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March 15, 2016

VIA ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: ViaSat, Inc., Notice of *Ex Parte* Presentation
GN Docket No. 14-177; WC Docket Nos. 10-90, 14-58, 07-135, 05-337, and 03-109; GN Docket No. 09-51; CC Docket Nos. 01-92 and 96-45; WT Docket No. 10-208

Dear Ms. Dortch:

On Friday, March 11, Mark Dankberg, Chairman and CEO of ViaSat, Inc., Chris Murphy, Associate General Counsel, Regulatory Affairs, of ViaSat, Inc., and the undersigned counsel to ViaSat, Inc., met with Chief of the Office of Engineering and Technology, the Chiefs of the Wireless and the International Bureaus, and various Bureau members listed below.

The enclosed materials relate to the Spectrum Frontiers proceeding and formed the basis for the conversation. We explained that ViaSat is a technology innovation leader in global communications services and that, much like a terrestrial wireless network, significantly progressing the capacity and efficiency of satellite broadband networks requires more intensive spectrum reuse. That occurs by employing larger numbers of gateway-type earth stations than before. Providing a better broadband experience for consumers, businesses and government users at an affordable price requires that those gateway-type facilities be located near fiber networks, wherever possible. Those state-of-the-art design approaches are enabling the provision of affordable, high-quality, 100-plus Mbps satellite broadband service to residential areas, 4K video streaming, and 1 Gbps service for enterprise applications, starting in 2019.

We also explained that the report at the March 10th Spectrum Frontiers Workshop panel of an imminent arrangement between the satellite industry and the wireless industry was premature, but that a negotiated arrangement is in fact possible. *See* Communications Daily, March 11, 2016 at 9-10. While ViaSat and others were and remain actively engaged in technical co-existence discussions with wireless carriers, relevant 5G information and responses to the technical information provided by certain satellite operators had not been received at the time of that panel discussion. Moreover, some satellite operators' positions do not account for all

industry positions or for next-generation advances in satellite broadband services. Exclusionary approaches toward satellite operations are not appropriate and are not warranted when terrestrial wireless and satellite uses of the 28 GHz band are fully compatible in well over 99.997% of the area of an average U.S. county. *See* Comments of ViaSat at 15-16, GN Docket No. 14-177 (filed Jan. 28, 2016). Specifically, ViaSat emphasized that there is no reason to believe that gateway-type facilities could not be located and operated inside major metro areas with appropriate arrangements.

We also discussed ViaSat's recommendation that the reverse auction for CAF II enable competition by all technologies and service providers for the limited available funds.

Please contact the undersigned if you have any questions regarding this submission.

Respectfully submitted,

/s/

John P. Janka

cc:

Office of Engineering & Technology
Julius Knapp, Chief Engineer
Ira Keltz, Deputy Chief
Mark Settle, Division Chief

International Bureau
Mindel De La Torre, Chief
Troy Tanner, Deputy Chief
Bob Nelson, Chief Engineer
Walt Strack, Assistant Chief & Chief Economist
José Albuquerque, Division Chief
Kerri Murray, Deputy Division Chief
Karl Kensinger, Deputy Division Chief
Chip Fleming, Chief Division Engineer
Steve Duall, Branch Chief

