call, if wireless technology is used for the call and where the call originates and (2) calls that originate using IP technology are not landline calls.

The Authority acknowledges that a certain degree of imprecision can occur when analyzing the origin to individual telephone calls, due to factors such as the advent of number portability and the growth of wireless and IP telephony. However, because of these technical issues, the industry has developed conventions and practices to evaluate calls for the purpose of intercarrier compensation. The Authority finds that the methodology used to collect the data and the interpretation of the data in the AT&T study are based upon common industry practices to classify whether traffic is originated on wireline or wireless networks. In addition, the Authority finds that the convention of collecting data for a single week is sufficient to demonstrate whether wireline traffic was sent to AT&T by Halo. Further, Halo identifies several calls included in AT&T's traffic study as likely being IP-originated,[72] which is considered by the industry to be wireline-originated for the purpose of intercarrier compensation rules.[73]

Based upon the Authority's agreement with the FCC's dispositive decision in the *Connect America Fund Order*, Halo's admission that it has delivered wireline-originated and IP-originated traffic to AT&T, and the information contained in AT&T's traffic study, the Authority finds that Halo has materially breached its interconnection agreement with AT&T.

[71] Mark Neinast, Pre-filed Direct Testimony, pp. 3, 11 and Attachment MN-3 (December 19, 2011).
[72] Russ Wiseman, Pre-filed Rebuttal Testimony, pp. 8-9 (January 3, 2012).
[73] Mark Neinast, Pre-filed Rebuttal Testimony, p. 6 (January 3, 2012).

AT&T's *Complaint* - Count 2

Count 2 of the *Complaint* alleges that Halo breached its interconnection agreement with AT&T by improperly altering call detail information that allows AT&T to properly classify calls for the purpose of intercarrier compensation. Section XIV.G of the ICA requires:

> The parties will provide each other with the proper call information, including all proper translations for routing between networks and any information necessary for billing where BellSouth provides recording capabilities. This exchange of information is required to enable each party to bill properly.[74]

In addition, Section XIV.E of the ICA also requires Halo to provide many types of call detail information, including the Charge Number.

In most cases, industry members use the Calling Party Number ("CPN") to determine whether a call is jurisdictionally long-distance or local. In rare cases a CN is included in the call detail record to indicate the number that will actually be financially responsible for the call. For example, some businesses want all calls made by its employees in a particular office to be billed to single number. Halo admits that it uses Transcom's BTN to populate the CN fields on traffic since February 2011.[75]

As with Count 1, the Authority finds that the FCC's *Connect America Fund Order* dispositively resolves this issue. Because the FCC dismisses "re-origination" by Transcom, Transcom clearly cannot be the originating entity and thus inserting Transcom's number as the Charge Number is inappropriate. Therefore, because Halo has improperly altered call detail information, the Authority finds that Halo has materially breached its interconnection agreement with AT&T.

[74] *Complaint*, p. 4 (July 26, 2011).
[75] Russ Wiseman, Pre-filed Direct Testimony, pp. 29-30 (December 19, 2011).

AT&T's *Complaint* – Count 3

Count 3 of the *Complaint* alleges that Halo has not properly compensated AT&T for the traffic it has delivered. Halo has been paying AT&T reciprocal compensation, which is only appropriate if the end-user initiated the call wirelessly within the MTA in which it is terminated, instead of switched access charges, which are appropriate for wireline-originated calls. The FCC's decision in the *Connect America Fund Order*, with which the Authority concurs, is that Halo's traffic does not originate within an MTA with its customer Transcom. In addition, AT&T's traffic study demonstrates that AT&T terminated calls that originated outside the MTA where it was terminated. Further, Halo's use of MTA specific numbers to assert a 100% intra-MTA factor necessarily implies that switched access charges were avoided since Transcom was not the true originating party.

The Authority's findings on Counts 1 and 2 of the *Complaint* concerning the wireline and IP-origination of Halo's traffic necessarily lead to the conclusion that Halo has not been properly compensating AT&T for the traffic it has delivered. The payment of reciprocal compensation is only appropriate if the end-user, which is not Transcom, initiated the call wirelessly within the MTA where it is terminated. Thus, Halo has failed to compensate AT&T for calls where it was due switched access charges. Therefore, the Authority finds that Halo is liable to AT&T Tennessee for access charges on the interstate and intrastate interLATA and intraLATA landline traffic it has sent to AT&T Tennessee.

AT&T's *Complaint* - Count 4

Count 4 of the *Complaint* alleges that Halo has refused to pay AT&T for transport facilities. Section V.B, page 10 of the ICA states:

> BellSouth will bear the cost of the two-way trunk group for the proportion of the facility utilized for the delivery of BellSouth originated Local traffic to Carrier's POI within BellSouth's service territory and within the LATA (calculated based on the number of minutes of traffic identified as BellSouth's divided by the total minutes of use on the facility), and Carrier will provide or bear the cost of the two-way trunk group for all other traffic, including Intermediary traffic.[76]

Halo does not dispute that it terminates all of its traffic on AT&T's network, but it does dispute AT&T's charges for the two-way trunk groups that connect the Parties. Halo details the arrangement of facilities with which it connects to AT&T in various locations, and it cites from FCC rules to argue that AT&T cannot charge Halo for facilities on AT&T's side of the POI.[77] This line of reasoning might be appropriate if Halo were a CLEC. However, Halo is not a CLEC but rather a CMRS provider, and under the ICA it signed with AT&T, each party is required to pay its share of the facilities cost. The Authority finds that Halo owes AT&T for the proportionate share of the facilities that connect Halo's Point of Presence ("POP") to AT&T's network as required by the ICA. The ICA allocates the costs of facilities based on the proportion of traffic each party sends to the other party, and since Halo sends 100 % of its traffic to AT&T, the Authority finds that Halo should pay 100% of the cost for these facilities as required by the ICA.

