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

[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.

[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. <u>DISCONTINUATION OF SERVICE TO HALO</u>

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.