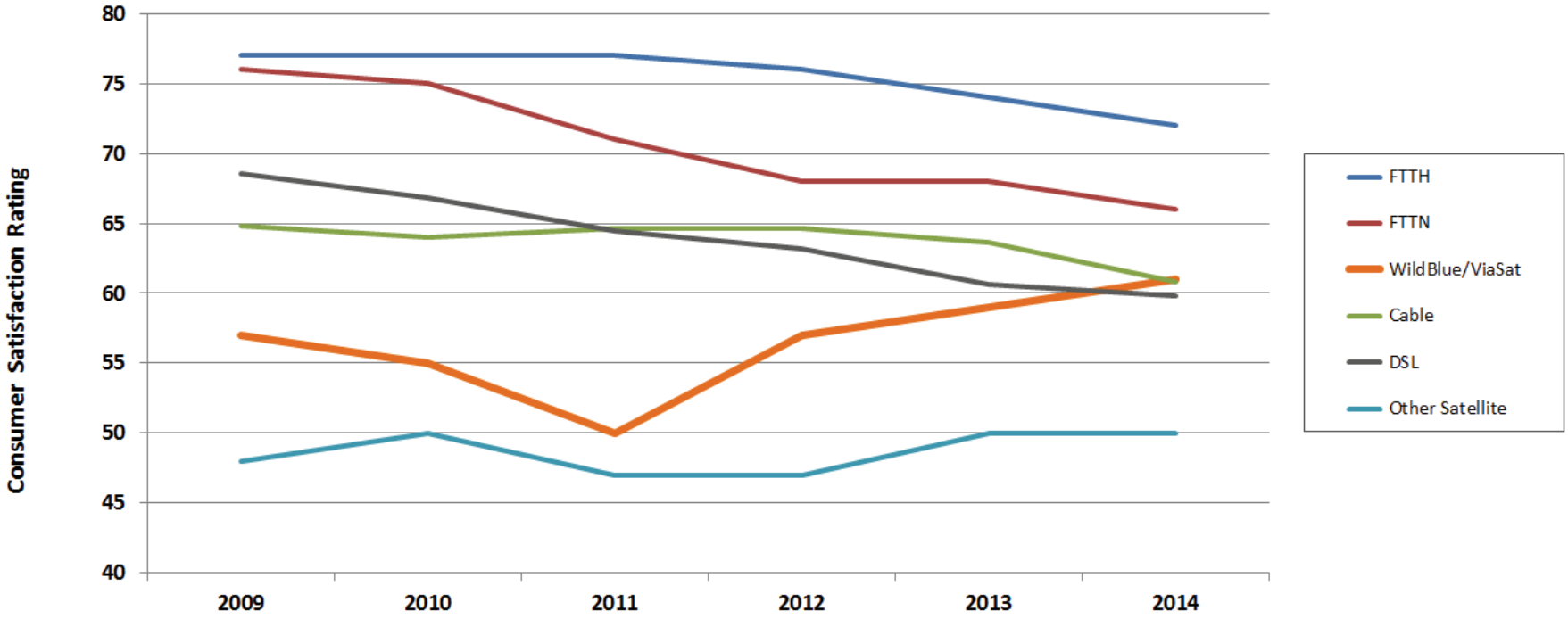
Wireless Bureau
Jon Wilkins, Chief
Brian Regan, Associate Bureau Chief

