

**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C. 20554**

In the Matter of	)	
	)	
TW Telecom Inc. Petition for Declaratory	)	WC Docket No. 11-119
Ruling Regarding Direct IP-to-IP	)	
Interconnection Pursuant to Section 251(C)(2)	)	
of the Communications Act	)	
	)	

**COMMENTS OF GOOGLE INC.**

Google Inc. (Google) files these comments in response to the Petition for Declaratory Ruling of TW Telecom Inc. (TWTC) seeking a ruling that it has the right under Section 251(c)(2) of the Communications Act, as amended, (Act) to establish direct Internet Protocol (IP) -to-IP interconnection with incumbent LECs for the transmission and routing of its facilities-based Voice-over-Internet-Protocol (VoIP) services.<sup>1</sup>

**INTRODUCTION**

TWTC's petition brings timely focus on two important but entirely separate issues: carrier interconnection rights and the appropriate classification of certain VoIP services. Notably, a Commission decision classifying TWTC's facilities-based VoIP offering as a telecommunications service does not necessarily lead to the legal conclusion that IP-to-IP interconnection involving different VoIP services falls within the purview of Title II of the

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<sup>1</sup> *Comment Sought on TW Telecom Inc. Petition for Declaratory Ruling Regarding Direct IP-to-IP Interconnection Pursuant to Section 251(C)(2) of the Communications Act, Public Notice*, WC Dkt. 11-119, DA 11-1198 (released July 15, 2011). *See also* Petition for Declaratory Ruling That tw telecom inc. Has the Right to Direct IP-to-IP Interconnection Pursuant to Section 251(c)(2) of the Communications Act, as Amended, for the Transmission and Routing of tw telecom's Facilities-Based VoIP Services and IP-in-the-Middle Voice Services, WC Dkt. 11-119 (filed June 30, 2011) ("TWTC Petition" or "Petition").

Communications Act, in particular Section 251(c). VoIP is a certain class of service offerings provided over communications networks, while Internet Protocol is the transmission code used within networks to carry VoIP and many other kinds of traffic. In short, while IP transmission is a new and desirable mode of communications technology, its use in a network does not automatically determine how a particular service offering should be classified and treated as a regulatory or legal matter.

The FCC already has noted the many benefits of transitioning to all IP networks in the *National Broadband Plan* and as part of its ongoing proposals to reform universal service (USF) and intercarrier compensation (ICC). Facilitating IP interconnection is a necessary part of this process. To this end, Google believes it would be useful for the FCC to clarify and affirm the statutory obligations of local telecommunications carriers to offer IP interconnection. Regardless, the FCC should reaffirm, separately, that any decisions regarding the regulatory classification of particular services, such as the facilities-based VoIP service provided by TWTC, depends upon the statutory definitions codified in the Communications Act.

## DISCUSSION

### **I. The FCC has already correctly found that promoting the deployment of IP networks should be a national priority.**

There is no question that IP transmission is more efficient, scalable and flexible than TDM-based telephone service, which is why the FCC has established the deployment of all-IP networks as a national priority.<sup>2</sup> The rise of IP-based services is increasingly driving network

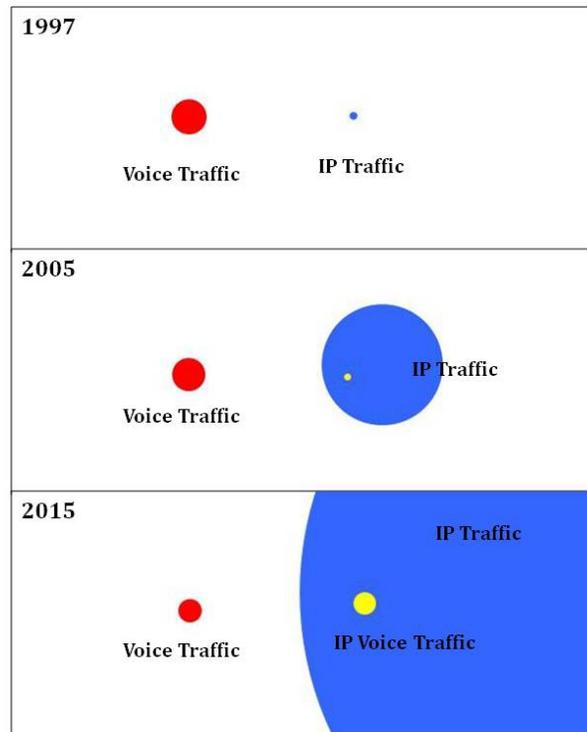
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<sup>2</sup> *In the Matter of Connect America Fund*, WC Dkt. 10-90, Notice of Proposed Rulemaking and Further Notice of Proposed Rulemaking, 26 FCC Rcd. 4554, ¶¶ 506, 527 (2011) (“*USF/ICC NPRM*”); Omnibus Broadband Initiative, *Connecting America: The National Broadband Plan*, GN Dkt. 09-51, 59, 153 (2010) (“*National Broadband Plan*”).

