Before The
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Connect America Fund	)	WC Docket No. 10-90
	)	
A National Broadband Plan for Our Future	)	GN Docket No. 09-51
	)	
Establishing Just and Reasonable Rates for Local Exchange Carriers	)	WC Docket No. 07-135
	)	
High Cost Universal Service Support	)	WC Docket No. 05-337
	)	
Developing a Unified Intercarrier Compensation Regime	)	CC Docket No. 01-92
	)	
Federal-State Joint Board on Universal Service	)	CC Docket No. 96-45
	)	
Lifeline and Link-Up	)	WC Docket No. 03-109
	)	
Universal Service Reform – Mobility Fund	)	WT Docket No. 10-208

COMMENTS OF COMPTEL

Karen Reidy
COMPTEL
900 17th Street, NW
Suite 400
Washington, D.C. 20006
(202) 296-6650 phone

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SUMMARY

This proceeding stands at a crossroads. Although the Commission adopted a transitional plan for intercarrier compensation reform, that transition today is limited primarily to a single rate element (end-office switching), applicable to a declining technology (TDM). In order to effectively guide the nation to a competitive future, the Commission must rapidly address two major gaps in its policies: reforming transport pricing and establishing the legal framework to guide IP interconnection negotiations.

In these Comments, we explain how the current transitional rules, if not augmented by parallel policies governing transport, confer an unreasonable advantage on the largest vertically-integrated incumbent providers (*i.e.*, AT&T and Verizon). And, while we recognize that the Commission's intercarrier compensation policies are intended to set the stage for the further development of IP networks, this groundwork will be for naught if the Commission does not *now* provide a clear and unambiguous path to enable a migration of the PSTN to its future technology platform based on IP. The starting block for this path begins with the Commission's affirmation that existing interconnection rights and obligations apply to this technology.

With respect to transport, we explain that 251(b)(5) applies equally to transport and termination. Commission access rules define separate rate elements based on the type of transport (*i.e.*, tandem-switched transport and dedicated transport) and termination (end-office switching). Because of the age of the incumbents' network architecture, extensive transport facilities must be used to reach dozens of end-offices in any particular market. The reverse, however, is not true: Competitor networks were deployed at a different time in the technology curve and generally involve a single switch in any particular market. Because the Commission

has reformed end-office switching but not transport, CLEC revenues are on a path to zero (which means that AT&T and Verizon's costs are on a path to zero), while ILECs will continue to receive significant revenues (and CLECs will continue to incur significant costs) for effectively the same function (*i.e.*, 251(b)(5) call completions). This inequity will distort competition and further entrench incumbents - particularly the large, vertically integrated incumbents, such as AT&T and Verizon. This inequity cannot stand – the Commission must rapidly reform transport to match the transition for end-office switching.

Of equal importance, the Commission must eliminate the uncertainty that today frustrates negotiations concerning IP-to-IP interconnection. COMPTEL has previously shown that prior Commission decisions have found that Section 251(c) is technologically neutral and that competitor interconnection rights do not disappear as ILECs deploy IP technology in their networks. The Commission should reaffirm that the Act's call for negotiation within the framework of Section 252 applies equally to IP networks as it has applied to TDM in the past, and allow the market an opportunity to evolve within that framework of nondiscrimination, public disclosure and opt-in.

Finally, we briefly address a number of issues where further Commission action is neither necessary nor appropriate at this time. Specifically, the Commission should take no further action regarding originating access rates (which are becoming less relevant each day as customers obtain long distance services from the same carrier that provides local service), and provide no further guidance to state commissions regarding the TDM "network edge" beyond reminding state commissions that entrants should not be required to establish more than a single network presence per LATA.

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COMMENTS OF COMPTEL

COMPTEL respectfully submits these comments,[1] pursuant to the Federal Communications Commission's ("Commission") Further Notice of Proposed Rulemaking released on November 18, 2011 (FCC 11-161)("*FNPRM*").[2] In the *FNPRM* the Commission seeks comment on a variety of topics either raised by – or not fully resolved within – its *ICC Transformation Order*. In our Comments below, COMPTEL focuses primarily on those areas

[1] These Comments reflect the position of a majority of COMPTEL members. Individual members may file company-specific comments advocating positions on issues that are different from those stated herein.

[2] Report and Order and Further Notice of Proposed Rulemaking, *Connect America Fund et al*, FCC 11-161, WC Docket Nos. 10-90, 07-135, 05-337, 03-109, GN Docket No. 09-51, CC Docket Nos. 01-92, 96045, and WT Docket No. 10-208 (rel. Nov. 18, 2011)("FNPRM" or "ICC Transformation Order").

requiring *immediate* action – specifically, the adoption of a transition plan for transport to place it on a similar path to reform as end-office switching (which is the principal rate element associated with termination), as well as establishing the legal framework for IP interconnection. Although we address other issues raised by the *FNPRM*, it is in these areas that rapid Commission action is most critical.

I. THE IMMEDIATE NEED TO REFORM TRANSPORT

The Commission seeks comment regarding the appropriate transition for transport prices, as well as what architectural rules should apply to determine the "network edge" for the application of bill and keep to traditional TDM networks.[3] To a large extent, these issues are interrelated, as the central question raised by the "network edge" concerns the geographic boundary within which transport will be priced according to the Commission's 251(b)(5) pricing rule. In the Comments below, we explain that: the Commission must rapidly reform transport or competition will be harmed; that the Commission's legal conclusion that all traffic be subject to 251(b)(5) requires that transport be subject to the same pricing methodology as termination; and, LATA boundaries should be used as the transitional pricing boundary (*i.e*., network edge) for TDM networks, while the Commission must reaffirm and codify the principal that CLECs cannot be required to establish more than one point-of-interconnection ("POI") per LATA. Finally, we propose a schedule to reduce transport rates (including dedicated transport) to a single, coherent

[3] *See* FNPRM at ¶¶ 1308 and 1321. Separately, the Commission has requested comment on the appropriate POI issues for an all-IP architecture. *See id*. at ¶¶ 1366-7.

structure on the same timeline as the Commission has adopted for end office switching (*i.e.*, termination).[4]

A. Transport Reform Must Parallel Termination Reform or Competition will be Harmed

The Commission has determined that Section 251(b)(5) applies to the transport and termination of all traffic. Moreover, the Commission adopted bill and keep as the "end state" for all rate elements and types of traffic.[5] Although the Commission's finding applied to all rate elements in *theory*, it effectively adopted a transitional plan for a single rate element, end-office switching. The Commission's plan does reduce tandem-switched transport to bill-and-keep, but this change does not occur until July, 2018[6] and, even then, only where both the tandem and end-office are owned by the same ILEC.[7] Otherwise, transport rates are "reformed" only to the extent that they are reduced to the level of interstate access rates.[8]

Significantly, the relative prominence of "transport" in a carrier's network is largely a function of when its basic architecture was established. The basic topology of ILEC networks – that is, the number and aggregation efficiency of central office switches – reflects the technological constraints of decades past, when the basic architecture of the network was established. The typical ILEC network is characterized by relatively short loops and, as a consequence, a multiplicity of central offices, each serving relatively few access lines. It is not

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4 Because the overwhelming number of minutes exchanged by COMPTEL members is exchanged with price-cap incumbent local exchange carriers, we have focused our recommendations on the pricing rules applicable to the territories of price cap ILECs.

5 FNPRM at ¶1297.

6 There is an interim step for tandem-switched transport (when both the tandem and end-office are owned by the same entity) to $0.0007 in July, 2017.

7 ICC Transformation Order at ¶ 801.

8 *Id.*

uncommon in a typical market (LATA) to have *dozens* of central offices,[9] and (on average) ILEC switches serve less than 10,000 lines each (see Table 1).

