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January 10, 2001

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Division of Records and Reporting
Florida Public Service Commission
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HAND DELIVERY

Re: Docket No. 000075-TP

Dear Ms. Bayo:

Enclosed herewith for filing in the above-referenced docket on behalf of A&T Communications of the Southern Inc., TCG of South Florida, Global NAPS, Inc., MediaOne Florida Telecommunications, Inc., Time Warner Telecom of Florida, LP, Allegiance Telecom of Florida, Inc., Florida Cable Telecommunications Association, Inc., and the Florida Competitive Carriers Association are the following documents:

1. Original and fifteen copies of the Prefiled Rebuttal Testimony of Lee L. Selwyn.

Please acknowledge receipt of these documents by stamping the extra copy of this letter "filed" and returning the copy to me.

Thank you for your assistance with this filing.

Sincerely,

Kenneth A. Hoffman

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cc: All Parties of Record

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By: _____
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BEFORE THE FLORIDA
PUBLIC SERVICE COMMISSION

Re: Investigation into appropriate methods to compensate carriers for exchange of traffic subject to Section 251 of the Telecommunications Act of 1996	**Docket No. 000075-TP**

Rebuttal Testimony

of

LEE L. SELWYN

on behalf of

AT&T Communications of the Southern States, Inc.
TCG of South Florida
Global NAPs, Inc.
MediaOne Florida Telecommunications, Inc.
Time Warner Telecom of Florida, LP
Allegiance Telecom of Florida, Inc.
Florida Cable Telecommunications Association, Inc.
and the
Florida Competitive Carriers Association

January 10, 2001

TABLE OF CONTENTS

REBUTTAL TESTIMONY

Introduction

Q. Please state your name, position and business address.

A. My name is Lee L. Selwyn. I am President of Economics and Technology, Inc., One Washington Mall, Boston, Massachusetts 02108.

Q. Are you the same Lee L. Selwyn who submitted Direct Testimony in this proceeding on December 1, 2000?

A. Yes, I am.

Q. What is the purpose of your Rebuttal Testimony at this time?

A. This testimony responds to certain arguments and evidence supplied in the Direct Testimony presented by BellSouth witnesses Beth Shiroishi and David P. Scollard, Verizon witnesses Dr. Edward C. Beauvais and Howard Lee Jones, Sprint witness Michael R. Hunsucker, and Staff witness Gregory D.

Fogleman. For convenience, I have organized my Rebuttal Testimony according to the various issues designated for consideration in this case[1]

Summary of testimony

Q. Please summarize your testimony.

A. The majority of the parties in this proceeding support a policy in which cost-based reciprocal compensation payments would continue to be applied to ISP-bound traffic exchanged between LECs. Many of the arguments raised by the two ILECs that oppose such a policy, BellSouth and Verizon, have already been anticipated and addressed in my Direct Testimony. For example, BellSouth and Verizon propose that "bill-and-keep" should be adopted on an interim basis, but my Direct Testimony (page 6) already explained that bill-and-keep arrangements are not appropriate or equitable whenever traffic flows between LECs are significantly out of balance. Similarly, BellSouth contends that it is feasible to segregate ISP-bound traffic from other forms of locally-rated traffic for inter-carrier compensation purposes. However, I have already explained why such segregation is

1. I am not responding to the testimony addressing Issue 1 (Commission jurisdiction to adopt an intercarrier compensation mechanism for delivery of ISP-bound traffic), because this is essentially a legal issue.

generally impractical (Direct Testimony, pages 46-51), and I demonstrate herein that BellSouth's specific segregation methods are equally unsatisfactory. A third example is that BellSouth attempts to apply the long-distance service "access charge" model to the treatment of inter-carrier compensation for ISP-bound traffic, which is another proposition that I have already addressed in my Direct Testimony (pages 18-28). In summary, it is clear that the testimony of the other parties reinforces the conclusions and policy recommendations set forth in my Direct Testimony.

Issue 2. Is delivery of ISP-bound traffic subject to compensation under Section 251 of the Telecommunications Act of 1996?

Ms. Shiroishi's analysis of the FCC's treatment of ISP-bound traffic is fundamentally moot, because the FCC's longstanding policy of exempting ISPs and other enhanced services providers from the access charge regime means that the only available alternative, the "sent paid" regime (including reciprocal compensation), must continue to be applied to ISPs.