Transcom Is Not an Enhanced Service Provider

The FCC has established a bright-line rule that the "enhanced" service designation does not apply to services that merely "facilitate establishment of a basic transmission path over which a telephone call may be completed, without altering the fundamental character of the telephone service," and that a service is not "enhanced" when the service does not alter the fundamental character of the service *from the end-user's perspective.*[78] Thus, for example, the FCC has held that

[76] Mark Neinast, Pre-filed Direct Testimony, p.19 (December 19, 2011).
[77] Russ Wiseman, Pre-filed Direct Testimony, p. 41 (December 19, 2011).
[78] *Implementation of the Non-Accounting Safeguards of Sections 271 and 272 of the Communications Act of 1934*, 11 FCC Rcd. 21905, ¶ 107 (1996).

services are not "enhanced" when customers use the same dialing method for allegedly "enhanced" calls that they would for any other call,[79] or where the alleged "enhancement" was made "without the advance knowledge or consent of the customer" that placed the call and the customer is not "provided with the 'capability' to do anything other than make a telephone call."[80]

The Authority finds that Transcom's services fail to meet the FCC's bright-line rule, since the record in this proceeding indicates that Transcom provides no services to actual end-users and does not offer any enhancements discernable to the person that actually places the call.[81] The record also supports the conclusion that end-users are completely unaware that Transcom is even involved in call delivery.[82] Nor does Halo's testimony prove that Transcom is an ESP. Halo asserts that Transcom

> ... employs computer processing applications that act on the format, content, code, protocol or similar aspects of the received information. The platform will provide the customer additional, different, or restructured information. This is done by generating, acquiring, storing, transforming, processing, retrieving, utilizing or making available information via telecommunications.[83]

However, despite the claim of computer processing of data, Transcom only reduces background noise and inserts "comfort noise" in periods of silence so that those periods of silence are not mistaken for the end of a call.[84] The Pennsylvania Public Utility Commission rejected a similar claim relating to Transcom's services, finding that "the removal of background noise" and

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[79] *Petition for Declaratory Ruling that AT&T's Phone-to-Phone IP Telephony Services are Exempt from Access Charges*, 19 FCC Rcd. 7457, ¶ 15 (2004) ("*IP-in-the-Middle Order*").
[80] *AT&T Corp. Petition for Declaratory Ruling Regarding Enhanced Prepaid Calling Card Services*, 20 FCC Rcd. 4826, ¶ 16, n. 28 (2005) ("*AT&T Calling Card Decision*").
[81] Mark Neinast, Pre-filed Rebuttal Testimony, p. 5 (January 3, 2012).
[82] *Id.*
[83] Robert Johnson, Pre-filed Rebuttal Testimony, p. 12 (January 3, 2012).
[84] *Id.* at 12-13.

"the insertion of white noise" do not make Transcom an ESP.[85] The alleged "enhancements" that Transcom claims it makes to calls that transit its network are simply processes to improve the quality of the call. Telecommunications networks have been routinely making those types of improvements for years and, in some cases, decades. Carriers have routinely incorporated equipment into networks that have, for example, expanded the dynamic range of a voice call to improve clarity. The conversion from analog to digital and back to analog has significantly improved call quality, yet none of these processes are deemed "enhancements" in the sense of an ESP.[86] For the reasons above, the Authority finds that Transcom is not an ESP for this particular traffic.

IT IS THEREFORE ORDERED THAT:

1. Halo Wireless Inc.'s *Motion to Dismiss Complaint With Prejudice* is denied.

2. BellSouth Telecommunications, LLC d/b/a AT&T Tennessee is authorized to terminate the interconnection agreement previously approved by the Authority in TRA Docket No. 10-00063 and to stop accepting traffic from Halo Wireless, Inc.

3. Halo Wireless, Inc. is liable to BellSouth Telecommunications, LLC d/b/a AT&T Tennessee for access charges on the interstate and intrastate interLATA and intraLATA landline traffic it has sent to AT&T Tennessee thus far and for the interconnection facilities it has obtained from AT&T Tennessee. However, nothing in this Order is intended to permit as part of these proceedings the liquidation of the amount of any claim against Halo or to affect the debtor-creditor relationship between the Parties beyond that permitted in the *Order Granting Motion of the AT&T*

[85] *Palmerton Tel. Co. v. Global NAPS South, Inc., et al.*, PA PUC Docket No. C-2009-2093336, 2011 WL 1259661, at 16-17 (Penn. PUC, March 16, 2010). ("We find that Transcom does not supply GNAPS with 'enhanced' traffic under applicable federal rules"). Note that the Pennsylvania Public Utility Commission specifically rejected the Transcom Bankruptcy Court's April 28, 2005 Memorandum Opinion finding Transcom to be an ESP on the basis that Transcom had indicated in that proceeding that it provided "data communications services over private IP networks (VoIP)." *Id.* The Authority is not persuaded by the Transcom bankruptcy court rulings regarding Transcom's status as an ESP, either.

[86] *Id.*

Companies to Determine Automatic Stay Inapplicable and for Relief From the Automatic Stay [Dkt. No. 13], issued by the United States Bankruptcy Court for the Eastern District of Texas, Sherman Division, in Case No. 11-42464-btr-11 on October 26, 2011. AT&T Tennessee may pursue further action for the collection of access charges or facilities charges in the United States Bankruptcy Court for the Eastern District of Texas, Sherman Division, or other appropriate fora as permitted by that Court.

4. Any party aggrieved by the Authority's decision in this matter may file a Petition for Reconsideration with the Authority within fifteen days from the date of this Order.

5. Any party aggrieved by the Authority's decision in this matter has the right to judicial review by filing a Petition for Review in the Tennessee Court of Appeals, Middle Section, within sixty days from the date of this Order.