ViaSat Broadband Update

Mark Dankberg, CEO, Viasat

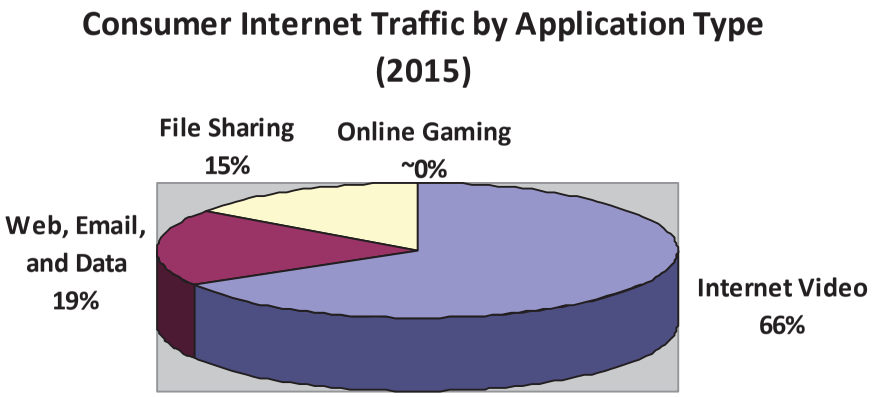
March 11, 2016

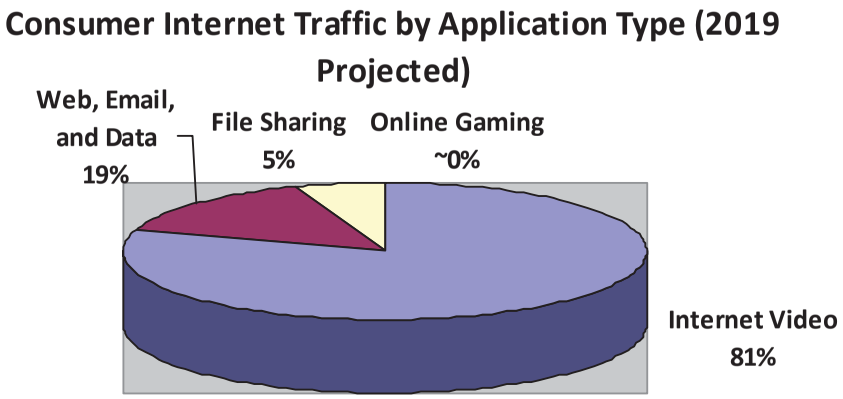
Consumer Reports: Broadband Customer Satisfaction



Source: *Consumer Reports* issues published February 2010, May 2011, June 2012, May 2013, May 2014, and May 2015, *available at* www.consumerreports.org.
FTTH: FiOS, FTTN: U-Verse, Cable: average score of CableOne, Charter, Comcast, Cox, MediaCom, Time Warner, DSL: average score of AT&T, Century Link, FairPoint, Frontier, Verizon, Windstream. ViaSat not ranked in 2013, data point is interpolated.

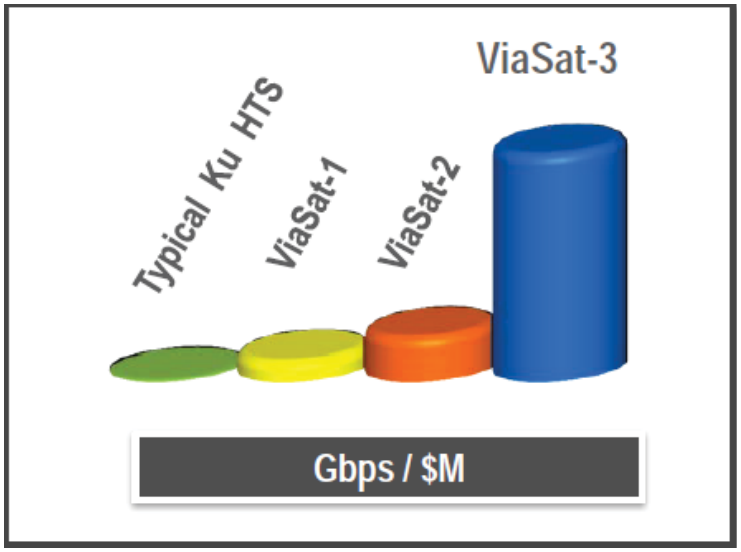
Video is the Primary Broadband Application