Q. Ms. Shiroishi contends, on the basis of her examination of various FCC decisions, that the FCC has classified ISP-bound traffic as jurisdictionally-interstate "exchange access service" and on that basis contends that the

reciprocal compensation obligations set forth in the *Telecommunications Act of 1996* cannot apply to this traffic.[2] How do you respond to these assertions?

A. Whether or not one agrees with Ms. Shiroishi's interpretation of the FCC decisions cited in her testimony (and I largely do not), Ms. Shiroishi has utterly missed the key point, which is that it is the FCC's *pricing* policy that is determinative here, not the FCC's jurisdictional findings. Essentially, Ms. Shiroishi seeks to apply the IXC switched access charge regime to ISP-bound traffic, even though the FCC has expressly *exempted* ESP/ISP calls from access charge treatment, on a theory that the IXC traffic is "analogous" to ISP traffic (Shiroishi Direct, at 9-10). As a policy matter, of course, the FCC continues to uphold its longstanding policy of *exempting* ISPs and other enhanced services providers from access charges, and requiring LECs to offer ISPs service via their local exchange tariffs, like any other end user.[3] Ms. Shiroishi herself acknowledges that this is the case (Shiroishi Direct, at 14).

What she fails to admit is that this settled pricing policy makes her conclusions concerning "exchange access" fundamentally beside the point: By

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2. See, e.g., Shiroishi Direct, pages 2-14 (especially pages 4-5, 7-8, and 12).

3. See my Direct Testimony at page 21 for citations to the FCC orders that have carried out the ESP exemption.

establishing the enhanced services provider (ESP) exemption from access charges, the FCC has chosen the sent-paid, local exchange service model for locally-rated ISP-bound calls. As a consequence, from a policy standpoint,[4] state regulators, including this Commission, the only rational result is to adhere to that same model. That is, in practical and economic terms, it just doesn't make any sense to deviate from that model and require ISPs to pay access charges in any form for dial-up calls in-bound to ISPs. And because the sent-paid model requires that the originating carrier must pay the terminating carrier compensation for the latter's work in terminating the sent-paid call (as I explained at page 13 of my direct testimony), reciprocal compensation arrangements must continue to be applied to all locally-rated ISP-bound calls that are terminated by ALECs.

The issue is not, from this perspective, the legal (one might say metaphysical) one of how end users are charged for making these calls, and how ISPs are charged for receiving them. Under this practical criterion — and consistent with the FCC rulings mandating that ISPs be treated like end users in purchasing their connections to the network — ISP-bound calls are "local,"

4. I am not an attorney and thus am not offering a legal opinion.

which compels the result that they should be treated that way for purposes of intercarrier compensation.

Q. Does Verizon's witness Dr. Beauvais overlook this implication of the ESP exemption as well?

A. Yes, he appears to. Like Ms. Shiroishi, Dr. Beauvais takes note of the ESP exemption (Beauvais Direct, at 7), but perceives it only in terms of supporting his interpretation that ISP-bound traffic is interstate and thus not subject to reciprocal compensation obligations (*id.*). Accordingly, his conclusion must be rejected for the same reason that Ms. Shiroishi's position must also be rejected.

Contrary to Ms. Shiroishi's claim, as an empirical matter, most ISP-bound traffic is jurisdictionally local in nature rather than interstate.

Q. Ms. Shiroishi also claims that ISP-bound traffic "is predominantly interstate in nature" (page 2, lines 17-18). Does she or any other witness in this proceeding offer any empirical evidence concerning the actual mechanics of an ISP-bound call that would support that contention?

A. No. In fact, a careful examination of how the Internet works and how access to the Internet is furnished by ISPs to their end user customers, as an empirical matter, leads to the conclusion that the majority of ISP-bound traffic is jurisdictionally local in nature, not interstate.

