

April 12, 2019

File Number: 48HH-246229

VIA IBFS

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

Re: **Notice of Ex Parte Presentation
Space Exploration Holdings, LLC; Application for Modification of Authorization for
the SpaceX NGSO Satellite System; IBFS File No. SAT-MOD-20181108-00083
WorldVu Satellites Limited; Application for Modification; IBFS File No. SAT-MOD-
20180319-00022**

Dear Ms. Dortch:

Several members of senior management for WorldVu Satellites Limited ("OneWeb") held a series of meetings with Commission staff over the past two days. In particular, Chief Executive Officer Adrian Steckel, General Counsel Stephen Chernow, and Vice President of Regulatory Affairs Ruth Pritchard-Kelly, together with the undersigned, met on Wednesday, April 10th with (1) Commissioner Michael O'Rielly and his Legal Advisor, Erin McGrath, (2) William Davenport, Chief of Staff and Senior Legal Advisor to Commissioner Geoffrey Starks, and (3) Commissioner Jessica Rosenworcel, her Legal Advisor, Umair Javed, and Special Advisor and Confidential Assistant, Jessica Martinez.¹ In addition, we also met with Rachael Bender, Legal Advisor to Chairman Ajit Pai, on Thursday, April 11th.

During these meetings, Mr. Steckel provided an update on the tremendous progress OneWeb has made toward building its ambitious satellite network. He also discussed OneWeb's state-of-the-art satellite manufacturing facility in Exploration Park, FL, which will soon be fully operational.² In addition, OneWeb also noted that it successfully launched the first six satellites in its constellation on February 27, 2019 and also announced on March 18, 2019 that it raised another \$1.25B for a total of \$3.4B in funding raised to date. Mr. Steckel underscored

¹ Ruth Pritchard-Kelly was present only for the first of these meetings on April 10th.

² See, e.g., Paul Brinkmann, *OneWeb mass-producing satellites in Florida*, UPI (Mar. 28, 2019, 10:15 am), https://www.upi.com/Top_News/US/2019/03/19/OneWeb-mass-producing-satellites-in-Florida/6221553010025/.

that OneWeb is rapidly progressing toward full deployment and inevitable, ubiquitous service to customers.

OneWeb also expressed serious concerns about the application filed by SpaceX to modify its space station license.³ OneWeb urged the Commission to require SpaceX to make the requisite technical demonstration that it will not cause increased interference to OneWeb or others in the first processing round of the Ku-/Ka-band before further processing of the SpaceX Modification Application. In this regard, OneWeb described its recent meeting with the staff of the Commission's International Bureau, where OneWeb demonstrated that SpaceX utilized a simulation methodology that the U.S. has identified as problematic and unrealistic when assessing interference. SpaceX's departure from a more representative, U.S.-endorsed methodology for modelling interference is both peculiar and troubling. It is peculiar because SpaceX was an active participant in the Working Party 4A process that led to the adoption of the U.S. position on interference assessment and, therefore, should know which methodologies are realistic and defensible. It is troubling because the substitute methodology SpaceX used instead always produces a false-positive irrespective of the parameters (e.g. antenna size, latitude, number of simultaneous links) SpaceX uses in its simulation.

OneWeb also expressed concerns that the SpaceX Modification Application causes serious procedural disruption to the Commission's first Ku-/Ka-band processing round. OneWeb noted that the first processing round of the Ku-/Ka-band was initiated by the Commission in July 2016 after OneWeb filed an application for a 720-satellite network utilizing Ku-band frequencies for service links and Ka-band frequencies for feeder links. OneWeb expressed its gratitude to the Commission for the U.S. market access grant it received, which was based squarely on the application it filed with the Commission. OneWeb further described how the Commission issued a license to SpaceX based on the application it filed on November 15, 2016. Like OneWeb, SpaceX sought to use the Ku-band for service links and the Ka-band for feeder links and, like OneWeb, the Commission granted SpaceX a license that was based upon the application it filed.⁴ This license was granted to SpaceX on March 29, 2018.

A mere eight months later and for no apparent reason other than its own convenience, SpaceX filed the Modification Application. The SpaceX Modification Application seeks to make significant changes to its licensed system by relocating over 1,500 satellites to a lower altitude

³ Application for Modification of Authorization for the SpaceX NGSO Satellite System, IBFS File No. SAT-MOD-20181108-00083 (filed Nov. 8, 2018) ("SpaceX Modification Application").