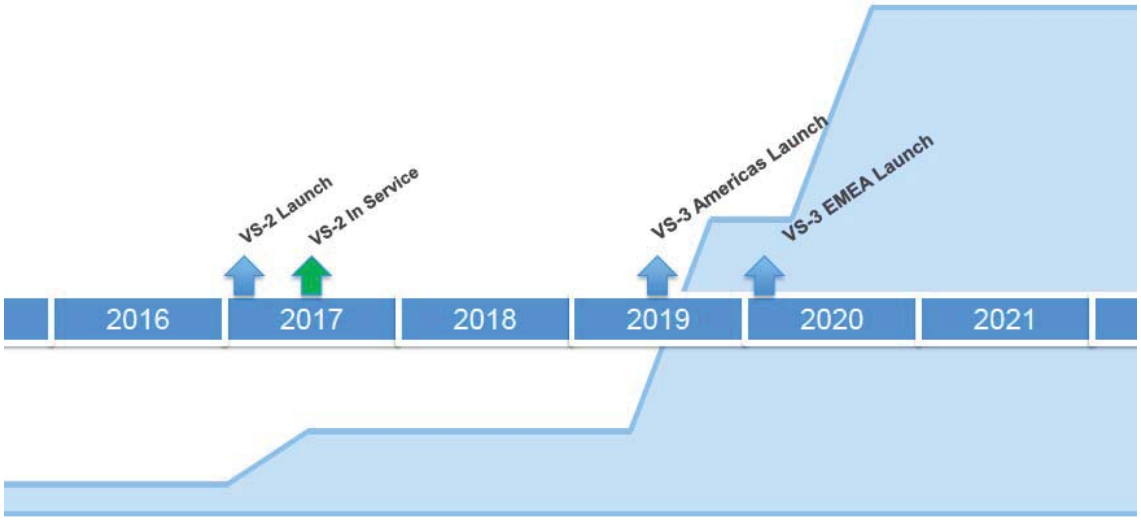




Cisco Visual Networking Index: Forecast and Methodology, 2014-2019 White Paper (May 27, 2015), *available at* http://www.cisco.com/c/en/us/solutions/collateral/service-provider/ip-ngn-ip-next-generation-network/white_paper_c11-481360.html

Comparative Capacity and ViaSat Expansion Schedule





Access to Ka-band Spectrum is Critical to the Continued Growth of Satellite Broadband

ViaSat-1 Gateway Teleport

- 140 Gbps capacity
- 17 site licensed aggregation and interconnection facilities
- 7.3 m antennas
- Mostly located outside urban areas

ViaSat-2

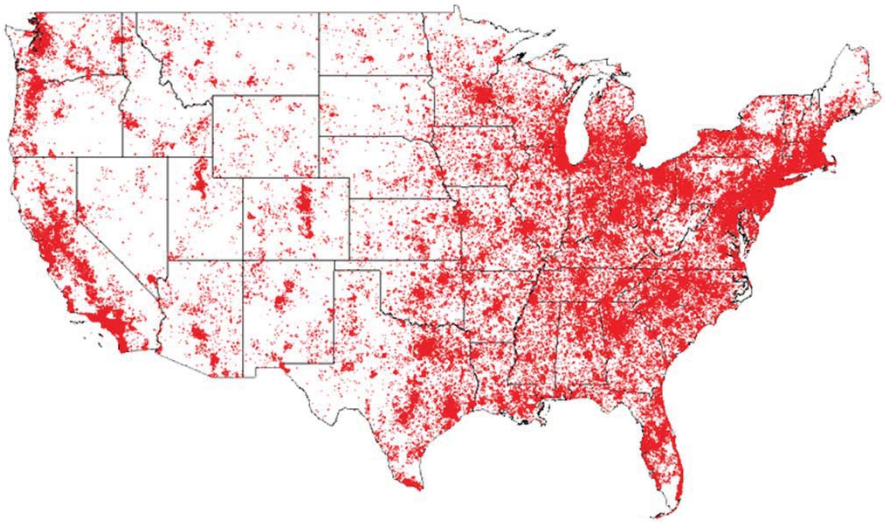
- > Double ViaSat-1 capacity
- More than 40 site licensed aggregation and interconnection facilities to increase spectrum reuse/capacity
- 4.1 m antennas
- Many located in urban areas to access fiber

