Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of AT&T Petition to Launch a Proceeding Concerning the TDM-to-IP Transition	)	GN Docket No. 12-353

REPLY COMMENTS OF CHARTER COMMUNICATIONS, INC.

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Charter Communications, Inc. ("Charter") hereby submits these reply comments in the above-captioned proceeding. Charter agrees with AT&T, the National Telecommunications Cooperative Association ("NTCA"), and many of the other commenters in this proceeding that the Commission should take steps to facilitate the nationwide conversion to an all-Internet Protocol ("IP") voice network.[1] However, Charter firmly opposes any suggestion by AT&T and other Incumbent Local Exchange Carriers ("ILECs") that the Commission's efforts should include eliminating or relaxing ILECs' obligation to interconnect with competitive providers when IP technology is used. To the contrary, a critical component of advancing the IP transition will be ensuring the availability of IP interconnection – the absence of which is functioning as a barrier to the IP transition today – and Charter agrees with many of the commenters in this proceeding that the Commission should take action to ensure that such interconnection is available on reasonable terms.[2]

[1] *See* AT&T Comments at 1; NTCA Petition at ii-iii; Cablevision Comments at 2; CenturyLink Comments at 1-2.

[2] *See, e.g.*, Cablevision Comments at 3-4, 4-5; Cbeyond *et al*. Comments at 6-16; NTCA Petition at 13-14; Competitive Carriers Association Comments at 4-6; Comptel Comments at 7-11; Cox Communications Comments at 9-11.

INTRODUCTION AND SUMMARY

Charter is the fourth largest cable company in the United States, serving approximately 5.3 million customers. Charter has long supported efforts to transition the nation's networks to IP, having invested over $8 billion to rebuild its legacy analog plant and to deploy broadband, competitive voice, and advanced video services to its largely rural subscriber base. Over 99% of the voice services Charter provides to its customers are provided in IP.

The ability to interconnect in IP is particularly important to Charter because of its geographic footprint and customer base. Charter's customers are widely distributed among 25 different states, and, in most of the areas that Charter serves, Charter's voice offering is the only facilities-based alternative to ILEC voice service. Moreover, despite Charter's having a large number of customers on a *national* basis, the ILEC is still the dominant voice provider in every single market Charter serves. Therefore, Charter is particularly cognizant that the policies enacted by Congress in the Communication Act of 1996 ("1996 Act") – to ensure that competitive providers can interconnect to the nation's phone network and that ILECs not be able to exploit their market position to harm competition – remain important today.

Congress' goal of advancing competition by requiring ILECs to interconnect with competitive providers, however, is being frustrated as the nation's voice networks transition to IP. Despite the large investments that providers like Charter have made in IP technology, much of the Public Switched Telephone Network ("PSTN") continues to use circuit-switched equipment, imposing inefficiencies on IP-based providers and denying consumers the full benefits of the IP transition. ILECs in Charter's service areas do not provide IP interconnection, and as comments in this proceeding indicate, Charter's experience is hardly unique among

competitive providers.[3] By refusing to interconnect in IP on reasonable terms, ILECs are discouraging investment by providers who fear that upgrading their networks to IP technology will generate additional costs when ILECs then require them to convert their IP traffic to Time Division Multiplex ("TDM") formant in order to interconnect. Thus, an essential focus of the Commission's efforts to speed the IP transition must be improving IP interconnection, including clarifying that carriers have the same rights to interconnect and exchange voice traffic in IP as they do in TDM.

While the precise relief AT&T seeks in its petition is unclear, AT&T plainly seeks to eliminate interconnection rights, arguing that there are no IP interconnection rights under existing law – even for managed voice traffic – and that no such rights should be recognized.[4] AT&T's attack involves both a legal argument – that there is no right to interconnect in IP because Voice over Internet Protocol ("VoIP") providers are "information service" providers rather than telecommunications carriers[5] – and a policy argument – that once the phone network has transitioned to IP, it will function like the public Internet, where commercial arrangements have been able to address the interconnection of networks without the need for a regulatory backstop.[6] Both arguments are mistaken.

As for AT&T's legal claim, the 1996 Act's interconnection obligations are technologically neutral and do not depend on what communications protocol is used. And the provision of exchange access services on an intercarrier basis is a telecommunications service

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[3] *See, e.g.*, Cbeyond Comments at 12-13; Sprint Nextel Comments at 28; Cablevision Comments at 3.