Q. Please explain.

A. First, the flow of data between the end user and the remote host across the ISP is anything but continuous. Consider the following examples:

- A user dials up his or her ISP and establishes a connection by transmitting user identification information that is then validated by the ISP. Depending upon the ISP, that validation exchange may utilize a user data base that is maintained locally (at the same physical location at which the ISP's modems are located) or remotely. If the latter, the ISP assembles and transmits a packet of data containing the user identification data to a remotely-located host, which responds by transmitting either an acceptance or a rejection message back to the ISP. If the validation is confirmed, a "home page" is transmitted over the Internet to the ISP and then on to the end user. Once that transmission is completed, however, and until some other transmission takes place, *there*

is no data flowing across the ISP between the end user and the Internet; i.e., the connection terminates at the ISP. This condition persists while the user is reading the home page content and until he/she clicks on a link to access another page. The request (initiated by a mouse click or by typing an Internet address (a "URL") into an Internet browser) is then transmitted by the ISP up to a remote host via the Internet, which (presumably) will respond by downloading another page of text or graphics to the user. *The only time that an actual connection between the end user and the remote host computer is in existence is when data is actually being uploaded or downloaded and a continuous flow of data signals is taking place; at all other times, the end user's "call" terminates in all relevant senses at the ISP's modem bank.* During that time, as long as the ISP's local service from the ALEC is obtained in a manner that makes calls from the end user to the ISP's location "local," the call is jurisdictionally local in nature.

- Even in those situations in which actual transmission of data is occurring, if the remote host is itself physically located in the same exchange or LATA, or EAS exchange, as the end user, then the call is also jurisdictionally local. Thus, if an Internet user in Miami clicks on the Miami Herald's web site (whose host server is also located in Miami),

both the call origination and termination are within the same exchange or LATA, and the call satisfies the definition of "local."

- The end user places a PSTN call to his or her ISP and then enters a "chat room" to converse with others who live in the same town (e.g., schoolmates). Irrespective of where the physical switching function takes place, this type of call is inherently "local" in nature, because both the origination and termination locations are within the same exchange or LATA.

In each of these examples, the point of origination and the point of termination of the call (defined as the end user and the location on "the Internet" being contacted) are both wholly within the same exchange or LATA; indeed, the only situation in which a "cross-LATA" (i.e., "non-local" call), is in place is where data is actually flowing across the ISP *and* where the remote host is *not* located within the same exchange or LATA as the end user. Even then, not all such calls are "non-local." To avoid tying up long-haul circuit bandwidth, ISPs utilize a technique known as "caching" in which the page of data that is downloaded from a remote host web site is stored locally at the ISP; for many popular web sites where repetitive accesses are made, the ISP can often provide the contents to its subscribers right out of its

own local storage device rather than repetitively downloading it from the remote host each time it is requested. In that case, a user's request for a particular page of data is not transmitted upstream (and out of state), but is actually fulfilled locally using "cached" copies of the requested material. Whenever caching is being employed in this manner, the dial-up call to the ISP will be jurisdictionally local.

Q. Has the FCC recognized "caching" and its possible implications for determining the jurisdictional character of Internet use?

A. Indeed, it has. At para. 18 of its *Declaratory Ruling in CC Docket No. 96-98 and Notice of Proposed Rulemaking in CC Docket No. 99-68* (FCC 99-38, Adopted February 25, 1999, Released February 26, 1999), the FCC concluded that:

> ... Further complicating the matter of identifying the geographical destinations of Internet traffic is that the contents of popular websites increasingly are being stored in multiple servers throughout the Internet, based on "caching" or website "mirroring" techniques. After reviewing the record, we conclude that, although some Internet traffic is intrastate, a substantial portion of Internet traffic involves accessing interstate or foreign websites.

Footnotes omitted. I would note that, while the Commission concluded that a "substantial" portion of Internet traffic is interstate, it did not quantify any specific percentage.

Q. What fraction of total end user-ISP connection time actually involves a direct flow-through of data between the end user and the remote host?

A. Mr. Fred Goldstein, an ISP consultant and expert witness with particular expertise in this area, previously has testified to this Commission that on average less than 10% of the total connection time that an average end user has with the local ISP actually involves direct flow-through of data between the end user and a remote host.[5] Thus, for 90% or more of the time of an average Internet session, the *only* communication taking place terminates at the ISP's modem bank and is thus local in nature.

Issue 3. What actions should the Commission take, if any, with respect to establishing an appropriate compensation mechanism for ISP-bound traffic in light of current decisions and activities of the courts and the FCC?

This issue is addressed in conjunction with Issues 2, 4, and 6 *infra.*

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5. See Docket No. 991267-TP, Rebuttal Testimony of Fred Goldstein, December 20, 1999, pages 18-19.

Issue 4. What policy considerations should inform the Commission's decision in this docket?