Table 1: Lines per Switch[10]	
ILEC	**Lines Per Switch**
Qwest	8,524
AT&T	9,890
Verizon	7,788
Average	8,863

In contrast, entrants arrived facing a very different set of technological choices, enabling them to deploy (typically) a single switch per market (or less).[11] For instance, PAETEC Communications, one of the largest competitors in the country, averages 1.5 switches per market, [12] a statistic that is inflated (on average) because PAETEC acquired a number of carriers that served some overlapping markets (and, as result, has duplicate switches). Earthlink, through its subsidiary acquisition ITC^DeltaCom, uses just 20 switches (18 of which are circuit-switched) to offer services from nearly 300 collocations, serving 420,000 switched voice lines (an average of 21,000 lines per switch).[13]

The principal consequence of the network topology differences between CLEC and ILEC networks is that ILEC networks are interconnected through extensive transport networks (as that term is defined by the Commission's access and reciprocal compensation rules),[14] while CLEC

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9 For instance, even in the relatively small Austin, TX market, Southwestern Bell has 22 wire centers. *See* FCC Benchmark Cost Proxy Model available at Results File at http://transition.fcc.gov/wcb/tapd/hcpm/welcome.html

10 Source: 2007 ARMIS 43-08. Total Switched Access Lines (column cj) divided by Total Central Office Switches (column cm). Since 2007, ILEC access lines have declined significantly, while the number of switches has remained relatively stable. As a result, the average number of lines per switch today is even lower than the statistics presented in the Table.

11 In some instances, a CLEC will serve several markets from a single switch.

12 PAETEC Holding Corp, 2009 Annual 10K Report, page 6 (data as of March 1, 2010).

13 Earthlink Inc., 2010 Annual 10K Report, *Business Operating Metrics*, at 55.

14 *See* 47 CFR §§ 69.2 (oo), 69.2 (ss), and 51.701(c).

networks – even when serving the same geographic area – rely upon long "loop" facilities to reach customers,[15] with little need for interoffice transport connecting multiple switches.

Because of the central architectural differences between ILECs and CLECs networks noted above, ILECs may assess transport charges on others that are not commonly assessed by other carriers on them. Consequently, the fact that the Commission has not yet reformed transport (to any meaningful degree, at least until 2017) imposes a cost on competitors (and a revenue flow to ILECs) that generally does not occur in reverse.[16] That is, ILECs are able to assess transport charges, but are unlikely to pay them. As presently structured, the Commission's disjointed intercarrier compensation reform policies – policies that favor networks that are disproportionately reliant on transport to interconnect multiple central office – will distort competition by disproportionately reducing the revenues of modern networks (with little transport) relative to the revenues of incumbents (which rely extensively on transport to terminate local and long distance calls).

B. Comprehensive Transport Reform is Necessary to Ensure Efficient Network Choices

The Commission must immediately adopt a rational transition for transport – including dedicated transport – to avoid creating artificial incentives for pointless reconfigurations. There

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15 CLECs generally focus on multi-line business customers that require a DS1 or higher capacity loop to serve. These digital loop facilities are less distance sensitive than the analog loop plant that defined the basic ILEC topology.

16 At least one court has upheld a CLEC's ability to charge the functional equivalent of the ILEC's tandem and end office switching rates when routing calls to its end users, regardless of whether the CLEC owns the tandem switch. *Paetec Communications, Inc. v. MCI Communications Services, Inc.*, 712 F. Supp. 2d 405, 415 (ED. Pa. 2010)("[W]here a CLEC routes calls to its end-users through a tandem switch, whether it owns that tandem switch or not, it may charge the full benchmark rate for that service. PAETEC has not violated the FCC's benchmark by charging Verizon for the functional equivalent of the tandem switching rate and the end-office switching rate for its SWAS access services.") It is important that this right be maintained during the transition.

are generally two transport routes from any given POI to any given end office: The tandem-switched (or common) transport option, or a dedicated transport path. Under the partial transition adopted by the Order, tandem-switched transport rates (at least when both the end-office and tandem are owned by the same ILEC) will transition to $0.0007 in July 2017, and then to bill-and-keep in 2018. In contrast, the Commission has not adopted *any* transition for dedicated transport (other than to eliminate any disparity between interstate and intrastate access by July 2013). Because of this disparate treatment, beginning in July 2017, the Commission's rules will introduce a fundamental pricing imbalance between the two transport options, with the price of tandem-switched transport falling to zero, while dedicated transport rates remain at above-cost interstate access rate levels.[17]

If not corrected, carriers will have an artificial incentive to rely on tandem-switched transport even where dedicated transport is a more efficient option. Importantly, the Commission's endorsement of "grooming requirements" in tariffs that can force network reconfiguration is *not* the appropriate solution, at least not in isolation.[18] The only time that grooming requirements should plausibly be imposed on a carrier is when the cost-consequence of the grooming reflect the gain in efficiency.[19] In other words, a carrier that rearranges its

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[17] As noted, the transitional rules for tandem-switched transport only apply to circumstances where both the end-office and tandem switch are owned by the same carrier. We explain below why it is inappropriate to adopt pricing rules that are dependent upon ownership when both carriers are ILECs and are jointly providing the service.

[18] *See* ICC Transformation Order at ¶ 754 hypothesizing "if a long distance carrier decided to deliver all of its traffic to a terminating LECs' tandem switch, that practice could result in tandem exhaust, requiring the terminating LEC to invest in additional switching capacity. To help address this concern, we confirm that a LEC may include traffic grooming requirements in its tariffs. These traffic grooming requirements specify when a long distance carrier must purchase dedicated DS1 or DS3 trunks to deliver traffic rather than pay per-minute transport charges, a determination based on the amount of traffic going to a particular end office."

[19] Moreover, as a practical matter, the circumstance assumed by the Commission – that is, that tandem exhaust might occur – is highly unlikely. As the Commission is well aware,

services to a more "efficient" configuration should pay *less* for that more efficient arrangement, not more. Under the Commission's incomplete pricing rules, however, a carrier forced into a dedicated transport arrangement (after July 2017), would pay full interstate access rates for the dedicated connection, but only $0.0007 per minute had it remained on the tandem route. The Commission must quickly adopt a transitional path for transport that does not favor one transport option over another.

C. By Law, Transport and Termination Must be Governed by the Same Methodology

In the *ICC Transformation Order*, the Commission adopted a pricing methodology for the transport and termination of all telecommunications traffic.[20] In accordance with the statute, the Commission should not ignore either rate element for purposes of designing a transition or in implementing a final methodology. As the Commission recognizes, it must adopt a transition for the various transport rate elements that results in an end state rate – using the same methodology as terminating access - as soon as possible.

The statute does not offer the Commission a choice as to whether 251(b)(5) – and, as a consequence, the pricing requirements of §252(d)(2) – apply to only termination but not transport, or only some forms of transport, but not to others. The statute unambiguously applies

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switched access minutes are in precipitous decline. Indeed, the Commission noted this very fact as supporting its reform efforts. *See* ICC Transformation Order ¶¶s 885-886, noting that switched access minutes have declined by 36% since 2006 and that the trend is accelerating. Because of this, the likelihood that tandem capacity could be "exhausted," when the tandems were engineered to meet much higher traffic volumes, is quite small.

[20] FNPRM at ¶ 1297. ["Today, we adopt…the default methodology that will apply to all telecommunications traffic at the end of the complete transition period….Although we specify the implementation of the transition for certain terminating access rates in the Order, we did not do the same for other rate elements, including…dedicated transport, tandem switching and tandem transport in some circumstances, and other charges including dedicated transport signaling, and signaling for tandem switching."]

to both the transport *and* termination of traffic.[21] As the DC Circuit stated in *United States Telecom Association v. FCC*, "an agency *cannot…*exclude from coverage certain items that clearly fall within the plain meaning of a statutory term."[22] Pursuant to the statute, the provisions of Sections 251(b)(5) and the associated pricing regulations under 252(d)(2) apply with equal force to *all* transport, as well as termination.

D. TDM Network Edge

The Commission has also requested comment regarding what guidance it should provide states concerning the appropriate "network edge" for the delivery of traffic (and application of the Commission's 251(b)(5) pricing rule) in a TDM network. The "network edge" is really a definitional issue that has two components: (a) should there be new rules that define the number (and location) of the POI at which traffic is physically delivered from one network to another,[23] and (b) what is the geographic *scope* of the obligation to transport and terminate traffic at reciprocal compensation rates (i.e., bill and keep[24])?