providers to modernize as users seek to leverage the potential of IP services and broadband networks.

Indeed, much of the nation’s communications traffic is already moving away from TDM to IP transmission networks, and at the same time away from standalone voice telephony services. Estimates are that in just a few years, voice traffic is projected to be just a tiny fraction of all network traffic, with TDM voice a tiny tail on a very large dog. The regulatory policies established by the FCC have the ability to help or hinder this transition, especially by carriers that have yet to upgrade their networks.

**The Evolution of Network Traffic<sup>3</sup>**



<sup>3</sup> Visualization based on data and analysis from: K. G. Coffman and A. M. Odlyzko, *The Size and Growth Rate of the Internet*, First Monday (Oct. 1998); Cisco, *Global IP Traffic Forecast and Methodology, 2006-2011* (updated Jan. 2008); Cisco, *Cisco Visual Networking Index: Forecast and Methodology, 2010-2015* (June 2011); FCC *Trends in Telephone Service*, Wireline Competition Bureau (Sept. 2010). See also Letter from Donna N. Lampert, Counsel for Google Inc., to Marlene H. Dortch, Secretary, FCC, CC Dkt. 10-90, *et al.* (filed June 16, 2011) (“Google June 16 Ex Parte”).

As the FCC, TWTC and others have explained, IP networks reduce costs and increase revenue potential for network providers.<sup>4</sup> IP networks decrease provisioning and circuit costs, switch costs, space needs, energy costs, signaling costs, and associated overhead while improving network reliability and survivability.<sup>5</sup> IP networks also allow network providers (and others) to offer new and innovative services to generate fresh sources of revenue, creating economic opportunity, jobs and growth.<sup>6</sup> In fact, growing revenues due to broadband deployment and IP services can outpace falling revenues from traditional PSTN service.<sup>7</sup>

For this reason, the FCC should take steps to ensure that network operators have the maximum incentives to transition to IP networks, including eliminating obstacles imposed by virtue of rules focused upon legacy architectures. To that end, not only should IP-based services like VoIP not be saddled with the inefficiencies of the TDM telephony regime, decisive FCC action can help speed up the IP transition, allowing users throughout the nation to enjoy the efficiencies and benefits of IP networks.

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<sup>4</sup> TWTC Petition at 4.

<sup>5</sup> See *USF/ICC NPRM* at ¶ 506; Jim Hodges, *Network Modernization in the Era of All-IP Networks*, White Paper, Heavy Reading, at 5-7 (May 2011).

<sup>6</sup> See, e.g., News Release, *FCC Chairman Genachowski Announces 100,000 New Broadband-Enabled Call Center Jobs with Business Leaders*, Aug. 4, 2011.

<sup>7</sup> See, e.g., Sean Buckley, *SureWest's broadband gains help offset Q2 landline voice losses*, FierceTelecom, July 29, 2011, available at <http://www.fiercetelecom.com/story/surewests-broadband-gains-help-offset-q2-landline-voice-losses/2011-07-29> (growing broadband revenue outpaces falling PSTN revenue); Sean Buckley, *Cincinnati Bell's Q2 results get boost from data center service gains*, FierceTelecom, Aug. 4, 2011, available at <http://www.fiercetelecom.com/story/cincinnati-bells-q2-results-get-boost-data-center-service-gains/2011-08-04> (falling PSTN revenue overcome by 4G, IPTV, and data center revenues).

## **II. Clear obligations for IP interconnection will help the transition to modern networks.**

TWTC joins other parties that have explained the need for greater clarity regarding the obligations of local telecommunications service providers to offer IP interconnection.<sup>8</sup> As these parties explain, IP interconnection barriers imposed by some local carriers can arbitrarily increase the operating costs of connecting network providers and degrade service quality, preventing them from realizing the full benefits of IP network upgrades.<sup>9</sup>

Simply put, the promise of IP networks could be significantly undermined unless the FCC makes clear that the interconnection obligations established by the Act will not be simply left behind in the ongoing transition to all-IP networks. This is especially necessary since it appears that eventually all interconnection arrangements ultimately will be for IP traffic.