Ms. Shiroishi's understanding of the cost-causation applicable to ISP-bound calls is flawed and does not support the cessation of reciprocal compensation payments for ALEC termination of ISP-bound traffic.

Q. Do you agree with the analysis of cost-causation that Ms. Shiroishi supplies at page 17 of her Direct Testimony, to support her view that an ALEC should not be compensated for ISP-bound traffic "originated by an ILEC's local service customer"?

A. No, and in fact the very phrasing used in Ms. Shiroishi's testimony ("originated by an ILEC's local service customer" -- lines 7-8) undercuts her analysis. Ms. Shiroishi appears to believe that, because "an end user accessing the Internet is a customer of the ISP for that service" (lines 12-13), despite the fact that the end user is also the ILEC's local service customer, the ISP is somehow responsible for the costs incurred by the originating ILEC as the end user makes use of the ILEC-supplied local service. She then draws an analogy to interexchange service, concluding that "the end user is no more the ILEC's customer on Internet calls than it is the ILEC's customer for interLATA long distance calls" (lines 17-18).

Ms. Shiroishi can only arrive at this conclusion with the help of a myopic and

ultimately erroneous view of the customer relationships extant between a person placing a telephone call, their serving LEC, and the called party (i.e., an ISP, other business, a friend, etc.). In summary, Ms. Shiroishi believes that the caller *is* the originating LEC's customer when the caller places a local call to a friend or to a non-ISP business (irrespective of whether another LEC is involved), but that the same caller is *not* the customer of the originating LEC when the call is a long distance call or a call to an ISP. At root, Ms. Shiroishi errs by assuming that an end user cannot be a customer of more than one entity at a time, and that it is somehow necessary to have a *single* party acting on behalf of the cost-causer, who must handle all billing and compensation arrangements for all of the services utilized by an end user. While Ms. Shiroishi may be misled by the fact that, as an empirical matter, interexchange services are treated in the latter manner in the US,[6] the underlying economics of cost-causation do not have any necessary relationship to the billing and compensation arrangements that are established in such cases.

6. It is worth noting that in some European countries, end users who make a toll call pay local measured usage charges to their local service provider (the originating LEC) in addition to the toll charges paid to the toll services provider, which belies the notion that a single point of contact to the retail customer must apply in that situation.

Q. Can you elaborate on this point?

A. Yes. The basic question at issue here is whose "customer" the end user is under various scenarios (e.g., when someone uses a telephone to call a friend, a non-ISP business, an ISP, or to make a long distance call).

One way of looking at the question of who is whose 'customer' is to look simply at who pays who for what. From this perspective, when an end user makes a long distance call, the end user is the 'customer' of the IXC (to whom it pays all per-minute charges associated with the call). Also from this perspective, although the end user actually makes use of the originating LEC's switching and transmission facilities (and the switching and transmission facilities of the terminating LEC as well), the end user is neither the originating nor terminating LEC's customer for purposes of this call. On this level (trivial from an economic perspective), who is whose 'customer' is simply a matter of regulatory fiat. In this regard, while I am not a lawyer, I note that Section 201(a) of the Federal *Communications Act* expressly states that the FCC generally can decide who pays whom in cases where multiple carriers collaborate to provide an interstate service -- referred to in the statute as a 'through route.' This illustrates why this 'who pays who' perspective is not helpful in sorting out the economics of the situation.

Q. If an analysis of billing arrangements is not helpful, can one analyze customer relationships from an economic standpoint?

A. Yes. From an economic perspective, what matters in assessing who is the ultimate "customer" in a multi-party transaction are familiar principles of cost causation. An end user making a call causes the costs associated with that call and, ultimately (except in situations where a subsidy has purposely been built into the system) should pay those costs. As a result, from an economic perspective, the end user making a call that involves multiple carriers is the customer of *all of the carriers involved in getting the call to its intended destination*. Now, for various practical or other reasons, the customer may not write separate checks to each of the entities involved. To the contrary, the more common practice is for the customer to pay only one of the carriers, who then becomes responsible, directly or indirectly, for passing money on to the other carriers who are jointly involved in carrying the call to its ultimate destination.