We begin with the Commission's request for comment concerning the location of the Point of Interconnection. As a threshold observation, the policies concerning POIs and network edge for the TDM architectures are backward-looking in that they apply to the existing network and traditional traffic patterns when, as the Commission and industry in general recognize, the future will involve new interconnection points and traffic exchange in IP. As a result, the

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21 The duty to establish reciprocal compensation arrangements for the transport and termination of telecommunications. 47 U.S.C 251(b)(5)(emphasis added).

22 *United States Telecom Association v. FCC*, 359 F.3d 554, 592 (D.C. Cir. 2004)(emphasis added).

23 FNPRM at ¶ 1316.

24 *Id.* at ¶ 1310. As noted elsewhere, COMPTEL opposes the adoption of "bill and keep" as an end-state pricing methodology. Our focus in this section, however, is that *whatever* pricing standard, it must be applied consistently to all network functions and rate elements encompassed by Section 252(b)(5).

Commission's POI (and network edge) policies that will apply only to the traditional circuit-switched network should be developed to minimize network disruption and rearrangements. As the Commission recognizes, it has interpreted the Act to mean that CLECs should be permitted to establish a single POI per LATA.[25] At this juncture, nearly twenty years after the Act was passed (which was predated by similar changes in a number of states), the Commission should reaffirm (and codify, to remove any doubt) the single-POI-per-LATA construct. This would ensure that any carrier that delivers traffic to a LATA need only establish a single interconnection point from which it will terminate traffic.

With respect to the geographic *scope* of the reciprocal compensation rate (that is, defining the geographic region in which transport should be transitioned to a zero rate under bill and keep), COMPTEL recommends that the LATA boundary be used for traditional TDM interconnection. As a practical matter, local networks have been engineered with the LATA boundary in mind and, even though the LATA is little more than a historical curiosity in the context of an IP network, it does hold practical value for a compensation scheme that applies to TDM networks. By establishing this basic guidance to state commissions, the Commission will minimize network disruption and reflect existing network designs. Of course, parties remain free to negotiate fewer (or more) points-of-interconnection, and larger (or smaller) zones where mutually beneficial.

By reaffirming network design rules and applying the reciprocal compensation methodology on a LATA basis, the Commission will prevent unnecessary network reconfigurations that are costly and effectively pointless in an environment where IP-to-IP

[25] FNPRM at ¶ 1316.

interconnection should become the architecture of the future.[26] Resources spent rearranging TDM networks are resources wasted – the only new arrangements that should be encouraged at this point, are rearrangements that migrate traffic from TDM to IP.

E. The Recommended Transition for Transport in Areas Served by Price Cap ILECs

Clearly, one of the first actions the Commission must take is to adopt a transition plan for the pricing of transport. As we explained above, treating transport consistently with termination is necessary to assure nondiscrimination between incumbents with extensive transport networks and new entrants with a more efficient network topology, to prevent distortions in network design, and to comply with the statute. To achieve such consistency, COMPTEL recommends the following steps.

First, a threshold goal is to assure that the rates to *terminate* local and long distance traffic are reformed consistently. Importantly, there is a structural difference between how dedicated transport rates are applied in reciprocal compensation agreements and in access tariffs. In existing reciprocal compensation arrangements for local traffic, two-way trunks are a *shared* responsibility, with the CLEC paying a rate that is reduced in proportion to the amount of traffic being sent to the CLEC by the ILEC.[27] In contrast, two-way access trunks are entirely the responsibility of the long distance carrier, who must pay not only to terminate traffic, but to originate traffic as well. Because of this structural difference, a transition plan must not only address differing rate levels between access and reciprocal compensation rates, it must also

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[26] We again request that the Commission affirm the statutory framework for IP-to-IP interconnection in the next section so that meaningful negotiations can get underway.

[27] As explained in the last section, COMPTEL does not recommend the Commission direct any resources to reforming originating access at this time. Consequently, our transition does not apply to one-way trunks used to originate traffic, or to the relative capacity (if any) of a two-way trunk attributable to originating traffic.

introduce similar ratcheting provisions to access tariffs so that dedicated transport rates for capacity (in a two-way trunk) attributable to terminating traffic can be reduced in a transition that differs from rates applicable to originating traffic.

COMPTEL recommends a three-pronged strategy that would (a) first apply ratcheting to two-way access trunks to assure consistent treatment with reciprocal compensation, (b) gradually reduce dedicated transport prices to the corresponding reciprocal compensation rate levels in a transition matched to reductions in tandem-switched transport, before (c) implementing a final step to a final rate established under same methodology that applies to termination charges.[28] The recommended transition starts with the first filing (July 2014) after all transport has been unified at interstate access rate levels (which is accomplished with the July 2013 access filings). The transition below is consistent with the transition for end-office switching, and would result in all LECs reaching bill-and-keep in the final filing (July 2018). The steps to this end-state:

Effective Date	**For Price Carriers And CLECs That Benchmark Access Rates To Price Cap Carriers**
July 1, 2014	Access tariffs adopt ratcheting provisions for two-way trunk groups to permit reductions in the effective price of trunks used to terminate traffic in the same way that interconnection agreements apply. The rates for dedicated transport (one-way terminating and the ratcheted share of two-way trunks used for termination) are reduced by 1/4 of the difference between interstate access rates and the applicable reciprocal compensation rates in each state. Rates for tandem-switched transport are reduced by 1/4 of the difference between interstate access and $0.0007.[29]
July 1, 2015	Rates for dedicated one-way transport and the ratcheted share of two-way

[28] The Commission has adopted Bill and Keep as the final rate, but this decision may be subject to an appeal.

[29] As explained above, the Commission must harmonize its transport pricing policies with its end-office pricing transition, and must also harmonize the transitions for tandem-switched transport and dedicated transport. As such, in order to propose a rational transition for dedicated transport (relative to end-office switching), the COMPTEL proposal includes a transition for tandem-switched transport to maintain consistency between the tandem-switched and dedicated transport options.

Effective Date	For Price Carriers And CLECs That Benchmark Access Rates To Price Cap Carriers
	trunks used for termination are reduced by an additional 1/4 of the original differential between interstate access and reciprocal compensation rates. Rates for tandem-switched transport are reduced by an additional 1/4 of the difference to $0.0007.
July 1, 2016	Rates for dedicated one-way transport and the ratcheted share of two-way trunks used for termination are reduced by an additional 1/4 of the original differential between interstate access and reciprocal compensation rates. Rates for tandem-switched transport are reduced by an additional 1/4 of the difference to $0.0007.
July 1, 2017	Rates for dedicated one-way termination transport and rates for the ratcheted share of two-way trunks used for termination reach reciprocal compensation rate levels. Rates for tandem-switched transport are reduced to $0.0007.
July 1, 2018	Rates for terminating dedicated transport (and the ratcheted share of the rates for two-way trunks used for termination), as well as the rates for tandem-switched transport, are reduced to bill-and-keep (assuming lawful).

This transition would apply to *all* ILEC tandem-switched transport rates, whether or not the same ILEC owns both the tandem and the end-office. There is no legal basis to treat tandem-switched transport that is provided by a single ILEC (i.e., when both the end-office and the tandem is owned by one LEC) differently than tandem-switched transport jointly provided by two ILECs. In either instance, the legal obligation is to provide for the "transport and termination of traffic" at just and reasonable rates determined "on the basis of a reasonable approximation of the additional costs of terminating such calls."[30] There is nothing in this record – nor could there be – that would suggest that the "additional costs" differ as a product of *ownership*. Indeed, the Commission's reciprocal compensation methodology must apply with equal force when both tandem and end-office are owned by the same entity, or separately. A core assumption behind the Commission's adoption of bill-and-keep is that these costs (whatever they are) should be recovered from end-users and not carriers. The Commission must eliminate the

[30] 47 U.S.C. 252(d)(2).

artificial distinction that tandem-switched transport prices should differ, based on how many ILECs are involved in the arrangement, by establishing a single pricing methodology that applies whether the tandem-switched transport option is provided by a single ILEC or jointly.

