

July 22, 2015

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

Re: *Ex Parte Presentation – Standards for Participation in
High-Cost Support Mechanisms (WC Docket No. 10-90)*

Dear Ms. Dortch:

ADTRAN, Inc. (“ADTRAN”) wants to take this opportunity to respond to yet another proposal in a recent *Ex Parte* submission filed by Hughes Network Systems (“Hughes”) concerning the standards for the Connect America Fund (“CAF”) Phase II competitive bidding process.¹ ADTRAN addressed similar proposals in previous *Ex Parte* submissions in this docket.² ADTRAN shares Hughes' desire to ensure that the CAF Phase II competitive bidding process serve the public interest. However, creation of satellite technology specific standards, as Hughes now apparently advocates, could result in widespread subsidization of “second class” broadband, contrary to the public interest.

Hughes previously advocated that for CAF Phase II bidding support, the Commission should use an R-Factor score of 52, in lieu of prescribing the maximum latency of 100 ms

¹ Letter from Jennifer A. Manner, Vice President, Regulatory Affairs for Hughes, filed in WC Docket No. 10-90, dated July 20, 2015.

² Letter from Stephen L. Goodman, counsel for ADTRAN, filed in WC Docket No. 10-90; WT Docket No. 10-208; WC Docket No. 14-58; WC Docket No. 07-135; and CC Docket No. 01-92, dated May 26, 2015; Letter from Stephen L. Goodman, counsel for ADTRAN, filed in WC Docket No. 10-90; WT Docket No. 10-208; WC Docket No. 14-58; WC Docket No. 07-135; and CC Docket No. 01-92, dated June 12, 2015; Letter from Stephen L. Goodman, counsel for ADTRAN, filed in WC Docket No. 10-90, dated July 16, 2015.

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standard adopted by the Commission for CAF Phase II support using the cost model.³ In its most recent filing, instead of the R-Factor, Hughes now proposes that the Commission use a latency threshold for satellite broadband providers of 750 ms, and contends that:

[T]he proposed 750 ms standard will ensure that satellite broadband providers are able to participate in the CAF Phase II competitive bidding process while providing a robust user experience that meets the vast majority of consumer voice and data needs.

ADTRAN urged the Commission to reject Hughes' previous suggestion of an R-Factor score of 52, because such a test would not enable use of real-time applications, such as VoIP, to any satisfactory degree. Indeed, Hughes' proposed R-factor score of 52 is at the lower end of the categorization of the quality as being "*Nearly all users dissatisfied*" based on the same ITU model proposed by Hughes.⁴ Hughes' newest proposal of a satellite-specific latency standard of 750 ms would be even worse.

As ADTRAN explained in its May 26, 2015 *Ex Parte* submission, measuring latency for determining voice quality requires that the provider account for all of the delay in the relevant *from mouth to ear* ITU standard applied by the Commission⁵ that the R Factor model uses for its input parameter $T_a=T$ in its calculator. If you apply half of the proposed 750 ms threshold into the one-way delay for the R model, and take into account the same factors ADTRAN applied in the May 26, 2015 *Ex Parte* submission -- including additional latency for dejitter buffering, packetizing delays and Codec processing (corresponding to a G.729 codec) -- you get an R-Factor value of 49.2, which is actually below the bottom of the "nearly all users dissatisfied" range.

Hughes also proposes the adoption of a satellite-specific data usage allowance of 50 GB per month, rather than the current Commission requirement of 100 GB per month for recipients of CAF Phase II support. Such a constraint on a customer's data usage is likely to limit the usefulness of satellite broadband for video streaming, which is a dominant use of the Internet presently.⁶

³ *Connect America Fund*, WC Docket No. 10-90, Report and Order, 28 FCC Rcd 15060 (Wireline Comp. Bur. 2013) at ¶ 23.

⁴ ITU-T G.107, SERIES G: Transmission Systems And Media, Digital Systems and Networks; International Telephone Connections and Circuits – Transmission planning and the E-model, Table B-1, available at <http://www.itu.int/rec/T-REC-G.107-201402-I/en> (emphasis added).

⁵ *Connect America Fund*, WC Docket No. 10-90, Report and Order, 28 FCC Rcd 15060 (Wireline Comp. Bur. 2013) at ¶ 20.

⁶ According to the Cisco Visual Networking Index™ (<http://www.cisco.com/c/en/us/solutions/collateral/service-provider/ip-ngn-ip-next-generation->

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ADTRAN has previously acknowledged that it may be necessary to apply somewhat lower standards in the context of the Remote Area Fund, given the extremely high costs of providing service to those territories.⁷ But it would disserve the public interest to lower the standards more generally in the CAF Phase II competitive bidding process by creating satellite-specific rules in order to accommodate the “technological reality” of much greater latency for satellites in Geostationary orbit. The Commission should not use CAF Phase II bidding support to subsidize broadband that would provide unsatisfactory voice service and limited video streaming. ADTRAN thus urges the Commission to reject the most recent satellite-specific standards for the CAF Phase II competitive bidding process proposed by Hughes.

Sincerely,

/s/
Stephen L. Goodman
Counsel for ADTRAN, Inc.

cc: Carol Matthey
Rodger Woock
Alexander Minard
Suzanne Yelen
Alec MacDonnell
Cathy Zima
Christopher Cook

network/white_paper_c11-481360.html), consumer internet video traffic comprised 64% of all consumer Internet traffic in 2014 and is forecasted to be 80% of such traffic in 2019. The sum of all forms of video (TV, video on demand, Internet, and P2P) will be in the range of 80% to 90% of global consumer traffic by 2019. High Definition video will be 70% of IP VOD traffic in 2019, up from 59% in 2014.

⁷ See, Comments of ADTRAN in WC Docket No. 10-90, filed March 28, 2013 at n. 4:

ADTRAN recognizes that some relaxation of the standards may be necessary for some remote and insular consumers, however, given the exceedingly high cost of providing service to these locations. Thus, ADTRAN does not object to different standards for “broadband” for purposes of the Remote Area Fund. See, e.g., *USF/ICC Transformation Order* at ¶ 134.

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