Kuiper response to clarification questions on NGSO gateway licence application

October 2025

1. **Aggregate assessment of satellite filings**
   We understand that the FCC made a non-standard request to the ITU to evaluate your combined Gen1 satellite filings. Please provide a summary of this request and its current status, including any relevant ITU publication number, and any references to favourable/unfavourable filings with respect to Articles 21 and 22.

   Kuiper response

   - We have submitted a modification to the Coordination Requests for the USASAT-NGSO-8A (15 February 2024), USASAT-NGSO-8B (22 February 2024) and USASAT-NGSO-8C (26 February 2024) systems, together with a request to perform a combined examination for these modified systems to the ITU BR. These requests are still in an "as received" status and have not been published yet. They are available on the ITU website as follows:
   - USASAT-NGSO-8A: https://www.itu.int/ITU-R/space/asreceived/Publication/DisplayPublication/55092
   - USASAT-NGSO-8B: https://www.itu.int/ITU-R/space/asreceived/Publication/DisplayPublication/55228
   - USASAT-NGSO-8C: https://www.itu.int/ITU-R/space/asreceived/Publication/DisplayPublication/55230

2. **New satellite filings**
   Please explain why the German and US filings relating to your Gen 2 satellites are not relevant to the current application.

   Kuiper response

   - These filings represent different options for our second generation system, ("Gen2"), the design of which has not been finalized yet. We will submit a new NGSO gateway application for our Gen2 system once its design has been finalized.

3. **Throughput degradation methodology**
   Please explain how you took account of the points set out in Note 4 of ITU-R Recommendation S.2131.

Kuiper response

- Amazon has evaluated GSO protections based on the specific requirements outlined in ITU Recommendation S.2131. The Recommendation clearly establishes in its "recommends" section (not just in "noting" statements) that satellite systems using ACM should be designed to meet performance objectives based on packet error ratio (PER) or spectral efficiency metrics and compare these metrics to rain fade statistics given in Recommendation P.618.

- Amazon's assessment followed the methodology described in Section 2.4 of the Recommendation, which provides a specific approach for evaluating average degraded throughput. This section demonstrates how to calculate the "average of the loss in throughput (ϕtotal)" by integrating spectral efficiency over the available connection time. Importantly, our assessment of throughput degradation is based on time periods over a year, consistent with both Section 2.4's methodology and Recommendation P.618's approach for evaluating propagation effects. This time-based annual evaluation is a fundamental measure established in Recommendation S.2131.

- While Note 4 mentions that additional throughput metrics could be considered, evaluating such metrics would require detailed knowledge of other operators' specific performance requirements - information that is not available to Amazon. Therefore, our assessment appropriately follows the established technical standards by evaluating average throughput degradation as specified in Section 2.4.