II. SECTIONS 251 & 252 OF THE ACT GOVERN IP-TO-IP INTERCONNECTION

The Commission has repeatedly expressed its "goal of facilitating industry progression to all-IP networks, and ensuring the transition to IP-to-IP interconnection is an important part of achieving that goal."[31] The Commission also recognizes that vital to achieving its goal is clarifying interconnection rights and obligations.[32] As the Commission noted:

> Interconnection among communications networks is critical given the role of network effects. Historically, interconnection among voice communications networks has enabled competition and the associated consumer benefits that brings through innovation and reduced prices.[33]

COMPTEL shares the Commission's view of "the importance of interconnection to competition and the associated consumer benefits"[34] and cannot emphasize enough the importance of maintaining competitors' interconnection rights under the Act in an IP world. As the Commission recognized, "IP interconnection between providers…is critical."[35]

Interconnection regulations are fundamental to competition and the consumer's ability to make and receive calls while still having a choice in service provider.[36] As the Commission has stated and "the 1996 Act recognized, without the ability to exchange traffic with the local

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31 FNPRM at ¶ 1335.

32 *Id.*

33 ICC Transformation Order at ¶ 1009 (footnotes omitted).

34 *Id* at ¶ 42.

35 *Id* at ¶ 1010.

36 *See* The National Broadband Plan at 49.

incumbent carrier, no competitive provider would be able to compete effectively."[37] Moreover, COMPTEL agrees with the Commission that the time to start migrating interconnection arrangements to IP *is now*, and that the "transition [to IP interconnection] will likely be appropriate before the completion of the intercarrier compensation phase down."[38] Further, COMPTEL is encouraged by the Commission's admonition that its "decision to address certain issues related to IP-to-IP interconnection in the FNPRM should not be misinterpreted to suggest any deviation from the Commission's longstanding view regarding the essential importance of interconnection of voice networks."[39]

Significantly, Congress also recognized the critical importance of interconnection and already determined the appropriate approach for interconnection between carriers by adopting Section 251 of the Act. Specifically, Congress established a cascading system of interconnection obligations, regardless of the technology at issue, with Section 251(a)(1) outlining the obligations of *all* carriers, Section 251(b) applies to all *local exchange* carriers, and Section 251(c) prescribes the obligations of *incumbent* local exchange carriers in particular. This scheme of carefully delineated interconnection obligations – obligations that differ according to the type of carrier and not technology – is not optional: The only way the Commission can pick and choose as to which statutory provision applies to IP interconnection is if it were to forbear from a particular statutory provision. Otherwise, any form of interconnection required by 251(a)

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37 Declaratory Ruling, *Petition of CRC Communications of Maine, Inc. and Time Warner Cable Inc. for Preemption Pursuant to Section 253 of the Communications Act, as Amended, et al*, WC Docket No. 10-143, GN Docket No. 09-51, CC Docket No. 01-92, FCC 11-83, ¶ 12 (rel. May 26, 2011)("Interconnection Clarification Order").

38 ICC Transformation Order at ¶ 1010.

39 *Id.*

generally, remains a valid form of interconnection for local exchange carriers pursuant to 251(b), and with incumbent local exchange carriers under 251(c).

To be clear, in the case of IP-to-IP interconnection, there is no basis for forbearance under Section 10 of the Act of any of the Section 251 provisions. Indeed the Commission "has set an express goal of facilitating industry progression to all-IP networks, and ensuring the transition to IP-to-IP interconnection is an important part of achieving that goal."[40] Indeed, it found IP interconnection between providers to be *critical*.[41] Moreover, the Commission has already found that incumbents LECs have the incentive to refuse reasonable interconnection to other network operators.[42] The Commission has also found "when incumbent carriers resist interconnection with competitive telecommunications carriers, it impedes the development of facilities-based voice services" and "[c]ompetition in local telecommunications markets can deliver significant benefits to consumers…" [43] It is inconceivable that the Commission could find that it is in the public interest for the Commission to forbear from its (and state commissions') duty of ensuring nondiscrimination, just and reasonable terms for interconnection, and publicly filed contracts that are available to other competitors. Such a finding would contradict the Commission's own warning to the industry that "the FNPRM should not be misinterpreted to suggest any deviation from the Commission's longstanding view regarding the

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40 FNPRM at ¶ 1335.

41 ICC Transformation Order at ¶ 1010 (emphasis added).

42 *Id.* at ¶ 1337, explaining "the Commission previously has found 'that incumbent LECs have no economic incentive . . . to provide potential competitors with opportunities to interconnect with and make use of the incumbent LEC's network and services.' Consequently, '[n]egotiations between incumbent LECs and new entrants are not analogous to traditional commercial negotiations in which each party owns or controls something the other party desires.'" (footnotes omitted).

43 Interconnection Clarification Order at ¶12.

essential importance of interconnection of voice networks."[44] Therefore, it cannot be in the public interest to forbear from any Section 251 interconnection provision.

In ensuring that Section 251 rights and obligations apply to IP-to-IP interconnection, the Commission is not creating new law. The Commission is merely affirming existing law and, importantly, removing the cloud of uncertainty created by the ILECs. As the Commission previously found "…section 251 of the Act is one of the key provisions specifying interconnection requirements, and that its interconnections requirements are technology neutral – they do not vary based on whether one or both of the interconnecting providers is using TDM, IP, or another technology in their underlying networks."[45] Moreover, the Commission found the "interconnection obligations of sections 251(a) and 251(c)(2) apply to incumbents' packet-switched telecommunications ***networks*** and the telecommunications services offered over them."[46] Subsequently, in the *Advanced Services Remand Order*, the Commission again states that "the interconnection obligations set forth in section 251(c)(2) apply to packet-switched services as well as circuit-switch services."[47]

In order for the Commission to give meaning to the technology-neutral nature of the Act, the Commission must interpret the provisions and terms of the Act in a manner that accommodates the factual circumstances of new technologies. It would be disingenuous for the Commission to say section 251(c) is technology neutral, but then interpret the statutory terms

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44 ICC Transformation Order at ¶ 1010.

45 FNPRM at ¶ 1342.

46 Memorandum Opinion and Order, and Notice of Proposed Rulemaking, *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket Nos. 98-147, 98-11, 98-26, 98-32, 98-78, 98-91, CCB/CPD No. 98- RM 9244, FCC 98-188, ¶¶48 (1998).

47 Order on Remand, *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket Nos. 98-147, 98-11, 98-26, 98-32, 98-78 98-91, FCC 99-413, ¶22 (1999)("Advanced Services Remand Order").

(e.g., "telecommunications service," "telecommunications carrier," "telephone exchange service," "exchange access") in a manner that only accommodates interconnection via one technology, that being TDM. The Commission would be playing lip-service to the scheme of clear, unambiguous and technology-neutral interconnection rights adopted by Congress (and previously adhered to by the Commission).

A. All Telecommunications Carriers are Entitled to IP-to-IP Interconnection Under Section 251 of the Act

Under Section 251(a) of the Act all telecommunications carriers are entitled to interconnection with other telecommunications providers. The terms of a carrier's interconnection arrangement with an ILEC are governed by section 251(c) of the Act.[48] Facilities-based VoIP providers are telecommunications providers and, as result, are entitled to interconnection with non-ILEC telecommunications carriers pursuant to 251(a) and direct interconnection with ILECs, in particular, pursuant to section 251(c). This is not to say that other VoIP providers are not telecommunications providers. But the central issue here concerns interconnection between *physical* networks (and their supporting systems), which necessarily involves facilities. As a result, the Commission's focus here should be limited to facilities-based providers of VoIP services.[49] In the Comments below, we explain how IP-to-IP interconnection applies to various traffic categories, including categories (such as IP-in-the-Middle) that the Commission has already concluded are telecommunication services.

