**BEFORE THE TENNESSEE REGULATORY AUTHORITY**
**NASHVILLE, TENNESSEE**

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

# ERRATA TO PRE-FILED REBUTTAL TESTIMONY OF ROBERT JOHNSON

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**Note: Errata only affects pages 16-17, so all preceding pages have been omitted.**

service session are in different formats, then the enhanced service platform has affected a net change of form.

**Q: Your answers rely on a very technical understanding of Transcom's service. Is there another way of describing this, by way of analogy, that would be more accessible to folks less technical than yourself?**

A: Yes. Let's use shipping produce as an analogy for the "end-to-end" model favored by the ILECs. When produce is shipped from the farm to the store, it is boxed up at the farm and shipped to an intermediate facility, where it is likely loaded with other produce from other farms and shipped to another intermediate facility, and so on. The only action taken at the intermediate facility is to open and inspect and repackage the produce. This process is an inherently lossy one, where produce gets bumped and bruised, ripens and sometimes rots, and is occasionally destroyed by bugs or other pestilence (including hungry produce handlers). The goal is to get the produce from farm to store with as little loss as possible.

Now we add Transcom into the process as a new kind of intermediate facility, one that does more than just open the box of produce and inspect it. As an example, Transcom would analyze the produce, looking through the damage done to the produce already, to determine what produce the farm *intended* to ship. Since the produce was already damaged and the analysis damages them further, Transcom throws the original box of produce away and uses the information from the analysis to create an entirely new box of produce that better represents the intention of the farmer than the damaged original box. It would have the same number of items of produce in it, each the same size as before, but it would be entirely new produce without the defects introduced by the shipping process thus far.

Of course it's tough to imagine Transcom creating entirely new items of produce because that's not a tool that science has given us, but science has given us the tools to analyze old digital content and create new digital content based on that analysis, which is exactly what Transcom does to the content it receives on the legs of an enhanced session. Transcom opens and inspects each "box of produce" it receives on the ingress leg of an enhanced session. Transcom then creates an entirely new box with *entirely new produce*. Indeed, the new items of "produce" are improved--they do not have any of the defects that the original produce had when Transcom received it. All content received by Transcom is discarded. Not one bit of the original content received by Transcom is ever delivered to the receiving party. Instead, only the newly created content is delivered.

**Q: How does Transcom connect to Halo?**

A: Transcom leases wireless equipment that can authenticate on and communicate with Halo's base station in an MTA when proximate thereto.

**Q: Do call sessions that Transcom processes for its customers get set up through the wireless equipment in an MTA?**

A: When Transcom needs to originate a call from our system in order to communicate with an edge device that is on the PSTN and Halo has been selected as the exchange carrier vendor for the call, Transcom will originate the call using our wireless equipment in the MTA that contains the rate center with which the desired terminating number is associated.

**Q: So every call that AT&T receives from Halo will have originated from Transcom wireless CPE in the same MTA?**

A: Yes.

**TRANSCOM HAS BEEN ASSIGNED NUMBERS FROM HALO IN EACH LATA**

**Q: Does Transcom receive Halo-assigned numbers?**

A: Yes. Halo has assigned Transcom at least one number per LATA. It serves as the billing telephone number.

**Q: Do calls addressed to a Transcom number in a LATA go to Transcom?**

A: Yes, these are active numbers. If a user on the PSTN in the LATA makes a call to that number it comes to Transcom and is answered.

**Q: What happens today with such calls?**

A: Transcom has an outgoing message indicating that the number is presently an administrative number and is not monitored.

**Q: Does Transcom plan to more actively use this incoming capability in the future?**

A: Yes. Transcom is actively developing new products that will rely on local dial-in capability. The uncertainty and distraction caused by all of the litigation has delayed its roll-out. When Transcom does deploy these services it will require more than one number per LATA.