Consider the following (non-telecommunications) examples. I buy an airline ticket originating on a Delta Airlines flight from Boston to Orlando connecting to an American Airlines flight from Orlando to Miami. Delta, as the originating carrier, will normally issue the ticket covering the entire trip,

and I will pay Delta the entire fare. However, even though I will be using a Delta-issued ticket on the Orlando-Miami flight, at that point I am unambiguously a customer of American Airlines, and not Delta.

Or consider an example that is perhaps closer to the ISP situation. I use my local BellSouth telephone service to order a pizza. In that instance, I am unambiguously BellSouth's customer with respect to the telephone call, and the pizza place's customer with respect to the pizza. Similarly, when I use my BellSouth phone to call an ISP, I am BellSouth's customer with respect to the local call and the ISP's customer with respect to the Internet service that I purchase from the ISP.

Thus, in economic terms, in all of the cases cited above (calls to a friend, a non-ISP business, an ISP, or a long distance call), the end user is the customer of all the entities involved, since the end user is originating a call that involves all of their services. Economic efficiency is in no way impaired by having two separate parties acting on behalf of the same cost-causer, which is precisely the case when an ILEC local telephone customer places a dial-up call to an ISP which is terminated by an ALEC. All this means is that such a person is using two services from two different entities simultaneously. As long as the cost-causer compensates those two entities

for the services that they render – which is precisely what occurs today given existing compensation arrangements between each Florida ILEC and its telephone subscribers, and ISPs and their subscribers – there would be no improvement in economic efficiency by merging those two transactions together.[7]

Issue 5. Is the Commission required to set a cost-based mechanism for delivery of ISP-bound traffic?

Q. Do you agree with Ms. Shiroishi's claim (page 18, lines 20-21) that "the FCC has established no parameters or requirements for a compensation mechanism for the delivery of ISP-bound traffic"?

A. No. As I explained earlier in my testimony, by firmly establishing the policy that enhanced services providers are exempt from access charges, the FCC has chosen the sent-paid, local exchange service model for locally-rated ISP-bound calls. As a policy matter, this forecloses any inter-carrier compensation alternatives for this traffic that would not have the effect of

7. One might think that transaction costs would be reduced if there was a single point of contact with the end user which handled billing the end user, but any such cost savings would be offset by the cost of the inter-carrier compensation which would then have to occur and would otherwise not be required if the two entities billed the end user separately.

ensuring that the originating carrier compensates the terminating carrier for its work in completing the ISP-bound call. Also, while I am not a lawyer, I would note nonetheless that the FCC order in which it was stated that there were "no rules" governing inter-carrier compensation for ISP-bound calls — which seems to be what Ms. Shiroishi is referring to — is the same order that was later vacated by the D.C. Circuit.

Issue 6: What factors should the Commission consider in setting the compensation mechanisms for delivery of ISP-bound traffic?

The proposals of BellSouth and Verizon to replace reciprocal compensation for ISP-bound calls with a "bill-and-keep" arrangement are fundamentally incompatible with the sent-paid arrangements used for locally-rated calls.

Q. What compensation mechanisms for ISP-bound traffic have the ILECs participating in this proceeding recommended that the Commission adopt?

A. The ILECs take a variety of positions on this issue. Sprint recommends that cost-based reciprocal compensation rates should be applied to ISP-bound calls, just as they would be applied to any other type of local traffic.[8] In contrast, BellSouth contends that "bill-and-keep" arrangements should be

8. Hunsucker (Sprint) Direct, pages 10-12.

applied to ISP-bound traffic on an interim basis.[9] "Bill-and-keep" means that interconnecting carriers would hand-off their ISP-bound traffic for termination without the payment of any explicit compensation from the originating carrier. Verizon would have the Commission apply bill-and-keep on an interim basis to *all* "local" traffic, including ordinary voice local calls as well as ISP-bound calls.[10]

Q. Would it be reasonable to establish a bill-and-keep system for ISP-bound traffic?

A. No, certainly not. Those proposals entirely ignore the fact that all local calls made via an ILEC's local exchange service, including locally-rated ISP-bound calls, are undertaken on a sent-paid basis, in which the originating telephone subscriber has paid to have the call delivered on an end-to-end basis. As I explained in my Direct Testimony (page 6), in the context of the sent-paid framework, a bill-and-keep system is only appropriate when inter-carrier traffic flows are roughly in balance, so that explicit payments for call termination would generally net out. When inter-carrier traffic flows are

9. Shiroishi (BellSouth) Direct, page 19.

10. Beauvais (Verizon) Direct, page 11.

significantly out of balance, explicit reciprocal compensation payments must be made for call termination, so as to ensure that each carrier is properly compensated for the termination work that it performs. To the extent that the ISP-bound traffic exchanged between two carriers is strongly one-directional, a bill-and-keep system would, to the same degree, fail to compensate the carrier that terminated the bulk of the exchanged traffic.