[4] *See* AT&T Comments at 11-12.

[5] *Id.*

[6] *Id.*

that subjects the participating carriers to Section 251, even if the service provided to retail customers is an information service.

As for AT&T's policy claim, Charter strongly agrees that the public Internet should remain unregulated. However, the market for transmission of voice calls is very different. Whereas Internet traffic can take numerous different paths between networks without degradation or coordination (thus minimizing both the incentives and the opportunities for individual providers to act anticompetitively), the managed IP networks used by facilities-based providers like AT&T and Charter for voice calls share all the same bottlenecks and opportunities for anticompetitive conduct as the traditional PSTN. Indeed, for all intents and purposes, it is the same network, with the same players, only using upgraded technology. Thus, while carriers might upgrade the communications protocol in which they transmit voice calls from TDM to IP, the concerns that caused Congress to include interconnection obligations in the 1996 Act remain vital today.

I. IP INTERCONNECTION FOR VOIP SERVICES IS LEGALLY REQUIRED.

As stated above, IP interconnection is critical to transitioning the nation's voice network to IP. Carriers have reduced incentive to upgrade their networks to IP if interconnection with the ILEC will require them to convert their traffic to TDM in order to interconnect. In addition, the current system – under which many ILECs refuse to interconnect in IP even with carriers that have already made the investments to upgrade their networks to IP – penalizes the very investments needed to modernize the nation's voice networks. Charter's experience, in providing competitive VoIP service across 23 different states, is that no ILECs have offered or permitted IP interconnection under the Act, taking the position (as AT&T does in its comments

here) that no legal obligation to interconnect in IP exists. The comments in this proceeding confirm that this experience is common across the industry.[7]

As a number of commenters have noted, there is no merit to the proposition that IP networks are somehow exempt from interconnection requirements. Charter has explained extensively in other comments that Section 251 imposes interconnection obligations without respect to the technology used, and that to the extent an ILEC provides IP interconnection within its own network or to affiliated entities, Section 251(c)(2) of the Act requires it also to make interconnection available to CLECs on the same terms.[8] Rather than repeat its previous submissions on the subject, Charter incorporates them by reference here.[9]

AT&T's argument to the contrary relies upon the claim that no interconnection obligations attach to VoIP service, because VoIP is an "information service" rather than a "telecommunications service" under the Communications Act, such that the entities providing it are not carriers subject to Section 251.[10] As Charter has explained, however, even if retail VoIP service is properly classified as an information service the provision of access services in connection with VoIP calls on a wholesale basis is a telecommunications service, and carriers providing such wholesale service have interconnection rights and obligations under Section 251.[11] The Commission has made clear that ILEC provision of exchange access constitutes

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[7] *See* note 3 *supra*.

[8] *See generally* Comments of Cablevision Systems Corp. and Charter Communications, Inc., WC Docket No. 11-119 (Aug. 15, 2011) ("Cablevision/Charter Comments").

[9] *See Id*.

[10] *See* AT&T Comments at 11-12.

[11] *In re Time Warner Cable Request for Declaratory Ruling that Competitive Local Exchange Carriers May Obtain Interconnection Under Section 251 of the Communications Act of 1934, as Amended, to Provide Wholesale Telecommunications Services to VoIP Providers* 22 FCC Rcd 3513, 3515, ¶4 (2006).

provision of a telecommunications service,[12] such that they are carriers subject to Section 251 irrespective of how VoIP is classified at the retail level. Policy considerations aside, there is simply no merit to AT&T's attempt to frame itself as exempt from its interconnection obligations under existing law merely because of an change to the protocol used to convey voice calls.

II. IP INTERCONNECTION RIGHTS FOR MANAGED VOIP SERVICES REMAIN CRUCIAL, AND THE INTERNET PEERING MODEL IS INAPPOSITE.

Beyond its legal argument, AT&T also makes a policy argument that interconnection requirements in the IP context are no longer necessary. Much of AT&T's argument for abandoning interconnection obligations centers around its claim that the Internet is able to function through voluntary peering arrangements by which data is transmitted among various providers without the need for regulatory oversight.[13] This analogy is misplaced. The competitive market for transmission of data on the public Internet is not inherent in the nature of Internet Protocol, but rather arises from features of that market that are not shared by the market for voice services. Superficial analogies between the two will only engender policies that harm competition and hurt consumers.