**Q: You have said several times that Transcom "originates" the call using Halo's service. AT&T has claimed that it is really a "re-origination." Do you agree?**

A: This is semantics in my opinion. Transcom is an end user. End users use customer premises equipment ("CPE"). End users originate calls using CPE. Calls terminate to end user premises using CPE. End user CPE can also perform routing functions associated with origination or termination. *See* § 153(14)[15] End user CPE is an end-point. The equipment that Transcom leases to connect to Halo are registered Part 90 stations designed for end user

[15] (14) CUSTOMER PREMISES EQUIPMENT.--The term "customer premises equipment" means equipment employed on the premises of a person (other than a carrier) to originate, route, or terminate telecommunications.

operation while connected to a Halo-operated base station. This is CPE, in contrast to "telecommunications equipment"[16] which is what carriers use.

AT&T says that there can be only one "origination" and it is determined on using the "end to end" concept. They seem to be implying that if an entity is "in the middle" it must be a carrier and cannot be an end user. I will allow counsel to debate this from a legal perspective, but in my experience that is simply not the case from an operational and functional viewpoint. ESPs have always been in "the middle" if a communication is viewed "end to end" and there are multiple legs. Yet ESPs have always been treated as end users, and have always been allowed to purchase telephone exchange service instead of exchange access service. ESPs have always been considered an end-point, for both origination and termination.

**Q: Do you know how some of the first ESPs secured local connections?**

A: They purchased local business lines that they used to originate calls or receive calls.

**Q: Did the first ESPs use local business lines to originate an additional leg of a communication that started somewhere else?**

A: Of course. That is why the FCC consistently compared ESP use to that of a "leaky PBX."

**Q: Do you have a concrete example?**

A: Long before there was a "public Internet" there were companies the FCC referred to as "Value Added Networks" ("VANs) that were the precursors to what we now call "Enhanced Service Providers." They operated packet networks, although they did not use IP. As part of the *Computer Inquiry* series of decisions[17] the FCC determined that they were not to be treated as

[16] (45) TELECOMMUNICATIONS EQUIPMENT.--The term "telecommunications equipment" means equipment, other than customer premises equipment, used by a carrier to provide telecommunications services, and includes software integral to such equipment (including upgrades).

[17] Counsel advises that the case that started it all was Notice of Inquiry, *In re Regulatory & Policy Problems Presented by the Interdependence of Computer and Communication Services & Facilities*, 7 FCC 2d 11 (1966). There have been too many decisions since them to list here. Some seminal ones, however, are *In re Amendment of*

common carriers. They were allowed to obtain basic business service – usually in the form of a PBX trunk arrangement – as the means by which they would collect calls from the PSTN and originate calls to the PSTN. It was well known at the time that quite often a call would originate on the PSTN and go to a local PBX trunk and the information would be converted to packets. The VAN would then transmit the packetized information across its network to a large mainframe computer. Sometimes the user would want to be able to reach another device in a distant location that was reachable only through the PSTN, and the VAN's platform would support that capability by seizing an outdial in the distant location and dialing another local number. Thus, the VAN would be originating (or re-originating) a second call, just like Transcom does today. The second call on the distant outdial was always considered an "origination" even though the two legs were then joined to make an "end to end" communication and the VAN was "in the middle."

**Q: What was one of the uses for this "in the middle" "re-origination" capability?**

A: A company called Telenet had an offering called "PC Pursuit." Again, this was before the public Internet. Users with home computers of the time would have a modem with a local line and dial in to Telenet's ingress portion of the platform using a local number. Telenet would then allow the user to go to any of the "bulletin board" systems that were "local" to where Telenet had an egress location. The distant bulletin board would be a computer that also had a modem. The user would connect through Telenet's platform and communicate with the distant bulletin board by having Telenet signal the telephone number associated with the local service arrangement that supported the bulletin board.

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*Section 64.702 of the Commission's Rules and Regulations (Second Computer Inquiry)*, Docket No. 20828 77 F.C.C.2d 384 (rel. May 1980); *Computer and Communications Industry Association v. Federal Communications Commission*, 693 F.2d 198 (D.C. Cir. 1982); Report and Order, *Amendment of Sections 64.702 of the Comm'n's Rules and Regs*., 104 F.C.C.2d 958 (1986) ("*Computer III Report and Order*").