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[48] As explained above, any form of interconnection encompassed under Section 251(a)'s general interconnection obligation does not disappear under Sections 251(b) and 251(c) that detail <u>*additional*</u> obligations that apply to local exchange and incumbent local exchange carriers respectively.

[49] We would expect over-the-top providers to benefit from facilities-based providers having interconnection rights by having more seamless networks over which they may provision their services.

a. Section 251 Provides for IP-to-IP Interconnection at the ILEC's IP Transport Network for IP-in-the-Middle Services.

The Commission, in its *IP-in-the-Middle Order*, concluded that the provider of a call that originates in TDM, is converted from its existing format into an IP format, and then converted back to TDM (IP- in-the-middle) is providing a telecommunications service.[50] This is true whether only one or multiple providers are involved in the IP transport.[51] Therefore, the subscriber's service provider is a telecommunications carrier.

In accordance with this decision, a competitive provider would be a telecommunications carrier -- and entitled to interconnection at any technically feasible point, including the ILEC IP transport network -- when providing a call that it originates in TDM, even if the call is converted to IP so that it may interconnect with the ILEC IP transport network, for carriage to an end-office where the ILEC ultimately converts back to TDM to terminate to the end-user. Moreover, in accordance with Commission rules, a telecommunications carrier that has interconnected with the ILEC on an IP-to-IP basis, pursuant to section 251(c) of the Act, for calls that originate and terminate in TDM has the right to also use that arrangement for purposes of completing a call that originate and/or terminate in IP, no matter what classification applies to the call.[52]

Currently, the vast majority of calls to the ILEC will terminate in TDM. This is simply the consequence of the sheer size of the incumbent network, which continues to serve nearly 95

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50 Order, *In the Matter of Petition for Declaratory Ruling that AT&T's Phone-to-Phone IP Telephony Services are Exempt from Access Charges*, WC Docket No. 02-361, FCC 04-97, ¶ 1 (2004)("IP-in-the-Middle Order")["When the call reaches AT&T's network, AT&T converts it from its existing format into an IP format and transports it over AT&T's Internet backbone. AT&T then converts the call back from the IP format and delivers it to the called party through local exchange carrier (LEC) local business lines. We clarify that… the service that AT&T describes is a telecommunications service…."]

51 *Id.* at ¶ 1.

52 47 CFR 51.100(b).

million traditional phone subscribers. It may take years before the traditional architecture of the ILECs is modernized all the way to the customer. And, while competitors are leading the transition to all IP networks, nearly 45% of their lines are TDM. Thus, many competitors serve a mix of IP and TDM-based end-users.[53] As shown in Table 2 below, as of the end of 2010, there were still over 116 million traditional switched access lines in service.

Table 2: Comparing VoIP and TDM
(Year End 2010- millions of lines)[54]

Technology Serving End User	ILEC	CLEC	Total
VoIP	2.9	28.8	31.7
TDM	94.7	22.2	116.9
	97.5	51.1	148.6

This does not mean IP-to-IP interconnection with ILECs should not occur today. It has been estimated that 90% of the interLATA interoffice network has been replaced by IP technology (and 60% of the intraLATA interoffice network).[55] As a result, for the foreseeable future, IP-to-IP interconnection could occur between IP transport networks, with much of the traffic being "IP-in-the-middle."

The Commission has already determined that such IP-in-the-middle calls are telecommunications services, so interconnection rights and obligations under section 251 should apply. Nevertheless, since the goal is to transition to all-IP network, as discussed below, the Commission should not link IP-to-IP interconnection rights solely to "IP-in-the-middle" services.[56]

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53 *See, e.g.*, Earthlink Inc., 2010 Annual 10K Report , at 6-7; *see also*, PAETEC Holding Corp, 2009 Annual 10K Report, page 5 (data as of March 1, 2010).

54 Local Telephone Competition, Status as of December 31, 2010, Industry Analysis and Technology Division, Wireline Competition Bureau, October 2011, Table 8.

55 Presentation of Carl Ford, Vice President, Crossfire Media, to National Association of Regulatory Utility Commissioners, Staff Telecommunications Subcommittee, February 14, 2009.

56 If IP interconnection rights were *limited* to carriers that serve a mix of IP and TDM customers (and, therefore, are likely to use their interconnection arrangements for IP-in-the-middle services), that factor would discourage competitive carriers from moving to an all-IP architecture in direct contravention of the Commission's objectives.

b. Calls that Originate and/or Terminate in IP are also Telecommunications Services

As discussed above, the Commission has already found that a call that originates and terminates in TDM, using IP technology in the middle, is a telecommunications service. The Commission should likewise affirm that a call provided by facilities-based provider that originates and/or terminates in IP is, likewise, a telecommunications service and, as a result, the provider is entitled to IP-to-IP interconnection under section 251 of the Act. While, as also discussed above, a carrier should be able to obtain IP-to-IP interconnection arrangements for telephone calls that use "IP-in-the-middle," and use those arrangements for calls originating and/or terminating in IP, carriers should also be able to obtain IP-to-IP interconnection under section 251 of the Act for voice calls the originate and/or terminate in IP, irrespective of whether they have also have TDM customers being served through that interconnection arrangement.

As the Commission has concluded, IP telephony services generally "enable real-time voice *transmission*."[57] The packet routers deployed in IP networks and the circuit-switching deployed in the PSTN are merely transmission technologies used to route traffic.[58] Regardless of whether a voice call originates and/or terminates in IP, the subscriber is receiving a service that provides real-time voice transmission for a fee. The form and content of the information sent by the caller, in a voice call, is the same as that received by the called party. Therefore,

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[57] Report and Order and Further Notice of Inquiry, *Implementation of Sections 255 and 251(a)(2) of the Communications Act of 1934, as Enacted by the Telecommunications Act of 1996*, WT Docket No. 96-198, FCC 99-181, ¶ 177 (1999).

[58] *See* Final Decision, Before the Public Service Commission of Wisconsin, Docket 6720_DR-101, p. 11, n. 9 (2010)("Wisconsin Final Decision") ["Within "transmission," "Internet protocol" or "IP-enabled" refer to services whose functional transmission mode is digital packetized transmission, as opposed to traditional circuit-based time division multiplexed (TDM) transmission. The digital IP-enabled mode typically will involve diverse routing of packets over networks, whether proprietary or the Public Internet, before re-assembly for delivery to the ultimate destination. "IP-enabled" is contrasted to current PSTN electronic switched circuit transmission in which a specific electronic circuit pathway, through Signaling System 7 (SS7), is established and disassembled for each communication."]

regardless of whether the voice call originates and/or terminates in IP, the provider of the voice transmission service is providing a service that meets the statutory definition of a telecommunications service[59] and, consequently, is a telecommunications carrier[60] entitled to interconnection at any technically feasible point pursuant to section 251(c) of the Act.

The Act defines "telecommunications service" as the offering of telecommunications – which is the transmission of information of the user's choosing, without change in the form or content of the information as sent and received[61] - for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of facilities used.[62] Consequently, the Commission must look at the nature of the service purchased by the end user when classifying this service – and not the network technology used by the provider of the service. For example, the end-user of a voice call does not experience a change in form (voice) and content (what is said) from what is sent even if the call originates in IP and terminates in TDM (or vice versa). Indeed, the Commission acknowledges that consumers have a reasonable expectation that interconnected VoIP services are replacements for traditional phone service.[63]

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59 "The term "telecommunications service" means the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of facilities used." 47 U.S.C. 153(46)

60 "The term "telecommunications carrier" means any provider of telecommunications services…"47 U.S.C. 153(44).

61 "The term "telecommunications" means the transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as send and received." 47 U.S.C. 153(43).

62 47 U.S.C. 153(46).