The FCC appears to have ample authority to require adequate IP interconnection pursuant to the broad authority provided by the Act. At a minimum, Sections 251(a) and 256 create an obligation for carriers “to interconnect directly or indirectly with the facilities and equipment of other telecommunications carriers,” as well as “to ensure the ability of users and information providers to seamlessly and transparently transmit and receive information between and across

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<sup>8</sup> See, e.g., TWTC Petition at 2; Google June 16 Ex Parte at 2-3; Reply Comments of PAETEC Holding Corp., *et al.* at 2-5, WC Dkt. 10-90, *et al.* (filed May 23, 2011); Comments of Google Inc. at 10-11, WC Dkt. 10-90, *et al.* (filed Apr. 18, 2011); Comments of Sprint Nextel at 20-27, WC Dkt. 10-90, *et al.* (filed Apr. 18, 2011) (“Sprint USF/ICC Comments”); Comments of XO Communications, LLC at 15-16, WC Dkt. 10-90, *et al.* (filed Apr. 18, 2011); Comments of COMPTTEL at 4-7, WC Dkt. 10-90, *et al.* (filed Apr. 18, 2011) (“COMPTTEL USF/ICC Comments”); Comments of Cox Communications, Inc. at 18-19, WC Dkt. 10-90, *et al.* (filed Apr. 18, 2011) (“Cox USF/ICC Comments”); Comments of EarthLink, Inc. at 2-7, WC Dkt. 10-90, *et al.* (filed Apr. 18, 2011) (“EarthLink USF/ICC Comments”); Opening Comments and Reply Comments on Section XV of Time Warner Cable Inc. at 12-13, WC Dkt. 10-90, *et al.* (filed Apr. 18, 2011).

<sup>9</sup> See TWTC Petition at 5-7; Sprint USF/ICC Comments at 27; EarthLink USF/ICC Comments at 3; Cox USF/ICC Comments at 18; COMPTTEL USF/ICC Comments at 7.

telecommunications networks.” Nothing in the Act’s language suggests that IP networks should be treated differently from TDM networks, or any other type of communications network.<sup>10</sup>

Affirming the applicability of statutory interconnection obligations to local networks employing IP under Sections 251(a) and 256 does not mean the FCC must take any specific action at this time. In particular, the FCC need not and should not weigh in on what constitutes a reasonable interconnection arrangement, or establish particular interconnection rates, or determine the appropriate basis for assessing such rates. Nor does the agency need to engage in heavy-handed regulation or utilize legacy-type rules. Rather, the better approach at this juncture is for the FCC to take a largely hands-off approach, serving instead only as a regulatory backstop, and providing a neutral forum for parties who cannot agree on interconnection terms and rates.

### **III. Regulatory classification of particular service offerings should be guided by the Act.**

Notably, the Commission already has established that the nature of the particular service being carried does not necessarily impact a carrier’s Section 251(a) obligations.<sup>11</sup> As such, it is not necessary for the FCC to find that TWTC’s facilities-based VoIP service offering is a telecommunications service in order to clarify the interconnection obligations of telecommunications carriers under Section 251(a).

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<sup>10</sup> To the extent that the FCC determines that a particular IP-based offering is a telecommunications service, such as local exchange or exchange access service, as urged by TWTC for its services in its Petition, the additional obligations of Sections 251(b) and (c) may also apply. While it is conceivable that the topology and characteristics of IP networks differ so substantially from TDM networks that Sections 251(b) and (c) are not a good fit, a more fulsome on-the-record analysis is necessary to reach that conclusion.

<sup>11</sup> *In the Matter of Petition of CRC Communications of Maine, Inc. and Time Warner Cable Inc. for Preemption Pursuant to Section 253 of the Communications act, as Amended, Declaratory Ruling*, 26 FCC Rcd. 8259, n.96 (2011).

Not all VoIP and IP-based services and applications are the same. The FCC's framework for IP-enabled services, while still evolving, has consistently recognized the distinctions between the various iterations of VoIP and IP services, noting, for example, differences between fixed and nomadic services.<sup>12</sup> Classification of communications services, including particular VoIP offerings, as telecommunications or information services should be based solely on the Act's definitions.