**Q: So Telenet's "PC Pursuit" offering would allow a user with CPE (the modem) communicate with another user in a distant city that also had CPE (the modem)?**

A: Yes.

**Q: The PC Pursuit offering used local business lines at the ingress and egress locations to receive local calls and originate local calls?**

A: Yes.

**Q: The PC Pursuit ingress location was considered to be the terminating location for the call from the modem user?**

A: Yes.

**Q: The PC Pursuit egress location was considered to be originating a call to the bulletin board?**

A: Yes.

**Q: But this was "one call" wasn't it?**

A: There was ultimately an "end to end" communication, with Telenet sitting in the middle between two users. But it did so while acting as a communications intensive business end user customer that was receiving calls, originating calls and joining various legs – just like Transcom does today. These were treated as two separate calls even though the legs were connected and information went from "end to end."

Despite all of the noise made by the ILECs this is the classic ESP leaky PBX method that has been used for years, and is still being used – by Transcom and others. The ILECs did not like it then and they do not like it now. They have been complaining about "access avoidance" for this very arrangement ever since access charges were first developed in the 1980s and the FCC

1 decided to preserve ESPs' status as end users by formalizing the arrangement into what is now

2 known as the "ESP Exemption."[18, 19 20]

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[18] Counsel points to the *MTS/WATS Market Structure* decisions insofar as they decided to maintain ESPs as end users and thus not subject to switched access, ultimately promulgating what is now 47 C.F.R. § 69.2(m) and 69.5(a) and (b). For a demonstration that the FCC compared ESP use of local connections to a "leaky PBX" that originates calls even though the communication may have actually started somewhere else on the PSTN see the following passage from one of the *Access Charge Reform* Orders:

> 341. In the 1983 *Access Charge Reconsideration Order*, the Commission decided that, although information service providers[n498] ***(ISPs) may use incumbent LEC facilities to originate and terminate*** *interstate calls*, ISPs should not be required to pay interstate access charges.[n499] In recent years, usage of interstate information services, and in particular the Internet and other interactive computer networks, has increased significantly. …
>
> n498 The term "enhanced services," which includes access to the Internet and other interactive computer networks, as well as telemessaging, alarm monitoring, and other services, appears to be quite similar to the term "information services" in the 1996 Act.… For purposes of this order, providers of enhanced services and providers of information services are referred to as ISPs.
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> n499 *MTS and WATS Market Structure*, Memorandum Opinion and Order, Docket No. 78-72, 97 FCC 2d 682, 711-22 (Access Charge Reconsideration Order). See also *Amendments of Part 69 of the Commission's Rules Relating to Enhanced Service Providers*, CC Docket No. 87-215, Order, 3 FCC Rcd 2631 (1988) (*ESP Exemption Order*).

First Report and Order, *In the Matter of Access Charge Reform; Price Cap Performance Review for Local Exchange Carriers; Transport Rate Structure and Pricing End User Common Line Charges*, CC Docket No. 96-262; CC Docket No. 94-1; CC Docket No. 91-213; CC Docket No. 95-72, FCC 97-158, ¶ 341 and notes 498 and 499, 12 FCC Rcd 15982 (rel. May 1997) (emphasis added).