Kenneth C. Hill, Chairman

Sara Kyle, Director

Mary W. Freeman, Director

THE OFFICE OF REGULATORY STAFF

DIRECT TESTIMONY

OF

CHRISTOPHER J. ROZYCKI

March 9, 2012

2011-304-C

COMPLAINT AND PETITION FOR RELIEF OF BELLSOUTH TELECOMMUNICATIONS, LLC D/B/A AT&T SOUTHEAST D/B/A AT&T SOUTH CAROLINA V. HALO WIRELESS, INCORPORATED FOR BREACH OF THE PARTIES' INTERCONNECTION AGREEMENT

DIRECT TESTIMONY OF
CHRISTOPHER J. ROZYCKI
FOR
THE OFFICE OF REGULATORY STAFF
DOCKET NO. 2011-304-C

IN RE: COMPLAINT AND PETITION FOR RELIEF OF BELLSOUTH TELECOMMUNICATIONS, LLC D/B/A AT&T SOUTHEAST D/B/A AT&T SOUTH CAROLINA V. HALO WIRELESS, INCORPORATED FOR BREACH OF THE PARTIES' INTERCONNECTION AGREEMENT

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND OCCUPATION.

A. My name is Christopher J. Rozycki and my business address is 1401 Main Street, Suite 900, Columbia, South Carolina 29201. I am employed by the State of South Carolina Office of Regulatory Staff ("ORS") as a Program Manager in the Telecommunications Department.

Q. PLEASE DESCRIBE YOUR BUSINESS EXPERIENCE AND BACKGROUND.

A. I have over thirty (30) years of experience. I have more than twenty (20) years in telecommunications business and regulation and nearly ten (10) years in the regulation of energy industries.

In the telecommunications industry I worked for a major interexchange company, AT&T (before it remerged with Southwestern Bell Telephone Company ("SBC") and BellSouth Telecommunications, Inc.), two competitive local exchange companies, a competitive broadband/cable TV company, and a telecommunications consulting firm.

As my experience grew, I took on roles of increasing responsibility and leadership, often crafting the regulatory policy for my company and presenting that position in meetings, presentations, formal comments, and testimony.

My testimony and advocacy covered issues involving finance, economics, rate-of-return, competitive entry, inter-carrier compensation and access. I have also been involved with the startup, development, and funding of telecommunications companies and other businesses.

Additionally, I have worked for the federal government in an energy regulatory organization (U.S. Department of Energy), and as a public utility consumer advocate for a county government in Virginia.

I hold a master's degree in Economics from George Mason University in Fairfax, Virginia and a bachelor's degree in Economics from Georgetown University in Washington, DC.

Q. WHAT ARE YOUR RESPONSIBILITIES AT THE OFFICE OF REGULATORY STAFF?

A. As Telecommunications Program Manager, I am responsible for all telecommunications activities of ORS including the certification of new telecommunications entrants, regulation and oversight of existing telecommunications companies, management of the state universal service and Interim LEC funds, and administration of the Lifeline Program.

Q. HAVE YOU PROVIDED TESTIMONY IN OTHER REGULATORY PROCEEDINGS?

A. Yes. I have provided testimony on a variety of issues in Alabama, Delaware, Florida, Georgia, Louisiana, Mississippi, New York, North Carolina, Pennsylvania, South Carolina, Tennessee, Vermont, and Virginia.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to provide the Commission with ORS' position regarding the telecommunications services being offered by Halo Wireless, Incorporated ("Halo") in South Carolina and our review of the interconnection agreement ("ICA") between Halo and Bellsouth Telecommunications, LLC d/b/a AT&T South Carolina ("AT&T"). More specifically, whether telecommunications traffic (telephone calls) delivered by Halo to AT&T for termination to South Carolina residents or businesses are wireless calls or are these telephone calls classified as wireline calls.

Q. CAN YOU SUMMARIZE AT&T'S POSITION IN THIS CASE?

A. Yes. Simply stated, AT&T alleges that Halo is delivering wireline originated interstate and intrastate, interLATA calls to AT&T and refusing to pay terminating access for these calls. Halo has a wireless ICA with AT&T. AT&T, however, claims that much of Halo's traffic originates on traditional wireline phones, and that Halo is using an access charge avoidance scheme to make these wireline calls appear to be wireless and intraMTA.

More specifically, AT&T has identified four specific complaints against Halo in its Complaint and Petition.

Count I – Breach of ICA: Sending wireline-originated traffic to AT&T South Carolina.

Count II – Breach of ICA: Alteration or deletion of call detail.

Count III – Payment for termination of wireline-originated traffic.

Count IV – Breach of ICA: Non-Payment for facilities.

Q. CAN YOU SUMMARIZE HALO'S POSITION IN THIS CASE?

A. Yes. Halo states it is a wireless carrier; it receives wireless traffic from Transcom; and it delivers wireless traffic to AT&T in accordance with its ICA.

Q. IS HALO A WIRELESS CARRIER?

A. Halo does have a wireless license for the Orangeburg, SC area, issued by the Federal Communications Commission ("FCC").

Q. DOES THE FACT THAT HALO HAS A WIRELESS LICENSE INDICATE THAT ALL TRAFFIC IT HANDLES MUST BE DEFINED AS WIRELESS?

A. No, it does not. Other telecommunications companies operating in South Carolina carry both wireless and wireline traffic in the state. Sprint, for example, provides wireless service in South Carolina, while also operating as an interexchange carrier ("IXC") and providing wholesale telecommunications service to other carriers.

Q. IN HALO'S PARTIAL MOTION TO DISMISS, THE COMPANY CLAIMS THE COMMISSION LACKS THE JURISDICTION TO "DECIDE WHETHER HALO IS ACTING WITHIN AND CONSISTENT WITH ITS FEDERAL LICENSE." IS HALO CORRECT?