63 Report and Order, *IP-Enabled Services, et al*, WC Docket No. 04-36, WT Docket No. 96-198, CG Docket No. 03-123, CC Docket No. 92-105, FCC 07-110, ¶17 (2007); *See also* NPRM (FCC 11-13) at ¶ 612 ["Interconnected VoIP services, among other things, allow customers to make real-time voice calls to, and receive calls from, the public switched telephone network (PSTN), and increasingly appear to be viewed by consumers as substitutes for traditional voice telephone services."]

Declining to classify a service as a telecommunications service based solely on the different transmission technologies used in initiating or terminating a telephone call conflicts with the statutory definition of telecommunications service, which prohibits such consideration.

An information service, on the other hand, is defined as "the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications, and includes electronic publishing, but does not include any use of any such capability for the management, control, or operation of a telecommunications system or the management of a telecommunications service."[64] VoIP service does not generally fit the definition of an information service since, when making a telephone call, the customer served does not acquire, store, transform, process, retrieve or utilize information – regardless of whether the call is made over a circuit switched or an IP network.[65] To the extent that protocol conversions take place within the network, they are internetworking conversions, which the Commission has found to be telecommunications services.[66] Indeed, the statute makes clear that information service capabilities used for the "management, control or operation of a telecommunications system or the management of a telecommunications service" are exempt from the definition of information services.[67] Protocol processing "involving internetworking

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64 47 U.S.C. 153(20).

65 *See Wisconsin Final Decision* at 10 ["The various elements of U-verse Voice are similar to or simply re-package existing telecommunications services. U-verse Voice's voice service is a communication capability like Plain Old Telephone Service (POTS), and includes long distance as a telecommunications service. The related features, such as voicemail, "live-reply," and "click-to-call" are virtually identical to their counterparts in traditional telecommunications voice service and custom calling offerings. The ability to access call information and manage account information occurs through an associated web portal, and does not indicate integration within the voice service transmission itself, as in the case of the nomadic, interconnected, Internet-based VoIP service at issue in the *Vonage Order*."]

66 *See* IP-in-the-Middle Order at ¶ 12.

67 47 U.S.C. 153(20).

(conversions taking place solely within the carrier's network to facilitate provision of a basic network service, that result in no net conversion to the end user)" are included within that exception.[68] In particular, the Commission has stated that "[t]he protocol processing that takes place incident to phone-to-phone IP telephony does not affect the service's classification…because it results in no net protocol conversion to the end user."[69] Likewise protocol processing "in connection with the introduction of a new basic network technology (which requires protocol conversion to maintain compatibility with existing CPE)" is included within the statutory exception.[70]

To underscore the absurdity of conditioning interconnection rights based on technology, consider its implications for a common calling scenario, a call that originates from a traditional telephone subscriber of the incumbent to a VoIP subscriber of a cable company. The service provided to the originating subscriber (whether local or long distance) experiences no change just because the call is to a customer of the cable company. No feature is added, no functionality changed. The originating subscriber makes a local or long distance call that is indistinguishable from every other local and long distance call, without any knowledge that the terminating subscriber may be served by IP technology.[71]

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68 Order on Reconsideration, *Implementation of the Non-Accounting Safeguards of Sections 271 and 272 of the Communications Act of 1934, as amended*, CC Docket No. 96-149, 12 FCC Rcd 2297, ¶2 (1997)("Non-Accounting Safeguards Reconsideration Order").

69 IP-in-the-Middle Order at ¶ 7, *citing Stevens Report*, 13 FCC Rcd at 11526, para. 50 (*citing Non-Accounting Safeguards Order*, 11 FCC Rcd at 21958 para. 107).

70 Non-Accountings Safeguard Reconsideration Order at ¶ 2.

71 Further, in this example, the TDM-service provided by the incumbent is offered as a telecommunications service and does not vary on a call-by-call basis, depending upon the technology choice of the carrier serving the terminating customer. Indeed, if the mere fact that individual calls might terminate with a VoIP subscriber changed the regulatory classification of the originating subscribers service, telecommunications service would cease to exist today,

Indeed, there is no dispute of the ILECs' obligation to interconnect with the cable providers, even if the call originates or terminates in IP, albeit at a point of interconnection configured for TDM. Replacing that TDM-based traffic exchange with an IP interconnection,[72] however, would not affect *in any way* the retail services obtained by the incumbent's subscriber. The only thing that would change is the interconnection between the carriers (from TDM to IP).[73] The Commission has made clear that 251(c) is technology neutral; consequently, 251(c) interconnection rights cannot disappear is a circumstance where the *only* thing that has changed is the technology used to exchange traffic. Section 251(c) cannot be technology-*neutral*, yet at the same time *disappear* with a change in technology. Such a result would be absurd.

B. VoIP Services Involve Telephone Exchange Services and Exchange Access

As the Commission found in the *Local Competition Order*, "Congress made clear that incumbent LECs must provide interconnection to carriers that seek to offer telephone exchange service *and* to carriers that seek to offer exchange access."[74] Therefore a carrier is entitled to IP-

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because *all* TDM-subscribers have the potential – if not the actuality – of calling VoIP subscribers without any knowledge of the fact.

[72] For purposes of this example, the incumbent has deployed an IP transport network and is therefore capable of exchanging traffic with other IP carriers through an IP interconnection arrangement.

[73] Carriers frequently make technology choices within their networks that have no bearing on the services obtained by subscribers. For instance, carriers routinely deployed fiber-feeder facilities, introducing an analog-to-digital conversion in the field closer to the customer. Customers, however, are unaware of the technology choices of their carriers precisely because retail services can be supported by a number of technology platforms/choices without affecting the retail service itself. Anytime a TDM subscriber calls a VoIP subscriber, a media-conversion occurs. Today, that conversion occurs after the traffic exchange (in the example here, by the cable company). If the traffic exchange occurred in IP, the media conversion would occur before the interconnection point (in this example, by the incumbent). The fact that the media conversion occurs *before* or *after* the interconnection point has no affect on the retail service itself and cannot, therefore, become a basis to deny the application of 251(c).

[74] First Report and Order, *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, Interconnection between Local Exchange Carrier and*

to-IP interconnection for purposes of either telephone exchange service or exchange access service. The Commission had found the offering of "telephone exchange service" and "exchange access" is not dependant on what technology is used, but *how* a technology is used. As the Commission explained, if services "…provide subscribers with the capability of communicating with other subscribers in that same exchange, they are properly classified as "telephone exchange service.""[75] Providing subscribers "with the ability to communicate across exchange boundaries" is "exchange access."[76]

The Commission specifically has found that, although what constitutes an "exchange" has traditionally been associated with an area served by a switch, or by an interconnected system of switches, the statutory language does not limit the definition of telephone exchange service to services that only employ circuit-switching technology.[77] Rather, the Commission has found, the concept of an exchange has to do with geography, not equipment.[78] So while the difference in telephone exchange services and exchange access has to do with the geography of the call, interconnection is required for either telephone exchange or exchange access. Therefore, the important feature for purposes of interconnection pursuant to section 251(c) it is that it is used for the purpose of providing subscribers the ability to communicate with each other. Moreover, the Commission has found the *type* of communication at issue is irrelevant, as the Commission

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Commercial Mobile Radio Service Providers, CC Docket Nos. 96-98 and 95-185, FCC 96-325, ¶ 184 (1996)("Local Competition Order").

75 *Advanced Services Remand Order* at ¶ 3.

76 *Id.*

77 *Id.* at ¶ 22.

78 *Id., citing BellSouth Louisiana II Order* at ¶ 30 & n. 68 (*citing* H. Newton, NEWTON'S TELECOM DICTIONARY (1998) at 277.

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has found "information access service" to fall under the classification of telephone exchange service and exchange access.[79]

C. Carriers Obligations Under Sections 251 of the Act

The determination of which provision of section 251 of the Act applies to the interconnection depends on the carrier from which another carrier seeks interconnection. As stated above, Section 251(a)(1) outlines the obligations of all carriers, Section 251(b) applies to all local exchange carriers, and Section 251(c) prescribes the obligations of incumbent local exchange carriers in particular.

