

Before the  
Federal Communications Commission  
Washington, DC 20554

In the Matter of )  
)  
International Comparison and Consumer ) GN Docket No. 09-47  
Survey Requirements in the Broadband Data )  
Improvement Act )  
)  
A National Broadband Plan for Our Future ) GN Docket No. 09-51  
)  
Inquiry Concerning the Deployment of ) GN Docket No. 09-137  
Advanced Telecommunications Capability to )  
All Americans in a Reasonable and Timely )  
Fashion, and Possible Steps to Accelerate Such )  
Deployment Pursuant to Section 706 of the )  
Telecommunications Act of 1996, as Amended )  
by the Broadband Data Improvement Act )  
)  
Comment Sought on Transition From Circuit- )  
Switched Network to All-IP Network (NBP )  
PN #25) )

To: The Commission

**COMMENTS OF HYPERCUBE TELECOM, LLC ON NBP PUBLIC NOTICE #25**

HyperCube Telecom, LLC (“HyperCube”) offers the following comments on the Commission’s public notice on whether the Commission should issue a Notice of Inquiry (“NOI”) to consider the transition in technology and services from the circuit-switched public switched telephone network (“PSTN”) to an Internet protocol (“IP”) based communications world.<sup>1</sup> HyperCube is a privately held company headquartered in Dallas, Texas, and a premier provider of local and national tandem and IP peering services to carriers throughout the U.S.

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<sup>1</sup> *Comment Sought on Transition from Circuit-Switched Network to All-IP Network, NBP Public Notice #25*, GN Docket Nos. 09-47, 09-51, and 09-137, Public Notice, DA 09-2517 (rel. Dec. 1, 2009) (“Public Notice”).

HyperCube provides tandem interconnection services to the competitive marketplace, including wireless, wireline, cable telephony, and voice over Internet protocol (“VoIP”) providers.

HyperCube agrees with the Commission that an NOI is the appropriate next step to consider the important issues raised by the transformation of communications networks. The implications of this transformation must be understood so that the Commission can identify policies that encourage, and do not inhibit or inadvertently curtail services which consumers expect with the adoption and use of new IP-based technologies. The ultimate goal should be to maximize these evolutionary technological changes for consumers’ benefit.

In order to do so, HyperCube urges the Commission to ensure that a commonality of obligations and rights exists across all providers that originate or terminate traffic on the public switched telephone network (“PSTN”). As the network transition proceeds, IP-based carriers too often demand the rights that pertain to carrier status, but refuse to accept any of the obligations. (In HyperCube’s experience, this is true even of obligations that the Commission has squarely applied to interconnected VoIP providers.<sup>2</sup>) Thus, the fundamental conclusion that should come from this proceeding is that all providers exchanging traffic with the PSTN must accept common carrier status, and comport themselves consistent with the rights and obligations that go along with carrier status. Several prominent examples are discussed below.

***Network Interconnection Issues.*** The shift of communications networks from circuit-switched to IP-based raises questions about the interconnection of circuit-switched and IP-based networks. There is, of course, a well-established set of rules and practices regarding the interconnection of circuit-switched networks, including Section 251 of the Communications Act

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<sup>2</sup> See, e.g., *Communications Assistance for Law Enforcement Act and Broadband Access and Services*, First Report and Order and Further Notice of Proposed Rulemaking, 20 FCC Rcd 14989, ¶ 8 (2005), *aff’d American Council on Education v. FCC*, 451 F.3d 226 (D.C. Cir. 2006)

and IP provisions of Part 51 of the Commission's Rules. IP peering practices are similarly well developed. However, there is less clarity regarding interconnection between circuit-switched and IP networks. Furthermore, there exists a lack of standards on the methodology of transferring crucial information (other than basic call information) between carriers or from one type of network to another. For the network transition to be successful, there must be assurances that consumers' calls and other important information will flow successfully from origination to termination through all the networks in between. Therefore, the NOI should include a component that addresses ways interconnection between and among different networks using different technologies can be expected to be accomplished.

***Transport and Termination Charges.*** As long as providers are using both circuit-switched and IP-based networks, thorny questions must be addressed about compensation for traffic that originates or terminates on different types of networks.<sup>3</sup> The Commission must fully understand the types of costs incurred in operating different interconnected networks,<sup>4</sup> and in converting traffic between the different network protocols, in order to ensure a reasonable compensation system. The rules should provide for nondiscriminatory, compensatory payments to efficient operators involved in providing service or transmission segments within the call or transmission flow. Without such compensatory payments, competition could cease to exist, undermining consumer benefits and network diversity.

***Technology-Neutral Regulatory Policies.*** As part of its inquiry into this network transition, the Commission should explore the implications of regulations that vary by

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<sup>3</sup> This issue is already problematic. *See, e.g., Feature Group IP Petition for Forbearance from Section 251 (g) of the Communications Act and Section 51.701(b)(1) and 69.5(b) of the Commission's Rules*, WC Docket No. 07-256, Memorandum Opinion and Order, 24 FCC Rcd 1571 (2009).

<sup>4</sup> *See, e.g., 47 C.F.R. § 51.705* (providing for cost-based reciprocal compensation rates).

technology type. Consumers will benefit from technology-neutral regulations that apply evenhandedly to providers using all types of networks. The Commission's NOI should explore areas where current regulatory policies may be creating inadvertent advantages for certain providers based on the types of networks they employ, as well as how to ensure a technology-neutral regulatory framework going forward.

**Security.** Circuit switched network practices exist for maintaining network security within the communication path as well as the handling of personally identifying information within networks.<sup>5</sup> In the NOI, the Commission should explore ways to ensure that consumer privacy and security are protected through the transition, including adequate enforcement of security and privacy obligations on all providers. As long as differences remain between or among providers' practices, the Commission should ensure that consumers have complete information about such differences so that the consumers can make informed choices about the services they purchase and use.

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<sup>5</sup> See, e.g., 47 C.F.R. §§ 64.2001 *et seq.*

**CONCLUSION**

HyperCube agrees that the Commission should issue an NOI on the transition from circuit-switched to IP-based networks, and encourages the Commission to seek comment on interconnection, compensation, and regulatory parity issues to ensure that this transition best serves consumers.

Respectfully submitted,

**HYPERCUBE TELECOM, LLC**

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