A. No. Pursuant to S.C. Code Ann. § 58-11-100 (D) the Commission retains jurisdiction to address and resolve issues relating to arrangements and compensation between telecommunications carriers and commercial mobile service providers, pursuant to 47 U.S.C. Sections 251 and 252.

Furthermore, the Commission has jurisdiction over intrastate telecommunications traffic, and the authority to regulate those companies offering retail or wholesale intrastate wireline telecommunications services. While not an issue raised in AT&T's complaint, it is ORS's position that Halo appears to be providing wholesale intrastate wireline telecommunications services in South Carolina without a certificate of public convenience and necessity ("CPCN").

Q. IS TRANSCOM AN END USER?

A. No, not in the opinion of ORS. For traffic originated by end users and delivered to Transcom by another carrier for delivery to a third carrier, or even an end user, Transcom cannot be classified as an originating or terminating end user.

Q. YOU USE SPRINT AS AN EXAMPLE OF A WIRELESS CARRIER WHICH OPERATES AS AN IXC AND WHOLESALE CARRIER. WHAT THREE TYPES OF SERVICES DOES SPRINT PROVIDE IN SOUTH CAROLINA? WHAT

APPROVALS OR LICENSES IS SPRINT REQUIRED TO HAVE FOR THOSE SERVICES IN SOUTH CAROLINA?

A. The first service Sprint offers is wireless service. Companies providing wireless service obtain a license from the FCC for a specified geographic area. Most wireless traffic is generated by end-user customers of the wireless license holder with mobile wireless devices (e.g. cell phones or tablets). The key here is that the traffic is end-user generated, and the end-user is a customer of the wireless company.

The second service Sprint offers is wireline IXC service. This is traditional wireline-based long distance service. Companies providing this service in South Carolina are required to obtain a CPCN from the Commission. Traffic here is again generated by end-users who are the customers of the IXC.

The third service Sprint offers is wholesale telecommunications service. This service is provided by one carrier to another carrier or multiple carriers. The wholesale carrier has no contract or direct relationship with the end-user. Wholesale telecommunications carriers are required to obtain a CPCN to operate in South Carolina.

Q. IS HALO OPERATING SOLELY AS A WIRELESS SERVICE PROVIDER IN SOUTH CAROLINA?

A. No. According to the information filed in this proceeding, Halo has an FCC license to operate in South Carolina as a wireless carrier, but it does not appear to ORS that Halo is providing end-users with wireless service that the end-user accesses through

a mobile wireless device, and nearly all of its South Carolina traffic is wholesale (provided to another carrier).

Q. IF HALO IS NOT OPERATING AS A WIRELESS SERVICE PROVIDER, HOW DOES ORS CLASSIFY THE SERVICE HALO IS PROVIDING?

A. Halo apparently has one customer in South Carolina - Transcom. Halo has informed ORS that it has no retail customers in South Carolina. Transcom appears to aggregate wireline traffic from other carriers and delivers it to Halo over a wireless connection. As I stated earlier, in this scenario, Halo appears to be a wholesale carrier or a carrier's carrier operating without the necessary CPCN to sell wholesale intrastate telecommunications services.

Q. ACCORDING TO HALO, TRAFFIC IS RECEIVED FROM ITS CUSTOMERS VIA A WIRELESS CONNECTION. BECAUSE HALO HAS A WIRELESS LICENSE DOES THAT CLASSIFY HALO AS A WIRELESS CARRIER?

A. No. Much of the traffic Halo transports originated as wireline telephone calls. AT&T and Halo dispute the amount of traffic that originated as wireline telephone calls. Halo then transports these calls to AT&T for termination to wireline customers of AT&T and other South Carolina ILECs. Calls that originate on a wireline phone and terminate on a wireline phone in South Carolina are intrastate wireline calls.

As for Halo's claim that it is a wireless carrier, based on the information I have reviewed, Halo and Transcom have constructed a wireless facility for the exchange of traffic.

Finally, the FCC in its recent Order (FCC 11-161) states in paragraph 1006:

> We clarify that a call is considered to be originated by a CMRS provider for purposes of the intraMTA rule **only if the calling party initiating the call has done so through a CMRS provider**. Where a provider is merely providing a transiting service, it is well established that a transiting carrier is not considered the originating carrier for purposes of the reciprocal compensation rules. Thus, we agree with NECA that the "re-origination" of a call over a wireless link in the middle of the call path does not convert a wireline-originated call into a CMRS-originated call for purposes of reciprocal compensation and we disagree with HALO's contrary position. (Emphasis Added)

Thus, a call that originates on a wireline and terminates on a wireline is a wireline call for purposes of inter-carrier compensation. For example, a call originating on a wireline phone in North Carolina and terminating on an AT&T wireline phone in South Carolina, is an interstate call, subject to interstate access charges, regardless of the means of transport. A call originating on a wireline phone in Charleston, SC and terminating on an AT&T wireline phone in Greenville, SC, is an intrastate interLATA call, subject to intrastate access charges, regardless of the means of transport. A call originating on a wireline phone in Charleston, SC and terminating on an AT&T wireline phone in Charleston, SC, is a local call, subject to reciprocal compensation charges, regardless of the means of transport. The FCC has reviewed other requests for exemption of access charges where the means of transporting the call was altered but did not change the fundamental nature of the call. See, *In the Matter of Petition for Declaratory Ruling that AT&T's Phone-to-Phone IP Telephony Services are Exempt from Access Charges,* WC Docket No. 02-361, FCC 04-97, 19 FCC Rcd 7457 (rel. April 21, 2004) ("AT&T Declaratory Ruling" or "IP-in-the-Middle"). Importantly, the FCC held that there is "no

benefit in promoting one party's use of a specific technology to engage in arbitrage at the cost of what other parties are entitled to under the statute and our rules, particularly where, based on the record before us, end users have received no benefit in terms of additional functionality or reduced prices." *Id.* at. ¶ 17 ORS agrees with the FCC's position on this issue and sees no benefit to end users in the construction of the call flow at issue in this proceeding.