The Commission notes, a number of ILECs are offering IP services through their affiliates.[80] Those affiliates are subject to ILEC Section 251(c) obligations. As COMPTEL has explained, the D.C. Circuit vacated an order of the Commission that would have allowed an ILEC to avoid its Section 251(c) obligations by setting up a wholly owned affiliate to offer advanced services.[81] The Court found that to allow an ILEC to evade its § 251(c)'s requirements

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79 *Id.* at ¶ 3 ["We find that "information access service" is not a category separate and distinct from telephone exchange service and exchange access."] *See also.*, *ESP Exemption Order,* 3 FCC Rcd. 2631, 2631, ¶ 2 (1988).

80 FNPRM at ¶ 1388. In Texas, where the issue of IP interconnection was tangentially raised in an arbitration, AT&T explained that "AT&T Texas [the AT&T ILEC affiliate] is providing U-verse VoIP services and that some of its facilities are used in so doing. AT&T Texas provides U-verse VoIP and other U-verse services, however, through bundling of its wireline capabilities with the Internet/IP services and facilities owned by and provided through its affiliate SBC Internet Services d/b/a AT&T Internet Services ("ATTIS")." (AT&T TEXAS' RESPONSE TO AMICUS BRIEF OF TW TELECOM, SPRINT, CBEYOND, AND MCLEODUSA D/B/A PAETEC, Texas Public Utility Commission Docket NO. 26381, October 21, 2010 at 5) By this statement, AT&T admits that its ILEC is <u>*providing*</u> the service, albeit relying on its affiliate for some of the network capabilities that make the service possible.

81 *Ass'n of Communs. Enters. v. FCC*, 235 F.3d 662, 668 (D.C. Cir. 2001)("[T]he Commission may not permit an ILEC to avoid § 251(c) obligations as applied to advanced services by setting up a wholly owned affiliate to offer those services.")

through a wholly owned affiliate amounts to a "circumvention of the statutory scheme."[82] The Commission has recognized the applicability of that court's ruling to the ILEC IP affiliates.[83]

Nevertheless, the Commission is not limited by the facts of that decision. The affiliate is subject to the same obligations as the ILEC whenever it is found to be a "successor or assign" of the ILEC.[84] The Commission has found that a successor or assign analysis is ultimately fact-based and that the terms take their meaning from the particular legal obligation which is at issue.[85] Here the particular legal obligation at issue is the ILEC's duty to interconnect on an IP basis where feasible. If an ILEC confers the ability to perform a particular function, such as the ability to interconnect on an IP basis, to a wholly owned affiliate, that affiliate should be considered as a successor or assign and treated as an ILEC for purposes of the legal obligations associated with that function.

Furthermore, an entity has been found to be a successor or assign when there is "substantial continuity" between two companies. This standard is met when one entity is viewed as stepping into the shoes of, or replacing, another entity.[86] Facilities, services and functions of an IP affiliate offer a replacement for those traditionally provided by the ILEC. AT&T clearly agrees, as demonstrated in its comments regarding the transition from a circuit-switched network to IP-based communications. As AT&T states the "transition is underway already: with each

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82 *Id*. at 666

83 FNPRM at ¶ 1388.

84 *See* 47 U.S.C. 251(h).

85 Order, ALLTEL Communications, Inc., File No. EB-05-SE-084, ¶5 (2005) *citing*, *Ameritech-SBC Order*, 14 FCC Rcd at 14897, 14900, *citing* Howard Johnson Co. v. Detroit Local Joint Executive Board, Hotel and Restaurant Employees and Bartenders International Union, AFL-CIO, 417 U.S. 249 (1974)(stating that determinations about successorship must be based on ``the facts of each case and the particular legal obligation which is at issue…").

86 *Id*. at¶ 5 (footnotes omitted).

passing day, more and more communications services migrate to broadband and IP-based services, leaving the [current network] as relics of a by-gone era."[87] Since certain facilities, services, and functions of the affiliate are meant to replace that of the ILEC, the affiliate is replacing or "stepping into the shoes" – and therefore a successor or assign - of the ILEC.

The Commission also asks if an ILEC ceased offering circuit-switched voice telephone service, and instead only VoIP service, would it still be considered a "local exchange carrier."[88] A "local exchange carrier" is any person that is engaged in the provision of telephone exchange service or exchange access.[89] As discussed above, the offering of "telephone exchange service" and "exchange access" is not dependant on the use a circuit-switched network. As such, whether a carrier is a "local exchange carrier" is not dependant on its offering of circuit-switched voice telephone service. Specifically, the Commission has found that the definition of "telephone exchange service" and the interconnection obligations of section 251(c)(2), in particular, are not limited to voice communications provided over the public circuit-switched network.[90]

D. Enforcement of Carriers Duty to Negotiate in Good Faith

The Commission has recognized that the duty to negotiate interconnection agreements in good faith has been a longstanding requirement of the Communications Act and does not depend on the network technology underlying the interconnection.[91] In the *FNPRM*, the Commission asks if it needs to provide guidance on what constitutes good faith negotiations in the context of

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87 Comments of AT&T-NBP Public Notice #25, GN Docket Nos. 09-47, 09-51, 09-137, p. 1 (dated Dec. 21, 2009).

88 FNPRM at ¶ 1387.

89 47 USC 153(26).

90 *Advanced Services Remand Order* at ¶¶ 20-22.

91 FNPRM at ¶ 1335.

IP-to-IP interconnection and if enforcement of good faith negotiations should occur at the Commission, state commissions, courts or other forums.[92]

ILECs and carriers requesting interconnection have a statutory duty to negotiate in good faith the terms and agreements to fulfill the duties established by section 251(b) and (c),[93] as well as under Commission rules.[94] Section 51.301 of the Commission's rules set forth certain actions or practices that, among others, violate the duty to negotiate in good faith. Enforcement of the statutory requirement under section 251, including good faith negotiations, as well as associated Commission rules, is available through state arbitrations under section 252. As the Commission has found, states have built up significant expertise in adjudicating interconnection disputes and Congress intended that carriers not be deprived of that expertise.[95] As a consequence, the Commission has also determined that requests made to ILECs for interconnection and services pursuant to section 251(a) and (b) - in particular ILECs that are exempt from Section 251(c) pursuant to section 251(f)(1) - are subject to state commission arbitration in accordance with section 252 and voluntary negotiation remedies, including mediation by state commissions.[96] Since, in accordance with the Commission's *ICC Transformation Order*, all traffic is reciprocal compensation traffic, there would be no interconnection agreements with an ILEC pursuant to section 251(a) in isolation.[97] Therefore, the Commission's rules on good faith negotiation –

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92 *Id.* at ¶ 1348-9.

93 47 USC 251(c)(1).

94 47 CFR § 51.301(a)(b).

95 Interconnection Clarification Order at ¶ 23.

96 *Id*. at ¶ 19.

97 *See id*. at ¶21. In that Order, the Commission found that states only had the authority to arbitrate section 251(a) issues in conjunction with its arbitration of 251(b) issues, finding section 252 did not apply to matter involving section 251(a) alone. The Commission points to when a LEC interconnects with another carrier for the exchange of access traffic as interconnection not

which apply to section 251(b) negotiations between and the ILEC and the requesting telecommunications carrier – would always apply. When a state fails to act, in accordance with the Act, the Commission must assume the state's responsibility under Section 252.[98]

The record does not reflect a problem with IP interconnection agreements being negotiated between non-ILEC carriers. Nevertheless, the Commission has found that Sections 201 and 202 of the Act (which applies to all carriers) require "carriers to negotiate the provision of their services in good faith."[99]

E. Implementation Issues Related to IP-to-IP Interconnection

a. Responsibility for IP-to-TDM Conversion Costs

The Commission has asked whether a carrier that has deployed an IP network should be required to bear the costs of conversion if it requires TDM interconnection.[100] The short answer is that the Commission should not allow an ILEC with an IP network to deny IP interconnection, as ILECs are statutorily required to interconnect at any technically feasible point. Nevertheless, there may be a conversion to TDM to reach certain end users and, as the *FNPRM* recognizes, there are costs of conversion. The best way for conversion costs to be "borne by the carrier electing TDM conversion" is for the carriers to interconnect in IP (*where technically feasible*), and then (if needed) perform the TDM conversion on its side of the interconnection. In this way, the costs would be *absorbed* by the carrier favoring old technology (the carrier that requires the

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implicating section 251(b). The Commission, however, has now found that section 251(b)(5) includes such traffic.

