



Hogan Lovells US LLP  
Columbia Square  
555 Thirteenth Street, NW  
Washington, DC 20004  
T +1 202 637 5600  
F +1 202 637 5910  
[www.hoganlovells.com](http://www.hoganlovells.com)

March 27, 2018

**VIA IBFS**

Jose Albuquerque  
Chief, Satellite Division  
International Bureau  
Federal Communications Commission  
445 12th Street, SW  
Washington, DC 20554

Re: Astro Digital US, Inc.  
File No. SAT-LOA-20170508-00071, Call Sign S3014

Dear Ms. Dortch:

Astro Digital US, Inc. ("Astro Digital"), through its counsel, responds to the Telesat Canada letter dated February 16, 2018.<sup>1</sup> The letter opposes Astro Digital's request that the Commission accept a detailed technical analysis as a substitute for the FCC's equivalent power flux density ("EPFD") compliance demonstration using certain International Telecommunications Union ("ITU") software.<sup>2</sup> Telesat Canada does not question, much less refute, the results or methodology used in Astro Digital's technical analysis demonstrating that its operations in the 29.9-30.0 GHz band will comply with the EPFD limits specified in Article 22 of the ITU Radio Regulations ("RR").<sup>3</sup> Rather, Telesat Canada asserts that using the ITU EPFD software is not burdensome and that granting Astro Digital's waiver will effectively "open the door to every [non-geostationary satellite orbit ("NGSO")] operator" obtaining similar waivers.<sup>4</sup> Telesat Canada's arguments are baseless and should be rejected.

Telesat Canada's suggestion that use of the ITU EPFD software takes "minutes" is both unsupported and absurd.<sup>5</sup> Astro Digital has attempted to use the free ITU software and found it extremely difficult and time consuming with little opportunity to identify or correct input errors. To use the more advanced version of the software, "Visualyse EPFD," Astro Digital must purchase a license at considerable expense or hire a consultant, which would likely be even more expensive. Indeed, as Astro Digital explained in its request and Telesat Canada does not dispute, the

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<sup>1</sup> Letter from Joseph A. Godles, Counsel, Telesat Canada, to Marlene H. Dortch, Secretary, FCC, IBFS File No. SAT-LOA-20170508-00071 (filed Feb. 16, 2018) ("Telesat Canada Letter"). Astro Digital did not learn of Telesat Canada's filing until March 12, 2017. Telesat Canada agreed to allow Astro Digital until March 27, 2018, to file a response.

<sup>2</sup> Letter from Tony A. Lin, Counsel, Astro Digital, to Jose Albuquerque, Satellite Division Chief, FCC, File No. SAT-LOA-20170508-00071 (filed Jan. 16, 2018) (the "Request").

<sup>3</sup> See Telesat Canada Letter.

<sup>4</sup> See *id.* at 2.

<sup>5</sup> See *id.* at 2.

Commission itself has acknowledged that reviewing the compliance showing associated with the ITU software is complex and labor-intensive and can take months.<sup>6</sup>

Similarly, Telesat Canada's argument that grant of Astro Digital's request will open the floodgates for other similar waivers is speculative and without merit. As explained in the Request, Astro Digital's system is unique. The company will uplink data to its thirty-satellite system from only a single earth station in Svalbard, Norway.<sup>7</sup> Because that station is at 78 degrees north latitude and has a significant mountain range to the south, and KSAT is required to operate with a minimum 5.0° elevation angle, there is extremely limited visibility to the geostationary orbit arc.<sup>8</sup> By comparison, other NGSO systems operating in the Ka-band frequencies have proposed to operate with thousands of satellites and multiple earth stations located throughout the world.<sup>9</sup> Moreover, in the few instances where transmissions from the Svalboard station would not otherwise be blocked from the factors identified above, Astro Digital has committed to take certain simple operational steps (e.g., not transmitting at angles of elevation less than 7° or reducing transmission power) to ensure that its uplink transmissions in the Ka-band frequencies do not exceed the limits specified in Article 22 of the ITU RR.<sup>10</sup>

Telesat Canada has failed to provide any meaningful reason to question Astro Digital's technical analysis, much less deny its request. Accordingly, the Commission should accept Astro Digital's technical analysis as a substitute for the ITU EPFD compliance showing for the reasons expressed above and in the waiver request.<sup>11</sup>

Respectfully submitted,

/s/ Tony Lin

Tony Lin  
tony.lin@hoganlovells.com  
D 1+ 202 637 8452

cc: Stephen Duall

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<sup>6</sup> See *Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters*, Report and Order and Notice of Proposed Rulemaking, 32 FCC Rcd 7809 ¶ 41 (2017).

<sup>7</sup> Request at 1.

<sup>8</sup> *Id.* at 2.

<sup>9</sup> See, e.g., *WorldVu Satellites Limited, Petition for a Declaratory Ruling Granting Access to the U.S. Market for the OneWeb System*, IBFS File No. SAT-LOI-20160428-00041 (proposing 720 satellites and 50 ground stations); *SpaceX Application for Approval for Orbital Deployment and Operating Authority for the SpaceX NGSO Satellite System Supplement*, IBFS File No. SAT-LOA-20161115-00118 (proposing 4,425 satellites).

<sup>10</sup> See Request at 2.

<sup>11</sup> See Request at 2. In the event Astro Digital's request is denied, the company requests additional time to provide the showing requested in paragraph 5 of its license.

# **DECLARATION OF JAN A. KING**

I, Jan A. King, Chief Technical Officer of Astro Digital US, Inc., hereby certify, under penalty of perjury, that I have reviewed the foregoing letter and that the factual statements in the letter are complete and accurate to the best of my knowledge and belief.

/s/ Jan. A King  
Jan A. King  
Chief Technical Officer  
Astro Digital US, Inc.  
jan@astrodigital.com

Dated: March 27, 2018

### **CERTIFICATE OF SERVICE**

I hereby certify that on March 27, 2018, a true and correct copy of the foregoing letter was provided via certified mail to the following:

Joseph A. Godles  
Goldberg, Godles, Wiener & Wright  
1025 Connecticut Avenue, N.W., Suite 1000  
Washington, DC 20036-2413

By: /s Wesley Platt  
Wesley Platt