Q. IN PARAGRAPHS 14 AND 15 OF HALO'S PARTIAL MOTION TO DISMISS, THE COMPANY COMPARES TELEPHONE TRAFFIC AT ISSUE IN THIS CASE TO INTERNET TRAFFIC. IS THIS A PROPER COMPARISON?

A. No, it is not. The ISP traffic being referred to by Halo in 2000 was dial-up data/IP traffic being directed to the Internet that could be sent to multiple locations all over the world simultaneously. Many of Transcom's so-called wireless/ESP transmissions first originated as traditional telephone calls and were directed to one and only one terminating telephone number. When the receiving party answered, one individual spoke with another individual, a voice communication occurred. As the FCC has stated in its recent Order (FCC 11-161, paragraph 1006), "the "re-origination" of a call over a wireless link in the middle of the call path does not convert a wireline-originated call into a CMRS-originated call for purposes of reciprocal compensation and we disagree with Halo's contrary position." It is very clear that the FCC does not consider the Transcom to Halo transmission to be a re-origination of the call, therefore, the wireline-originated call and all of its IXC and network transiting components are

jurisdictionally identified by the true originating and terminating points of the telephone call.

Q. ARE THERE ANY BENEFITS TO THE ROUTING OF THIS TRAFFIC THROUGH TRANSCOM AND HALO?

A. I can think of one – avoidance of the higher priced switched access charges. It is significant that Halo inserted a Charge Number ("CN") on calls it sent AT&T in a given MTA thereby ensuring that every call appeared to be wireless and intraMTA (Direct Testimony of Neinast at p. 34, lines 3-8).

Q. HAS HALO BREACHED ITS INTERCONNECTION AGREEMENT WITH AT&T, BY SENDING WIRELINE-ORIGINATED TRAFFIC TO AT&T?

A. Yes. It appears the AT&T and Halo ICA is specific to wireless traffic only, and a significant amount of Halo's traffic appears to be wireline-originated.

Q. WHAT ARE YOUR RECOMMENDATIONS IN THIS CASE?

A. ORS recommends the Commission do the following:

1. Authorize AT&T South Carolina to stop accepting traffic from Halo Wireless, Inc.
2. Require Halo, within ten (10) days, to identify all affiliated companies operating in South Carolina, and for Halo and each of these affiliated companies to identify the following:
   a. Whether the affiliate is offering local, long distance, or wholesale telecommunications service in the state;

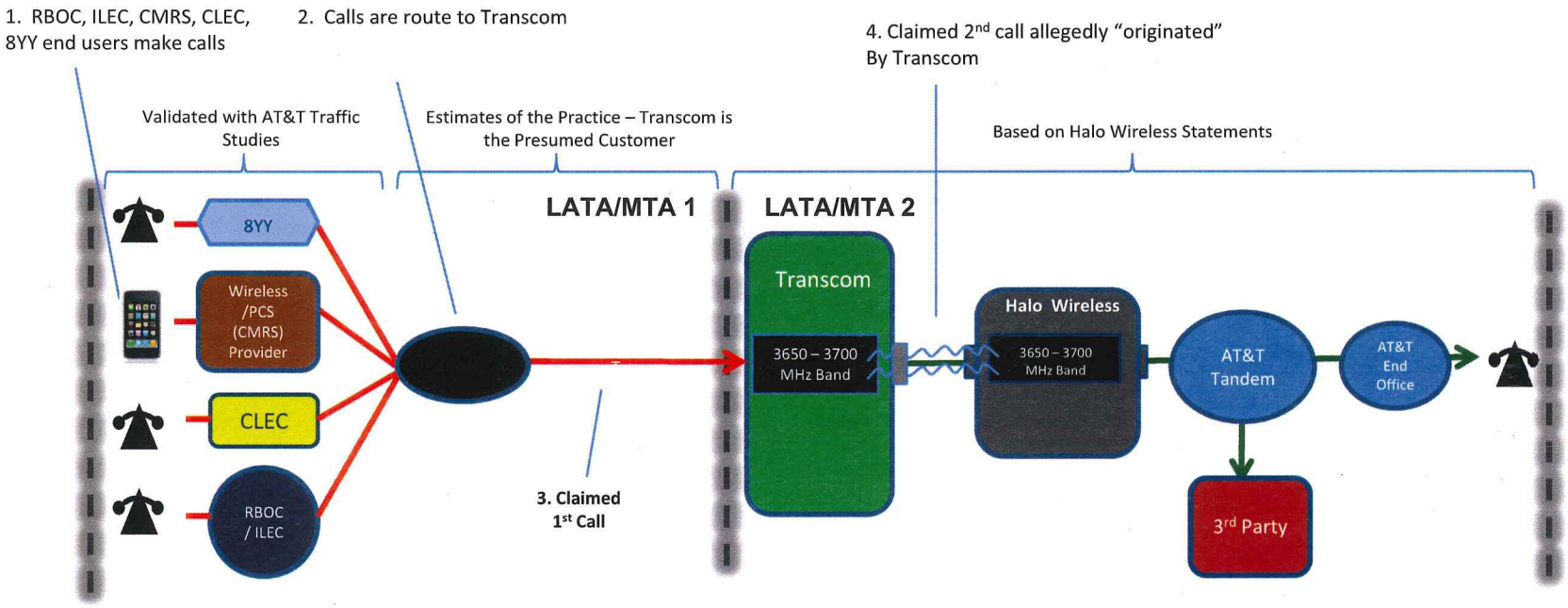
b. In which areas or communities Halo or the affiliate is providing telecommunications service; and

c. The number of residential, business, and carrier customers Halo and each affiliate is serving.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes it does.