[19] Counsel also suggests that the TRA review the *Computer Inquiry* decisions insofar as they ultimately come up with the term "enhanced service" that was excluded from common carrier treatment and led to the promulgation of what is now 47 C.F.R. § 64.702(a). *See* in particular *In re Amendment of Section 64.702 of the Commission's Rules and Regulations (Second Computer Inquiry)*, Docket No. 20828, 77 F.C.C.2d 384, ¶¶ 121 - 123 (rel. May 1980) (emphasis added):

> 121. Because enhanced service was not explicitly contemplated in the Communications Act of 1934, there is no more a requirement to confront it with a specific traditional regulatory mechanism than there was, for example, in the case of cable television, which has formal elements of common carriage and broadcast television, or of specialized mobile radio services, which bears many formal similarities to radio common carriage. Precedent teaches that the Act is not so intractable as to require us to routinely bring new services within the provision of our Title II and III jurisdiction even though they may involve a component that is within our subject matter jurisdiction. In fact, in *GTE Service Corp. v. FCC*, 474 F.2d 724 (2nd Cir. 1973), the court substantially affirmed a Commission decision the underlying premise of which was that **not all services involving the electronic transmission of information are communications services subject to regulation under Title II of the act.**
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> 122. Precedent teaches us, also, that **all those who provide some form of transmission services are not necessarily common carriers.** See, e.g., *AT&T v. FCC*, 572 F.2d 1725 (2d Cir. 1978) (sharing of communications services and facilities not common carriage and not subject to Title II); *National Association of Regulatory Utility Commissioners v. FCC*, 525 F.2d 630 (D.C. Cir. 1976) ("NARUC I") (SMRS); *American Civil Liberties Union v. FCC*, 523 F.2d 1344 (9th Cir. 1976) (CATV); *Philadelphia Television Broadcasting Co. v. FCC*, 359 F.2d 282 (D.C. Cir. 1966). (FCC not required to treat cable television systems as common carriers nor to employ Title II regulatory tools.) Although the term itself is difficult to define with any precision, a distinguishing

**Q: Please provide the source of your assertions relating to Telenet**

A: http://en.wikipedia.org/wiki/Telenet

http://massis.lcs.mit.edu/archives/public.access/pc.pursuit

http://hackarchives.org/archives/website-hacking/telnet/299-telnet-access-numbers

http://hackarchives.org/archives/website-hacking/telnet/317-telnet-pc-pursuit-outdials

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> characteristic is the quasi public undertaking to "carry for all people indifferently." *NARUC I*, 525 F.2d at 641; *National Association of Regulatory Utility Commissioners v. FCC*, 533 F.2d 601, 608 (1976) ("NARUC II") citing *Seamon v. Royal Indemity Co.*, 279 F.2d 737, 739 (5th Cir. 1960) and cases cited therein. While one may be a common carrier even though the nature of the service offered is of use to only a segment of the population, *NARUC I*, 525 F.2d at 641, ". . . a carrier will not be a common carrier where its practice is to make individualized decisions, in particular cases, whether and on what terms to deal." *Id.* At the same time, we recognize certain inadequacies of any definition of common carriage which is dependent entirely on the intentions of a service provider. Instead, as the Court's opinion in *NARUC I* acknowledges, **an element which must also be considered is any agency determination to impose a legal compulsion to serve indifferently.** *NARUC I*, 525 F.2d at 642. **We have specifically imposed no such obligation with respect to enhanced service providers.**
>
> 123. **Even this definition of common carriage cannot be readily applied to vendors of enhanced services.** Inherent in the offering of enhanced services is the ability of service providers to custom tailor their offerings to the particularized needs of their individual customers. Thus, such services can vary from customer to customer as "individualized decisions" are made as to how best to accommodate the processing needs of their various subscribers. **Admittedly, vendors of enhanced services also have the ability, if they so desire, to provide these services on an indiscriminate basis. Presumably, some do. But "this is not a sufficient basis for imposing the burdens that go with common carrier status."** *NARUC I* at 644. We cannot conclude that under the common law providers of these services are common carriers or that Congress intended that these services be regulated under our Title II of the Act. **Indeed, to subject enhanced services to a common carrier scheme of regulation because of the presence of an indiscriminate offering to the public would negate the dynamics of computer technology in this area.** It would substantially affect not only the manner in which enhanced services are offered but also the ability of a vendor to more fully tailor the service to a given consumer's information processing needs.