98 47 U.S.C 252(e)(5).

99 Declaratory Ruling, *The Need to Promote Competition and Efficient Use of Spectrum for Radio Common Carrier Services*, 2 FCC Rcd 2910, ¶ 21(1987).

100 FNPRM at ¶ 1341.

TDM conversion to complete the call), not by first *imposing those costs* on the carrier favoring the IP interconnection, that doesn't require the TDM conversion.

Importantly, the approach suggested in the *FNPRM* would create an administrative quagmire. How would the costs of conversion be calculated and by whom? Where would disputes about these costs be resolved? Would the costs include the space and power requirements needed to house whatever equipment is used for the conversion? These questions (and more) would need to be resolved by the Commission if it were to seriously entertain this approach.

b. Rule Changes Should Not Delay Affirmation of Interconnection Obligations

The Commission seeks comment on any rules it may need to revise or adopt.[101] Initially, as discussed above, the Commission needs to confirm carriers interconnection obligations under section 251 of the Act so negotiates can begin. Once negotiations begin, carriers may have a better sense of what, if any, rules need to be added or modified.

Generally, existing rules provide the flexibility to accommodate IP interconnection, even if the rules also include provisions that are TDM-centric. For example, section 51.305 of the Commission's Rules provides for interconnection with the ILEC at any technically feasible point (as does section 251(c) of the Act). With this general guidance, the rules are technology neutral and presumably provide sufficient flexible to accommodate IP. The rule also identifies several TDM-based locations that are known technically-feasible points of interconnection (e.g., the line side of a local switch). While these POIs are only relevant to a TDM network, the provision is not intended as an exhaustive list of technically-feasible POIs, and therefore imposes no limits

101 FNPRM at ¶ 1350.

that would hinder IP interconnection.[102] In other words, by and large, the Commission's Rules are not technology-specific. While they may provide some specific guidance on what the requirements entail for a particular technology, like the statute from which they stem, the requirements themselves are technology-neutral. Consequently, additional rules changes should not be a prerequisite to negotiations (and hopefully agreements) under section 251 of the Act.[103]

Finally, the Commission has raised a number of additional questions concerning where IP interconnection should occur and whether it needs to provide (at this time) rules specifying the number and location of physical POIs.[104] As a general matter, we expect the number and location of IP interconnection POIs to be very different than the POIs that define the traditional circuit-switched architecture. Although we supported a continued reliance on LATA boundaries to define the geographic scope of the 251(b)(5) pricing standard for TDM networks, we noted that such boundaries are little more than a historical curiosity to new IP networks.[105] We fully expect that IP interconnections will occur at fewer locations, and cover much larger geographic regions, than what has occurred in the traditional network.[106] Moreover, we believe that carrier-hotels and other locations that house existing Internet traffic exchange points will be likely candidates for negotiated traffic exchange.

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102 *See* 47 CFR § 51.305.

103 This is not to say the rules could not be improved by listing, for instance, an equally-obvious point of IP interconnection (e.g., the interface port of a Session Border Controller or its equivalent). But the Commission should not delay clarifying that section 251(c) applies to IP interconnection in order to develop rule changes.

104 FNPRM at ¶ 1366-67.

105 *See* Section II(c) *supra*.

106 For instance, Earthlink's recommendation that a single POI per state (with a second point for redundancy) may be a reasonable starting point. FNPRM at n. 2480.

Overall, consistent with our comments above, we recommend that the Commission eliminate the legal confusion surrounding such negotiations by making clear that the basic statutory protections of 251(c) apply to IP-to-IP interconnection -- such as the requirement that compensation provisions must be reciprocal, that discrimination is prohibited, and that contracts must be filed and available to opt-in – and, at least *initially*, allow the industry to seek common ground within the four corners of these basic protections.[107]

III. THE COMMISSION DOES NOT NEED TO ADDRESS ORIGINATING ACCESS

The Commission states that because originating access is not included in Section 251(b)(5) these charges should be eliminated at the conclusion of the ultimate transition to a new intercarrier compensation regime.[108] But, a failure to mention originating access does not grant authority to impose rules relating to originating access. Unlike the originating charges for local traffic addressed in the *Local Competition First Report and Order*, section 251(g) of the Act preserves "exchange access, information access, and exchange services for such access to interexchange carriers and information service providers in accordance with the same equal access and nondiscriminatory interconnection restrictions and obligations (including receipt of compensation)" previously in effect "until such restrictions and obligations are explicitly superseded by regulations prescribed by the Commission."[109] Therefore the Commission needs to justify its authority. Until such time, the pre-1996 Act regulatory regime, including rules regarding "receipt of compensation," would continue to apply to originating access.

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107 As noted (n. 103 *supra*), it may become appropriate to provide additional guidance at some point in the future. If so, COMPTEL will supplement these Comments with additional filings in this proceeding as appropriate.

108 FNPRM at ¶ 1298.

109 47 U.S.C. § 251(g).

Even if the Commission determines that it has authority over intrastate originating access, through section 251(b)(5) or otherwise, as a policy matter the Commission should allow originating access charges to decay naturally (as originating access disappears) because there is no concern with arbitrage or need for revenue protection.

The most recent statistics from the Commission indicate that nearly 70% of residential lines are presubscribed to the ILEC or its affiliate for long distance service (and over 60% of all residential and business subscribers).[110] As has been noted, in these circumstances originating access is simply "an imputation, not a real payment".[111] "In such instances the incumbent's reduced access revenue is offset by the affiliate's savings in access expense."[112] As a result, the level of originating access rates is largely irrelevant and no recovery is necessary. Indeed, no reform is needed.

Originating access only applies in a meaningful way in those increasingly rare instances where an interexchange carrier provides long distance service to a customer that obtains local service from another provider. But even in these situations, reform is unnecessary. One of the Commission's primary rationales for reform was to cure arbitrage situations. The concern with regard to terminating access rates was carriers' ability to mask the origination of voice traffic to reduce or avoid payments or assess above-cost rates for delivering traffic and thereby motivating

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110 See Local Telephone Competition: Status as of June 30, 2010, Industry Analysis and Technology Division, Wireline Competition Bureau, Federal Communications Commission, released March 2011, Table 7.

111 FNPRM at ¶ 1300, *citing* CRUSIR August 3 PN Comments at 11-12.

112 Missouri Commission August 3 PN Comments at 13 (dated Aug. 24, 2011).

carriers to artificially inflate traffic volumes. These concerns are not present with originating access since the originating carrier measures the traffic and captures the billing detail itself.[113]

CONCLUSION

For the foregoing reasons, the Commission should expeditiously adopt a transition for all transport rate elements and affirm carriers' rights to interconnection with the ILEC on an IP-to-IP basis pursuant to section 251(c) of the Act.

Respectfully submitted,

/s/

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Karen Reidy
COMPTEL
900 17th Street, NW
Suite 400
Washington, D.C. 20006
(202) 296-6650 phone

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[113] This is assuming that under the *ICC Transformation Order* current originating access rates (including *intrastate* originating rates for interconnected VoIP calls) remain in effect. *See*, Petition for Reconsideration and/or Clarification of Windstream/Frontier, pp. 21-9 (filed Dec. 29, 2011)[Discusses the need for Commission clarification on this matter.] If the Commission's order is meant to apply interstate originating access charges to any originating intrastate call that terminates in VoIP, the Order would be creating (for the first time) a circumstance where the information needed to correctly bill originating access would no longer be in the possession of the provider of originating access. This would be because the applicable rate (intrastate originating access or interstate originating access) would depend upon a fact *invisible* to the originating provider (i.e., the technology used by the carrier terminating the call).