Diagram of How Halo Sends Traffic To AT&T

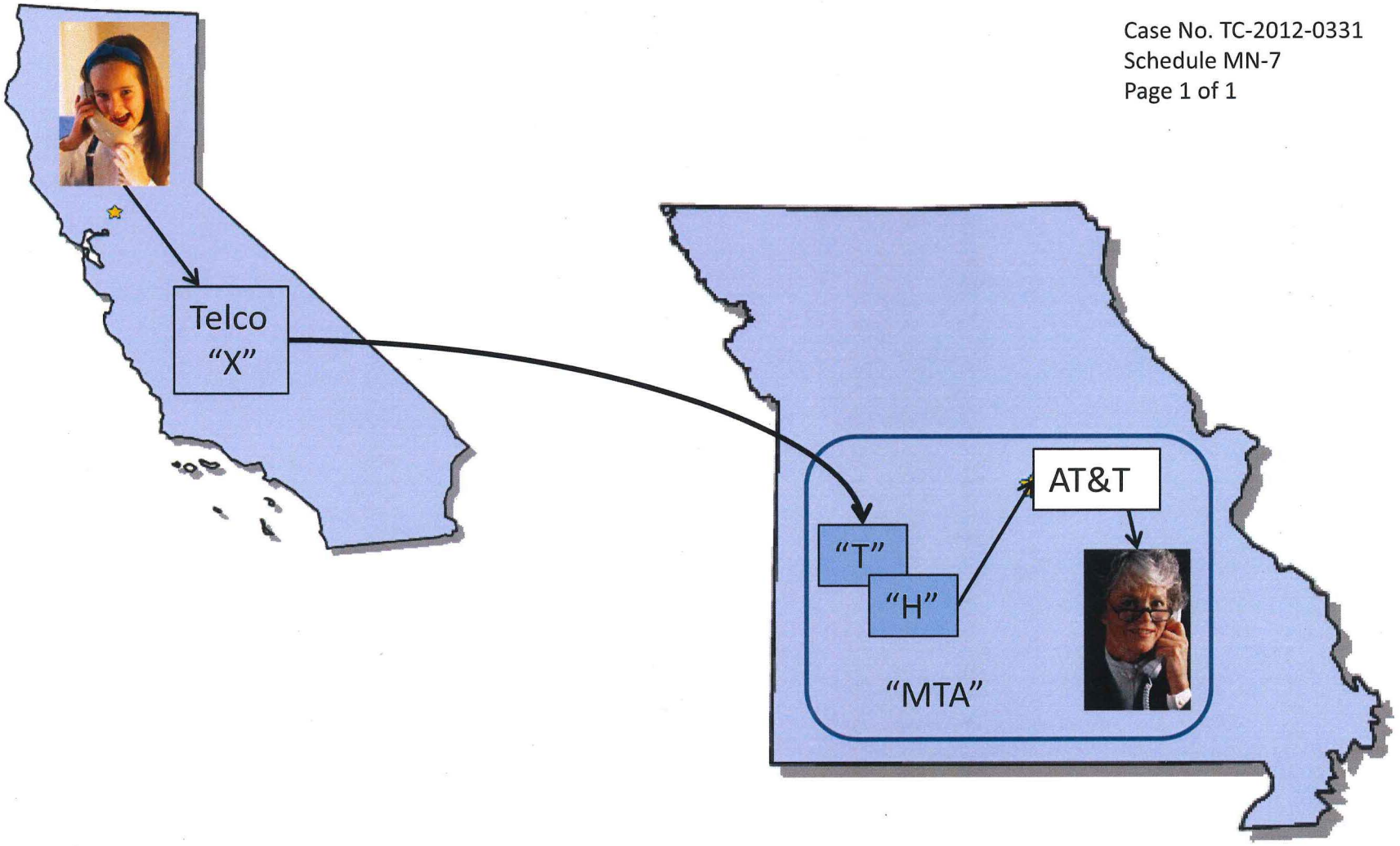


State	Traffic Termination	Traffic Type	Jurisdiction	Percent by State	Landline vs. Wireless Orig %	Traffic Study Date	Percent by State	Landline vs. Wireless Orig %	Traffic Study Date	Percent by State	Landline vs. Wireless Orig %	Traffic Study Date
MO DMS	Total Terminating	Wireless Originated	InterMTA Interstate	9%	78%	3/6/11 - 3/12/11	4%	44%	9/11/11 - 9/17/11	14%	34%	2/26/12 -- 3/24/12
			InterMTA Intrastate	3%			20%			7%		
			IntraMTA	66%			19%			13%		
		Landline Originated	Interstate	9%	22%		24%	56%		34%	66%	
			Intrastate	13%			32%			31%		
Total				100%	100%		100%	100%		100%	100%	
MO DMS	Terminating to 3rd Parties	Wireless Originated										
			InterMTA Interstate	6%	70%	3/6/11 - 3/12/11	10%	25%	9/11/11 -- 9/17/11	11%	29%	2/26/12 -- 3/24/12
			InterMTA Intrastate	6%			5%			7%		
			IntraMTA	58%			10%			11%		
		Landline Originated	Interstate	12%	30%		27%	75%		37%	71%	
			Intrastate	17%			48%			33%		
Total				100%	100%		100%	100%		100%	100%	
MO DMS	Terminating to AT&T RBOC	Wireless Originated										
			InterMTA Interstate	12%	88%	3/6/11 - 3/12/11	0%	59%	9/11/11 -- 9/17/11	18%	40%	2/26/12 -- 3/24/12
			InterMTA Intrastate	0%			32%			7%		
			IntraMTA	76%			27%			15%		
		Landline Originated	Interstate	5%	12%		21%	41%		31%	60%	
			Intrastate	7%			21%			29%		
Total				100%	100%		100%	100%		100%	100%	

Example of Halo Calls Terminating to AT&T MO with 50 State LNP and Split Number Range Look up
Date of Call Study (9/12/2011)