Q. Does Staff recognize that bill-and-keep fails to be equitable when traffic is not roughly balanced?

A. Yes. Staff's witness Mr. Fogleman acknowledges that under such circumstances the application of a bill-and-keep regime would mean that "carriers that have to terminate more traffic would be forced to pass these costs on to their own customers, even though their customers did not directly cause these costs to be incurred" (Fogleman Direct, page 14, lines 14-17).

Q. Is there an additional reason that the Commission should not adopt a bill-and-keep regime for ISP-bound traffic exchanged between carriers?

A. Yes. In order to adopt bill-and-keep, or any other mechanism intended to apply solely and exclusively to ISP-bound traffic, the Commission would

have to implement procedures that it was confident could accurately identify all ISP-bound calls and distinguish them from all other types of locally-rated calls. As I shall explain later in my testimony (relative to Issue 8), the ISP traffic identification methods advanced by some of the ILECs fall far short of this requirement, and there is no practical method available at this time to support any sort of differential treatment of ISP-bound calls for reciprocal compensation purposes.

Mr. Jones mis-attributes certain cost characteristics to ISP-bound traffic that in fact apply to the wider category of high-volume inbound traffic, and thus is in error when he concludes that cost studies for inter-carrier compensation purposes should consider a distinct network design for ISP-bound traffic.

Q. Verizon witness Mr. Jones argues (page 6, lines 20-22) that "since the network design for ISP bound traffic is different than for standard voice traffic, an inter-company cost study should recognize this difference." Do you agree?

A. No. Mr. Jones reaches this conclusion by first observing that "most" carriers switch ISP-bound calls via trunk-to-trunk arrangements rather than line-side (trunk-to-line) switching (pages 5-6). However, Mr. Jones admits that this is done "simply because it is more efficient with the call volume and handling time involved" (page 6, lines 1-2). Of course, given such efficiency benefits,

trunk-side connections are not used solely for terminating ISP-bound traffic, but are used generally for terminating traffic to all types of end users who receive high volumes of in-bound calls. Consequently, Mr. Jones is mis-attributing a distinction to ISP-bound traffic which in fact applies to a different and far wider traffic category (i.e., high-volume traffic). Clearly, his erroneous logic cannot offer any support for the imposition of discriminatory treatment of ISP-bound traffic for reciprocal compensation purposes.

Applying traffic imbalance adjustments to a regime of explicit reciprocal compensation payments is inequitable and discriminatory, and should not be considered by the Commission.

Q. Staff witness Mr. Fogleman has observed (pages 16-17) that some states have adopted "traffic imbalance adjustments," under which reciprocal compensation payments may be reduced for traffic exceeding a pre-defined ratio of incoming to outgoing traffic. Should this Commission consider adopting such a mechanism?

A. No, it should not. At pages 35-38 of my Direct Testimony, I have already explained that under an explicit reciprocal compensation regime, the appropriate compensation for calls terminated by one of two interconnected carriers is entirely independent from the volume of traffic and associated

compensation flowing in the reverse direction. Such "traffic imbalance adjustments" are discriminatory against those carriers that have elected to specialize in serving customers with high inbound calling requirements, and as such are neither necessary nor appropriate, and should not be considered by the Commission.

Issue 8. How can ISP-bound traffic be separated from non-ISP bound traffic for purposes of addressing any reciprocal compensation payments?

The ILEC witnesses' testimony and interrogatory responses confirm that there is at present no reliable means to identify and segregate ISP-bound vs. non-ISP bound calls.

Q. At pages 46-51 of your Direct Testimony, you explained that currently there is no practical means to reliably and accurately distinguish ISP-bound calls from other local data and voice calls. Does any of the testimony from ILEC witnesses in this proceeding demonstrate that this fundamental problem has been overcome?