[20] The FCC observed in the first decision that created what is now known as the "ESP Exemption" that ESP use of the PSTN resembles that of the "leaky PBXs" that existed then and continue to exist today, albeit using much different technology. Leaky PBXs originate calls that terminate on the PSTN. *See*, Memorandum Opinion and Order, *MTS and WATS Market Structure*, Docket No. 78-72, FCC 83-356, ¶¶ 78, 83, 97 FCC 2d 682, 711-22 (rel. Aug. 22, 1983) [discussing "leaky PBX" and ESP resemblance]; Second Supplemental NOI and PRM, *In the Matter of MTS and WATS Market Structure*, FCC 80-198, CC Docket No. 78-72, ¶ 63, 77 F.C.C.2d 224; 1980 FCC LEXIS 181 (rel. Apr. 1980) [discussing "leaky PBX"]. *See, also generally*, Notice of Proposed Rulemaking, Third Report and Order, and Notice of Inquiry, *In the Matter of Access Charge Reform; Price Cap Performance Review for Local Exchange Carriers; Transport Rate Structure and Pricing Usage of the Public Switched Network by Information Service and Internet Access Providers*, CC Docket Nos. 96-262, 96-263, 94-1, 91-213, FCC 96-488, 11 FCC Rcd 21354, 21478, ¶ 284, n. 378 (rel. Dec. 24, 1996); Order, Amendments *of Part 69 of the Commission's Rules Relating to Enhanced Service Providers*, CC Docket No. 87-215, FCC 88-151, 3 FCC Rcd 2631, 2632-2633. ¶13 (rel. April 27 1988); Memorandum Opinion and Order, *MTS and WATS Market Structure*, Docket No. 78-72, FCC 83-356, ¶¶ 78, 83, 97 FCC 2d 682, 711-22 (rel. Aug. 22, 1983).

**Q: So in your opinion have Transcom and Halo concocted some new "access avoidance scheme"?**

A: Of course not. What is really going on is that the ILECs are trying to pump up their access revenues by forcing access-exempt entities to pay access that is not due.

Enhanced services were defined long before there was a public Internet. ESPs do far more than just hook up "modems" and receive calls. They provide a wide set of services and many of them involve calls to the PSTN, from the PSTN and calls that have PSTN legs on each side. The FCC expressly recognized the bidirectional nature of ESP traffic, when it observed that ESPs "may use incumbent LEC facilities to originate and terminate interstate calls." ESPs have used the leaky PBX model for their local connections for a very long time – without payment of access charges – but the ILEC's persist in spreading myths and mischaracterizations. They have always tried to limit the ESP Exemption and, frankly, have never liked ESPs at all. They most certainly did not consider them valuable customers.

When local competition began in the 1990s the ESPs quickly found a more friendly set of vendors. The CLECs welcomed ESPs as customers. The ILECs proceeded to turn on the CLECs and began to label them as "arbitrageurs" and "cream-skimmers." The TRA will likely recall the painful and extended wars over dial-up ISP-bound traffic, which the ILECs particularly attacked because of the reciprocal compensation effects. It might be useful to compare and contrast this matter to the ISP wars, when the traffic was going the other way. Back then the ILECs did not want to pay *any* compensation to CLECs for ISP-bound traffic. They argued for bill and keep. Now, however, the ILECs are not even content to be paid reciprocal compensation and want to receive access for what is essentially the same call using the same leaky PBX, just in the

opposite direction. They will never voluntarily pay anything, but insist on always receiving access. That does not seem too fair.

I am not a lawyer, but I do know that from an operational and technical perspective ESPs have always secured local connections just like all other end users, they used these local connections to both originate (indeed, re-originate) and receive calls and neither they nor their exchange carrier vendor had to pay other exchange carriers any form of access.

Transcom is no different from all the ESPs that went before: it can buy telephone exchange service and its traffic is access-exempt.

**Q: Does this conclude your testimony?**

A: Yes. I reserve the right to make corrections of any errors we may discover by submitting an *errata*.