The fact is that IP is a communications transmission protocol and is not itself an enhancement that determines the nature of a service for regulatory purposes. The FCC has properly held that simply utilizing IP does not transform a service into an information service and it should continue this approach.<sup>13</sup> As Google and others have reiterated, IP transmission, in itself, is not "magic pixie dust" that somehow creates a regulation-free zone.<sup>14</sup>

TWTC's facilities-based VoIP service, described as providing exchange and exchange access services, might well fit the Act's definition of a telecommunications service. However, VoIP covers a broad range of services and applications, from facilities-based services that mirror traditional voice telephony calls (such as offered by many cable and wireline providers), to "over the top" voice services accessible from any Internet connection, to software platforms that include a secondary voice component as part of an integrated package of features. The relevant statutory distinctions rest on whether the end user is empowered to interact with stored

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<sup>12</sup> See *Preserving the Open Internet*, Report and Order, 25 FCC Rcd 17905, ¶ 22 (2010).

<sup>13</sup> See *AT&T's Phone-to-Phone IP Telephony Services*, Order, 19 FCC Rcd. 7457, ¶ 24 (2004).

<sup>14</sup> See, e.g., *Comments of Google Inc.* at 5, WC Dkt. 10-90, *et al.* (filed Apr. 1, 2011).

information and to use voice capabilities in ways fundamentally different than traditional plain old telephone service (POTS).<sup>15</sup>

In fact, many if not most IP-based voice services properly are classified as information services as defined under the Act, providing consumers the “value-added” enhancements that characterize information services.<sup>16</sup> As the FCC previously has recognized, some IP-based voice services integrated with advanced features that provide information about other users, presence information, and a variety of communications features and options are properly deemed information services under the Act.<sup>17</sup>

Other types of Internet offerings, however, including apps stores, online instant messaging platforms, and online games, may include some human voice element but do not include the underlying telecommunications transmission component required by the Act. These offerings are not even information services pursuant to the statutory definition. Instead, they are online software-based platforms and applications, well outside the scope of the FCC’s jurisdiction.<sup>18</sup>

The ability of a service to facilitate direct voice communications does not necessarily require that it falls within the definition of a telecommunications service.<sup>19</sup> Given the wide variety of service offerings that come within the rubric of VoIP, the application of the statutory

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<sup>15</sup> See 47 U.S.C. § 153(20).

<sup>16</sup> *Petition for Declaratory Ruling that pulver.com’s Free World Dialup is Neither Telecommunications Nor a Telecommunications Service*, Memorandum Opinion and Order, 19 FCC Rcd 3307, ¶ 12 (2004) (“*Free World Dialup*”).

<sup>17</sup> *Id.* at ¶ 11.

<sup>18</sup> See *National Cable & Telecommunications Assn. v. Brand X Internet Services*, 545 U.S. 967, 976-77 (2005) (“*Brand X*”).

<sup>19</sup> *Free World Dialup* at ¶ 12.

definitions should be based on the specific features of a particular service. As such, to the extent that the FCC utilizes this proceeding to determine the regulatory classification of TWTC's facilities-based VoIP service, it should avoid pre-judging the class of VoIP services and applications generally.

**CONCLUSION**

For the foregoing reasons, the Commission should make clear that the regulatory classification of a particular VoIP offering and the legal status of IP-to-IP interconnections are two different questions that require two different types of analysis. TWTC's Petition does raise some important questions about the obligations of local carriers to offer IP interconnection. However, any Commission decision regarding the classification of TWTC's facilities-based VoIP service should be limited to that service offering, and based on application of the pertinent statutory definitions.

Respectfully submitted,



Richard S. Whitt, Esq.,  
Director and Managing Counsel  
for Telecom and Media Policy

Megan Anne Stull, Esq.,  
Telecom Policy Counsel

GOOGLE INC.  
Public Policy Department  
1101 New York Avenue NW  
Second Floor  
Washington, DC 20005

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Donna N. Lampert  
Mark J. O'Connor  
Joseph A. Bissonnette

LAMPERT, O'CONNOR & JOHNSTON, P.C.  
1776 K Street NW, Suite 700  
Washington, DC 20006  
(202) 887-6230 tel  
(202) 887-6231 fax

*Counsel for Google Inc.*