A. No, and in fact, the ILECs' testimony and data responses to date concerning this issue have confirmed the fundamental impracticability of isolating ISP-bound traffic from non-ISP-bound traffic on an ongoing basis for the purpose of segregating ISP-bound traffic from reciprocal compensation.

Q. Please explain.

A. First of all, it is striking that one of the ILEC witnesses, Mr. Hunsucker, recommends that a segregation of ISP-bound from non-ISP-bound traffic should not be made, as he has concluded that it would be "extremely administratively burdensome to do so."[11] While Mr. Hunsucker's testimony speaks for itself, it is particularly noteworthy that he has described several means by which ILECs have attempted to segregate ISP-bound traffic, and he concludes that none of them have proven to be workable.[12]

Moreover, the evidence supplied by BellSouth further underscores the infeasibility of such segregation. First, in response to AT&T Interrogatory No. 7, BellSouth has described procedures that BellSouth (or "BST" as used in the interrogatory response) has undertaken in order to estimate ISP-bound minutes of use for calls that originate with BellSouth's end users and terminate to an ALEC. As summarized therein, the essentials of that process are as follows:

(1) Attempt to compile a list of ISP telephone access numbers "from all

11. Hunsucker (Sprint) Direct, page 19, lines 7-8.

12. *Id.*, pages 19-20. Staff has also concluded that segregation of ISP-bound traffic is "problematic at best" and should not be attempted for reciprocal compensation purposes. Fogleman (Staff) Direct, page 19.

sources."

(2) Assume that all traffic terminating to the telephone numbers on that list constitutes ISP-bound traffic.

(3) Estimate additional ISP-bound traffic that has not been identified by Step 2. For that purpose, BST assumes that whenever the average call holding time for traffic terminating to an ALEC-served NPA-NXX is 15 minutes or greater (as calculated by dividing total MOU for the NPA/NXX, by total messages for that NPA/NXX), then all of the minutes terminating to that NPA/NXX are assumed to be ISP-bound.

(4) Require ALECs to provide "factual ISP usage information" to allow BST to true up its invoiced amounts for ISP-bound traffic payments.

Second, BellSouth Florida's witness Mr. Scollard describes the process that BellSouth currently uses to attempt to segregate ISP-bound traffic for calls that originate with an ALEC and are destined to an ISP served by BellSouth (i.e., the reverse of the situation described in the interrogatory response cited

above).[13] Mr. Scollard describes the following steps in that process:

(1) Attempt to compile a list of ISP telephone access numbers.

(2) Dial all suspected numbers "to verify that the tones returned are consistent with those used for ISP access" (*Id.*, page 3, lines 21-22).

(3) Add all such "verified" numbers into a database accessed by BellSouth's Carrier Access Billing System (CABS), which marks each ALEC-originated call that is destined to any of the telephone numbers in the database as an ISP-bound call.

(4) Update the database of assumed ISP access numbers "on a periodic basis as new information becomes available" (*Id.*, page 4, line 11).

Both of these procedures represent specific instances of the *indirect methods* for identifying ISP-bound traffic that I discussed in my Direct Testimony. As I explained there (at pages 46-51), such indirect methods cannot identify ISP-bound traffic with sufficient accuracy to permit segregation of ISP-bound and

13. Scollard (BellSouth) Direct, page 2.

non-ISP-bound traffic for reciprocal compensation purposes.

Q. Why are the indirect identification methods that BellSouth describes infeasible as a practical matter?

A. There are several crucial weaknesses to these indirect methods:

First, as a practical matter, BellSouth and other ILECs simply are not able to accurately identify all telephone numbers which may be used to access ISPs. In the interrogatory response I have cited, BellSouth admits that "BellSouth has attempted to obtain a list of ISP access numbers from all sources. It has only been able to obtain a fraction of such access numbers."[14] Moreover, even when certain telephone numbers can be identified as serving ISPs, the fact that modem pools may be shared among multiple subscribers, including ISPs and non-ISP businesses, means that one cannot be certain that 100% of the traffic terminating to those telephone numbers is actually destined for an ISP (see page 47 of my Direct Testimony). Dialing a suspect telephone number to listen for a modem tone, as Mr. Scollard describes, also cannot uniquely distinguish ISPs from other (non-ISP) users of modems.

14. *Id.*, page 1.