CARRIER CODE	CALLING PARTY NUMBER (CPN) OWNER	LANDLINE CARRIER BASED ON LERG	CALLING PARTY NUMBER	CALLING PARTY STATE	CALLED NUMBER OWNER	CALLED NUMBER OWNER	CALLED NUMBER STATE
429F	ACS OF ANCHORAGE, INC.	ILEC	907-343-0XXX	AK	AT&T MO	417-865-7XXX	MO
429F	WINDSTREAM ALABAMA, INC.	ILEC	205-594-3XXX	AL	AT&T MO	417-863-6XXX	MO
429F	PRAIRIE GROVE TELEPHONE CO.	ILEC	479-267-0XXX	AR	AT&T MO	417-782-7XXX	MO
429F	QWEST CORPORATION	RBOC	480-558-2XXX	AZ	AT&T MO	417-624-0XXX	MO
429F	TELUS COMMUNICATIONS (B.C.) INC.	ILEC	250-260-3XXX	BC	AT&T MO	816-443-2XXX	MO
429F	PACIFIC BELL	RBOC	209-664-0XXX	CA	AT&T MO	417-624-8XXX	MO
429F	VERIZON CALIFORNIA INC.-CA (GTE)	RBOC	310-371-0XXX	CA	AT&T MO	417-832-1XXX	MO
429F	EMBARQ FLORIDA, INC. DBA CENTURYLINK	ILEC	352-624-0XXX	FL	AT&T MO	816-823-7XXX	MO
429F	VERIZON FLORIDA INC.	RBOC	727-531-9XXX	FL	AT&T MO	660-646-0XXX	MO
429F	WINDSTREAM GEORGIA, INC.	ILEC	706-654-1XXX	GA	AT&T MO	816-407-3XXX	MO
429F	HAWAIIAN TELCOM, INC. - HI	ILEC	808-521-5XXX	HI	AT&T MO	417-841-1XXX	MO
429F	QWEST CORPORATION	RBOC	319-376-2XXX	IA	AT&T MO	660-665-6XXX	MO
429F	FRONTIER COMMUNICATIONS OF IOWA, INC.	ILEC	515-955-3XXX	IA	AT&T MO	417-829-5XXX	MO
429F	QWEST CORPORATION	RBOC	208-542-5XXX	ID	AT&T MO	417-358-9XXX	MO
429F	ILLINOIS CONSOLIDATED TELEPHONE CO.	ILEC	217-324-3XXX	IL	AT&T MO	816-860-1XXX	MO
429F	FRONTIER NORTH, INC. - IL	ILEC	217-245-9XXX	IL	AT&T MO	816-232-4XXX	MO
429F	UNITED TEL OF EASTERN KANSAS DBA CENTURYLINK	ILEC	913-874-2XXX	KS	AT&T MO	417-881-2XXX	MO
429F	SOUTHWESTERN BELL	RBOC	913-888-1XXX	KS	AT&T MO	816-347-0XXX	MO
429F	FOOTHILLS RURAL TELEPHONE COOPERATIVE CORP.	ILEC	606-297-7XXX	KY	AT&T MO	417-753-1XXX	MO
429F	HIGHLAND TELEPHONE COOPERATIVE, INC. - KY	ILEC	606-354-7XXX	KY	AT&T MO	417-831-3XXX	MO
429F	VERIZON NEW ENGLAND INC.	RBOC	508-747-1XXX	MA	AT&T MO	417-682-6XXX	MO
429F	VERIZON MARYLAND, INC.	RBOC	301-423-1XXX	MD	AT&T MO	660-826-0XXX	MO
429F	NO NEW ENGLAND TEL OP DBA FAIRPOINT COMM - ME	RBOC	207-492-2XXX	ME	AT&T MO	417-451-6XXX	MO
429F	FRONTIER NORTH, INC. - MI	ILEC	231-777-3XXX	MI	AT&T MO	417-476-5XXX	MO
429F	CENTURYTEL OF MICHIGAN INC DBA CENTURYLINK	ILEC	231-839-1XXX	MI	AT&T MO	816-763-7XXX	MO
429F	EAST OTTER TAIL TELEPHONE CO.	ILEC	218-346-2XXX	MN	AT&T MO	816-279-5XXX	MO
429F	FRONTIER COMMUNICATIONS OF MINNESOTA, INC.	ILEC	507-964-5XXX	MN	AT&T MO	816-630-9XXX	MO
429F	QWEST CORPORATION	RBOC	406-329-1XXX	MT	AT&T MO	417-862-2XXX	MO
429F	CAROLINA TEL AND TEL CO., LLC DBA CENTURYLINK	ILEC	252-454-4XXX	NC	AT&T MO	417-877-5XXX	MO
429F	NORTH STATE TELEPHONE CO. DBA NORTH STATE COMM	ILEC	336-889-2XXX	NC	AT&T MO	417-864-7XXX	MO
429F	ATLANTIC TELEPHONE MEMBERSHIP CORP.	ILEC	910-575-2XXX	NC	AT&T MO	417-235-3XXX	MO
429F	MISSOURI VALLEY COMMUNICATIONS, INC.	ILEC	701-774-4XXX	ND	AT&T MO	816-218-0XXX	MO
429F	NORTH DAKOTA TELEPHONE CO.	ILEC	701-776-6XXX	ND	AT&T MO	417-862-5XXX	MO
429F	CURTIS TELEPHONE CO.	ILEC	308-367-6XXX	NE	AT&T MO	816-420-1XXX	MO
429F	CITIZENS TELECOM OF NE LLC DBA FRONTIER COM OF NE	ILEC	308-425-8XXX	NE	AT&T MO	816-233-9XXX	MO
429F	VERIZON NEW JERSEY, INC.	RBOC	201-891-1XXX	NJ	AT&T MO	417-781-5XXX	MO
429F	QWEST CORPORATION	RBOC	505-828-1XXX	NM	AT&T MO	417-862-7XXX	MO
429F	CENTRAL TEL. CO. - NV	ILEC	702-614-9XXX	NV	AT&T MO	816-823-7XXX	MO
429F	RURAL TELEPHONE CO.	ILEC	775-969-8XXX	NV	AT&T MO	417-862-4XXX	MO
429F	VERIZON NEW YORK, INC.	RBOC	212-221-1XXX	NY	AT&T MO	660-886-2XXX	MO
429F	CITIZENS TELECOMM CO OF NY DBA FRONTIER COMM OF NY	ILEC	315-376-8XXX	NY	AT&T MO	417-887-5XXX	MO
429F	UNITED TEL. CO. OF OHIO - CENTURYLINK	ILEC	419-337-9XXX	OH	AT&T MO	417-832-0XXX	MO
429F	BELL ONTARIO	ILEC	416-360-6XXX	ON	AT&T MO	660-542-1XXX	MO
429F	WINDSTREAM PENNSYLVANIA, INC.	ILEC	724-845-2XXX	PA	AT&T MO	417-227-9XXX	MO
429F	AMELIA TELEPHONE CORP.	ILEC	804-561-6XXX	VA	AT&T MO	417-725-0XXX	MO
429F	TELEPHONE OP CO OF VERMONT DBA FAIRPOINT COMM-VT	RBOC	802-288-7XXX	VT	AT&T MO	816-358-7XXX	MO
429F	WAITSFIELD - FAYSTON TELEPHONE CO.	ILEC	802-434-5XXX	VT	AT&T MO	660-263-6XXX	MO
429F	UNITED TEL CO WEST - WY DBA CENTURYLINK WEST - WY	ILEC	307-532-7XXX	WY	AT&T MO	816-802-1XXX	MO
429F	RIVERSIDE TELCOM, INC.	ILEC	920-927-3XXX	WI	AT&T MO	417-358-8XXX	MO