⁴ OneWeb also noted that OneWeb did not request a waiver of the Commission's milestone requirement, while SpaceX did so. *Compare* Petition for a Declaratory Ruling Granting Access to the U.S. Market for the OneWeb System, IBFS File No. SAT-LOI-20160428-00041 (filed Apr. 28, 2016) with Application for Approval for Orbital Deployment and Operating Authority for the SpaceX NGSO Satellite System, IBFS File No. SAT-LOA-20161115-00118, Waiver Requests at 8 (filed Nov. 15, 2016).

already occupied by vast numbers of smallsats.⁵ More importantly, the SpaceX Modification Application creates serious RF interference concerns by proposing to use the Ku-band not just for service links but also for feeder links. Unlike service links, which are used only intermittently, feeder links are always on and, thus, create an even greater potential for RF interference. OneWeb noted that SpaceX has provided no technical or other reason why it cannot use the Ka-band for feeder links as it initially proposed and for which it has already been given a license by the Commission.

Given this procedural posture, OneWeb expressed deep concerns that grant of the SpaceX Modification Application threatens to upend the carefully established framework of the first Ku-/Ka-band processing round. Participants in the processing round have invested significant amounts of capital and made system design decisions according to the spectrum sharing environment established in this processing round. Ambitious undertakings like the OneWeb constellation require long-term planning based on regulatory predictability and stability, which was seemingly achieved through the processing of the various processing round applications. Because spectrum is a shared and valuable resource, this long-term planning is essential to delivering the types of innovative services to end users encouraged by the Commission. However, approval of the SpaceX Modification Application under artificially created external pressure, and before its effects on the spectrum sharing environment are fully analyzed, could lead to a severe restriction on the ability of operators to utilize spectrum in a manner that most benefits the U.S. consumer. Hasty action to grant the SpaceX Modification Application would be arbitrary and capricious and will result in significant interference to OneWeb and other NGSO FSS systems.⁶

During the meetings, OneWeb also highlighted that it filed a modification application for its own authorized NGSO FSS system over one year ago.⁷ Unlike the SpaceX Modification Application, however, the OneWeb Modification Application does not propose to change any frequency usage or the intended orbital altitudes of its constellation. The OneWeb Modification Application makes one request: to increase the number of satellites in the OneWeb constellation as a direct response to the Commission changing the NGSO milestone rule while the first processing round was ongoing.⁸ Even as modified, the OneWeb constellation will still

⁵ See, e.g., Comments and Conditional Petition to Deny of Kepler Communications, Inc., IBFS File No. SAT-MOD-20181108-00083 (filed Jan. 29, 2019); Planet Labs, Inc., Petition to Defer, IBFS File No. SAT-MOD-20181108-00083 (filed Jan. 29, 2019).

⁶ See Letter from Brian D. Weimer, Counsel to WorldVu Satellites Limited, to Marlene H. Dortch, Secretary, FCC, IBFS File No. SAT-MOD-20181108-00083 at 3-6 (April. 4, 2019).

⁷ See WorldVu Satellites Limited, Application for Modification, IBFS File No. SAT-MOD-20180319-00022 (filed Mar. 19, 2018) (“OneWeb Modification Application”).

⁸ See *Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters*, Report and Order and Further Notice of Proposed Rulemaking, 32 FCC Rcd 7809, ¶ 66 (2017).

only contain a fraction of the number of satellites proposed by SpaceX. Moreover, the OneWeb Modification Application will allow OneWeb to employ full satellite diversity, thus allowing OneWeb to mitigate interference events.

Notwithstanding the progress OneWeb has made in building, launching and financing its system, the OneWeb Modification Application remains pending at the Commission. OneWeb respectfully requested during the meetings that the Commission accord equal treatment for the OneWeb Modification Application and the SpaceX Modification Application. By “equal treatment,” OneWeb means that both the OneWeb Modification Application and the SpaceX Modification Application will be processed in the same time frame and acted upon contemporaneously. This approach preserves regulatory parity among competing parties.

Kindly contact the undersigned with any questions regarding this submission.

Very truly yours,

/s/ Brian D. Weimer

Brian D. Weimer
for SHEPPARD, MULLIN, RICHTER & HAMPTON LLP

cc: Commissioner Michael O’Rielly
Commissioner Jessica Rosenworcel
Erin McGrath
William Davenport
Umair Javed
Jessica Martinez
Rachael Bender