Second, it is striking that the procedure described by Mr. Scollard does not even attempt to identify the ISP-bound minutes that have not been accounted for by identifying ISP access numbers *per se*, even though the Company admits that the telephone number-based approach is (at best) incomplete. However, the remedy described in the interrogatory response also fails: BST is forced to rely upon a single call characteristic, average call duration, and assumes that all traffic terminating to a given ALEC-served NPA-NXX is ISP-bound whenever the average duration exceeds 15 minutes. As I have already demonstrated in my direct testimony (at page 49), it is a logical error to infer that a group characteristic (such as average call duration) tells anything about a particular member of that group (such as that a particular call is necessarily ISP-bound), and in any event, long call durations do not uniquely identify ISP-bound calls. In the recent generic investigation of inter-carrier compensation mechanisms for ISP-bound traffic conducted by the California PUC, the Administrative Law Judge's draft decision reached a similar conclusion:

> Such a methodology based solely on call duration to determine the proportion of ISP-bound calls is inherently unreliable because it fails to exclude classes of long-duration calls other than ISP-bound calls (e.g., telecommuting and other calls to corporate LANs, business conference

calls, calls to airline reservations offices, etc.).[15]

Finally, Mr. Scollard states that billings for inter-carrier compensation specific to ISP-bound traffic could be verified by having the billing LEC "provide the billed LEC a list of the ISP numbers that was used in calculating the charges contained on the bill" (page 4, lines 23-24) and suggests that ALECs might "be required to provide BellSouth with the ISP numbers so that actual traffic records could be used" (page 5, lines 13-15). However, my understanding is that ALECs generally do not routinely track the uses to which their local exchange services are applied by their subscribers, and thus will not always know whether a given telephone number that they serve is used to access an ISP, or is used to access an ISP *all of the time*. Indeed, the fact that BellSouth finds it necessary to perform a "search of the Internet" to find ISP access numbers "for calls bound for ISPs served by BellSouth," as Mr. Scollard has described (page 3) suggests that BellSouth itself is not privy to which of its own subscribers are ISPs or which of the telephone numbers used by those subscribers are receiving ISP-bound calls. Thus, the Commission should recognize that this aspect of BellSouth's suggested ISP-bound traffic segregation procedures is also not feasible.

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15. California PUC Docket R.00-02-005, Proposed Decision of ALJ Pulsifer (Mailed 11/3/2000), at page 35.

Q. What is Verizon's position on the issue of segregation of ISP-bound traffic?

A. Verizon's witness Dr. Beauvais recommends that the Commission should not pursue an inter-carrier compensation regime that would require the segregation of ISP-bound traffic (Beauvais Direct Testimony, pages 10-11). Indeed, consistent with my Direct Testimony on this point (pages 48-50), Dr. Beauvais recognizes that such segregation methods will not produce precise results, and in particular admits that using call holding times for segregation purposes "does not identify calls or minutes on an individual basis," but can only provide estimated percentages for ISP-bound and non-ISP-bound traffic (*id.*, pages 10).

Issue 9. Should the Commission establish compensation mechanisms for delivery of ISP-bound traffic to be used in the absence of the parties reaching an agreement or negotiating a compensation mechanism? If so, what should be the mechanism?

A system of explicit, cost-based reciprocal compensation payments, based on the ILEC's forward-looking economic costs, should apply as the default mechanism whenever LECs fail to establish a mechanism via negotiation.

Q. What is BellSouth's position on the issue of a default compensation mechanism?

A. Ms. Shiroishi states (page 26) that BellSouth's position on this issue is that the Commission should not establish *any* compensation mechanism for ISP-bound traffic, but that if the Commission chooses to do so, it should adopt bill-and-keep as the default mechanism.

Q. Do you agree with this position?

A. No, certainly not. As my Direct Testimony should have made clear, there are compelling reasons why ISP-bound traffic should be subject to the same reciprocal compensation obligations as apply to all other forms of locally-rated traffic. While bill-and-keep can be appropriate for inter-carrier compensation when traffic in either direction is roughly balanced, for reasons that I have already explained (see pages 11-13 *infra*), it is not appropriate nor equitable to apply bill-and-keep when a significant traffic imbalance exists. Therefore, a system of explicit, cost-based reciprocal compensation payments (based on the ILEC's forward-looking economic costs) should apply as the default mechanism whenever LECs fail to establish a mechanism via negotiation.

Q. Does this conclude your rebuttal testimony at this time?

A. Yes.