Missouri Traffic Analysis Comparison								
Study Description	**Termination**	**Traffic Type**	**Landline vs. Wireless Orig %**	**Traffic Study Date**	**Landline vs. Wireless Orig %**	**Traffic Study Date**	**Landline vs. Wireless Orig %**	**Traffic Study Date**
Non-Altered Study Percents	Total Terminating	Wireless Originated	78%	03/06/11 -- 03/12/11	44%	9/11/11 -- 9/17/11	34%	2/26/12 -- 3/24/12
		Landline Originated	22%		56%		66%	
Bandwidth and Level 3 removed from Landline and moved to the Wireless bucket	Total Terminating	Wireless Originated	80%	03/06/11 -- 03/12/11	51%	9/11/11 -- 9/17/11	39%	2/26/12 -- 3/24/12
		Landline Originated	20%		49%		61%	


Telco
"X"
"T"
"H"
AT&T
"MTA"

Sample Call Records Showing Halo's Improper Sending of Landline-Originated Traffic and Improper Insertion of a Halo Charge Number to Make Toll Calls Appear Local

CARRIER CODE	DIRECTION	DATE	CALLING PARTY NUMBER (CPN)	CALLING PARTY STATE	CHARGE NUMBER (CN)	CHARGE NUMBER STATE	CALLED NUMBER	CALLED STATE
429F	T	11/12/2011	870-438-6XXX	AR	417-719-1901	MO	417-869-9XXX	MO
429F	T	11/12/2011	520-321-7XXX	AZ	417-719-1901	MO	417-869-8XXX	MO
429F	T	11/12/2011	562-693-0XXX	CA	417-719-1901	MO	417-869-9XXX	MO
429F	T	11/12/2011	270-694-4XXX	KY	417-719-1901	MO	417-873-1XXX	MO
429F	T	11/12/2011	973-999-6XXX	NJ	417-719-1901	MO	417-869-4XXX	MO

Halo-Populated Charge Number which is always local to the Called Number. If you look up the Halo-Populated Charge Number in the LERG, it belongs to Halo. Note that the Charge Number is always the same, even though calls originated in different states and from different NPA-NXXs.

True originating Customer Number. All calls in this sample originated from non-Halo carriers as verified in the LERG and LNP database. All of the calls in this sample originated from landline carriers.

CARRIER CODE	DIRECTION	DATE	CALLING NUMBER (CPN)	CALLING STATE	CHARGE NUMBER (CN)	CHARGE NUMBER STATE	CALLED NUMBER	CALLED STATE
XXXX	T	09/25/11	865-253-3XXX	TN	--	--	865-936-0XXX	TN
XXXX	T	09/25/11	865-253-4XXX	TN	--	--	865-428-8XXX	TN
XXXX	T	09/25/11	865-253-3XXX	TN	--	--	865-936-4XXX	TN
XXXX	T	09/25/11	865-253-4XXX	TN	--	--	865-429-1XXX	TN
XXXX	T	09/25/11	865-253-2XXX	TN	--	--	865-292-9XXX	TN

For a Typical Wireless Originated IntraMTA call, the Calling Party Number (CPN) is local to the Called Number

Typical Wireless Call does not contain a Charge Number, but if a Charge Number exists, it is located in the same jurisdiction of the Calling Party Number.

LEGEND

- Carrier Code is the OCN of the carrier sending the traffic and is determined based on the NPA-NXX assignment in the LERG.
- Calling Party Number is the CPN of the originator of the call.
- Charge Number is the CN and indicates which number should be billed for the call.

Note: The last four digits of the Calling Party Number (CPN) and Called Number are withheld for CPNI considerations. The originating party is unaware that its call is being routed through the Transcom/Halo routing scheme. The NPA-NXX digits are sufficient to determine whether a call is landline-originated and the jurisdiction of the call (the CPN was verified against the LNP database to insure the number was not ported to another provider).