ViaSat-3

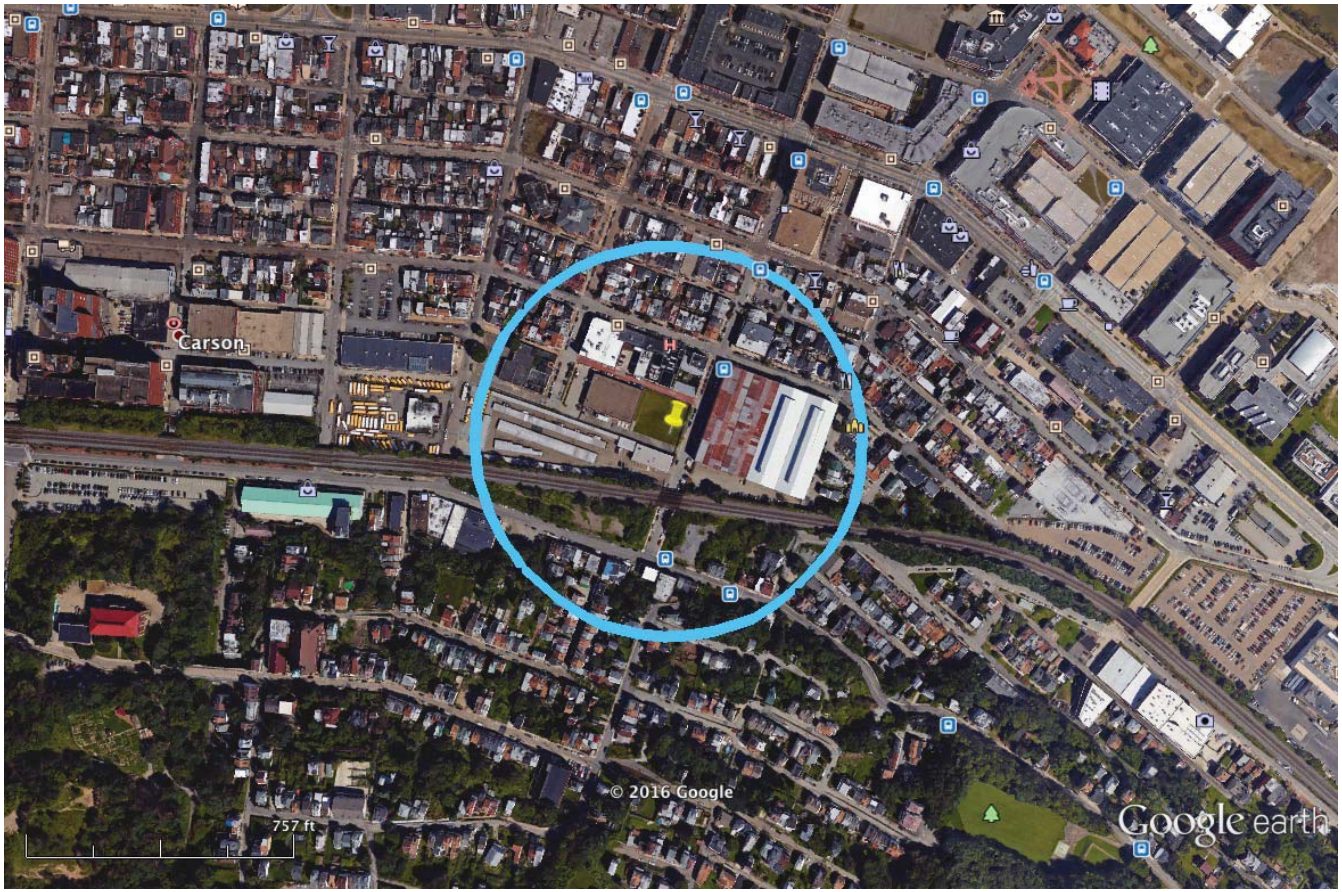
- 1+ Tbps capacity
- Hundreds of site licensed aggregation and interconnection facilities to increase spectrum reuse/capacity
- Even smaller antennas
- Many located in urban/suburban areas to access fiber

ViaSat believes that shared use in the 28 GHz band with terrestrial is feasible and necessary to achieve the full potential of satellite broadband in mmWave spectrum

Satellite Broadband Customers Are Everywhere



ViaSat Broadband Subscriber Density

- 1/3 of current customers have switched from DSL and cable
- Delivering 100+ Mbps residential service on ViaSat-3 will enable 4K UHD video streaming & competition with fiber
- ViaSat-3 will provide up to 1 Gbps speeds for use in maritime, aviation, and corporate enterprise applications

Internet Access Point & Compatibility Zone