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Federal Communications Commission  
Office of the Secretary

July 1, 2010

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12th Street SW  
Washington, DC 20554

Re: Notice of Ex Parte Communication, GN Docket No. 09-191, WC Docket No. 07-52

Dear Ms. Dortch:

On May 19, 2010 Tom Anschutz, AT&T Labs; Fred Baker, Cisco; Rich Whitt, Google; Scott Jordan, UC Irvine; Paul Mankiewich, Juniper Networks; Jay Rolls, Cox Communications; David Reed, MIT; Dan Meredith, New America Foundation; Rob Topolski, New America Foundation; Lauren Van Wazer, Cox Enterprises; Richard Woundy, Comcast; David Young, Verizon; David Tennenhouse, NVPLLC; Leslie Daigle, ISOC; Kevin Kahn, Intel, met to discuss issues associated with the open Internet, and reasonable network management practices with members of the Commission as part of the Commission's Technical Advisory Process for an Open Internet. The TAP meetings provide an opportunity for a discussion on topics related to reasonable network management practices. Views expressed in these discussions focus on technical matters and do not necessarily represent the positions of each company or organization. (A full list of meeting attendees is attached). The meeting discussions focused on presentations by participants, topics covered in past meetings, and future directions for the TAP meetings.

Dr. Scott Jordan shared his technical views on approaches to defining reasonable traffic management, managed services, and reclassification of broadband services (see separately filed presentation). Dr. Jordan proposed criteria for evaluating the reasonableness of traffic management that reflect considerations of user choice, security concerns or quality of service (QOS).

Fred Baker discussed existing Internet Standards that relate to various QOS, prioritization, and other issues related to reasonable traffic management. He identified a diverse set of RFCs that, among other things, relate to host and router requirements (RFCs 1122, 1123, 2309); congestion management, prioritization and QOS (RFCs 2309, 2474, 2475, 3246, 3247); and other Internet technology functionality (RFCs 970, 2597).

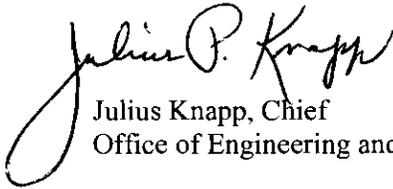
Paul Mankiewich discussed particular network management concerns related to wireless networks and his personal experiences in the development of 2G, 3G and evolving 4G systems including long-term evolution (LTE) standards. Mr. Mankiewich discussed that technical considerations relevant to defining reasonable network management for wireless may differ from wireline networks due to the need for mobility (handoff from one cell to another) and the indeterminate nature of radio transmission and reception. LTE, for example, defines as part of the standard nine different classes of services with differing QOS guarantees, and a number of different allocation and retention priorities. Other wireless networking standards incorporate traffic management in other crucial ways to address the particular resource constraints of wireless networks. It was discussed that wireless networks must manage much greater variability of performance, which makes providing quality of service even more difficult. Mr. Mankiewich explained that the design of networks reflects these engineering challenges and uses feedback gathered from handsets to ensure that traffic is distributed most efficiently across a wireless network. The use of packet categorization through inspection techniques was described as necessary to accomplish these tasks and complement the access network's functionality.

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List A B C D E

Leslie Daigle discussed views in the separately filed comment<sup>1</sup> on maintaining the open architecture of the Internet. She emphasized the need for market incentives to reward or penalize broadband providers for the quality of Internet service made available to users. Current research of Internet traffic shows that network capacity has generally grown at the same rate as usage, though not uniformly. Ms. Daigle emphasized that increasing available bandwidth has expanded the potential for innovation for Internet applications.

The group discussed future directions, and proposed that its next meeting be held in the next few months. At that time, participants plan to share thoughts on the emergence of new topics and possible best practices of interest to the Commission.

Sincerely,

A handwritten signature in black ink that reads "Julius P. Knapp". The signature is written in a cursive style with a large, looping initial "J".

Julius Knapp, Chief  
Office of Engineering and Technology

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<sup>1</sup> <http://www.isoc.org/isoc/conferences/bwpanel/docs/bp-growingp-201003-en.pdf>.

## Attendees

<b>Name</b>	<b>Organization</b>
Tom Anschutz	AT&T Labs
Fred Baker	Cisco
Rich Whitt	Google
Michael Goldstein	FCC
Walter Johnston	FCC
Scott Jordan	UC Irvine
Paul Mankiewich	Juniper Networks
John Kiefer	FCC
Julius Knapp	FCC
James Miller	FCC
Alison Neplokh	FCC
Jon Peha	FCC
Jay Rolls	Cox Communications
David Reed	MIT
Dan Meredith	New America Foundation
Rob Topolski	New America Foundation
Lauren Van Wazer	Cox Enterprises
Richard Woundy	Comcast (PM)
David Young	Verizon
David Tennenhouse	NVPLLC
Leslie Daigle	ISOC