In the context of the public Internet, the market for peering arrangements has been able to function without regulatory interconnection requirements because of the absence of incentives and opportunities for transmission providers to exert monopoly pricing. IP packets on the public Internet do not need to take specified paths to reach their destinations. Because they can take any of multiple available paths to their destinations without coordination by the involved

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[12] *See In re Federal-State Joint Board on Universal Service*, Report and Order, 12 FCC Rcd 8776, 9178-19, ¶ 785 (1997) (exchange access is a telecommunications service); *In re Connect America Fund*, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 17,633, 18,105-17, ¶ 956 (2011) (irrespective of how VoIP services are classified, the service they purchase from LECs is exchange access).

[13] *See* AT&T Comments at 11.

providers, there are rarely reasons for any particular transmission provider to seek to deny access to its network. In addition, for much of the data transmitted on the public Internet (such as loading webpages, or transmitting files), the consumer experience is tolerant of any *de minimis* delays or disruptions that might arise as the result of data packets' taking less-efficient routes. Therefore, in most cases, any competitive advantage a particular provider might enjoy from controlling the most efficient path to transmit a competitor's data is minimal. The combination of these market features provides pricing discipline that prevents any one provider from seeking to extract unreasonable concessions in connection with peering arrangements. Indeed, because the market for Internet peering services is essentially competitive, Charter strongly agrees that such arrangements should be negotiated on a commercial basis without regulatory interference.

Conversely, very little of the above is true for voice service. Although VoIP services might utilize the same IP protocol as data that is transmitted over the public Internet, the resemblance largely ends there. With the exception of over-the-top providers that depend upon the public Internet for transmission (and therefore cannot provide the same quality-of-service guarantees that customers expect from facilities-based providers), VoIP calls do not travel over the public Internet. Rather, they utilize managed IP networks that interconnect with the PSTN. To provide consistent and reliable VoIP service that meets customer expectations, each entity involved in the transmission of a voice call must be able to guarantee a level of service that prevents an excessive number of packets from being dropped or delayed. Internet Protocol, conversely, is a "best effort" delivery system not designed to accommodate quality-of-service guarantees. Put simply, reliable and quality fixed interconnected VoIP service requires coordination among networks in a way that the public Internet does not. This need for coordination replicates the same bottlenecks that exist on the PSTN: unlike the public Internet, a

competitive VoIP provider cannot circumvent an ILEC that imposes monopoly conditions on interconnection by simply routing its transmissions through alternate channels – the alternate channels would be unable to deliver the same quality call. Although it might be feasible in some markets for competitive providers to coordinate interconnection with one another in IP or to arrange for quality-of-service guarantees with alternate providers, the transaction costs of such interconnection (just like in the TDM context) make it impractical in the majority of markets.

AT&T focuses on the fact that many ILECs no longer control the same share of the residential market that they once did.[14] However, ILECs continue to enjoy substantial market power in the interconnection context not only because they control the ability to originate calls from and terminate calls to their own subscribers (which, despite the overall reduced residential market share of some ILECs, is still very substantial relative to competitive providers in virtually every local market). Rather, ILECs continue to exercise such leverage also because they generally control access to calls originating or terminating from subscribers of other competitive providers that for historical reasons interconnect with the ILEC. Accordingly, while it might be theoretically possible for a multitude of competitive providers to each interconnect with one another, the transaction costs of such an approach prevent it from being a viable option in the foreseeable future. Thus, a narrow focus on residential market share, as AT&T urges, understates the extent to which there remain substantial imbalances in many markets between the traffic volume controlled (directly or indirectly) by ILECs and traffic controlled by smaller competitive providers seeking interconnection. This issue is of particular importance to Charter, which, because its customer base is widely dispersed, may control only a small portion of traffic

[14] *See* AT&T Comments at 9 & Ex. A.

in many of the markets where it depends upon interconnection with the ILEC to remain competitively viable.

CONCLUSION

For the reasons stated above, Charter urges the Commission, as part of any proceeding arising out of AT&T's and/or NTCA's Petitions, to clarify IP interconnection rights and ensure that competitive providers are able to interconnect in IP on reasonable terms.

Respectfully Submitted,

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