Exhibit A

Technical Analysis

The Commission's rules permit GSO FSS use of the 27.5-28.35 GHz band segment for gateway-type earth stations on a secondary basis to Upper Microwave Flexible Use Service ("UMFUS"). Viasat submits the following showing to demonstrate that the proposed gateway-type earth station, or satellite access node ("SAN") is compatible with UMFUS operations in accordance with Section 25.136.

The modified location is approximately 648 feet from the originally licensed location and, as illustrated below, the earth station as modified has a coverage contour that in the same general area and substantially overlaps the same areas as it would at the currently licensed location. Nevertheless, because the modified site is greater than one second from the licensed location, a Prior Coordination Notice (PCN) has been sent out to coordinate with any potentially affected licensees. No terrestrial licensees have objected.

Viasat conducted a technical analysis to determine the region around the earth station where the power flux density (PFD) at a height of 10 m above ground level would be equal to or greater than -77.6 dBm/(m^2 * MHz).

The analysis was performed both using a simple spreadsheet approach as well as by using the Visualyse Pro software to perform an area analysis around the earth station.

In the case of the spreadsheet analysis, the parameters used were taken from the FCC Form 312 application and supporting exhibits.

Antenna Diameter	4.1	m
Antenna Gain	59.6	dB(i)
Antenna Input Density	-25.8	dB(W/MHz)
EIRP Density	33.8	dB(W/MHz)
EIRP Density	9.8	dB(W/4 kHz)
Antenna Disc toward Horizon	70.8	dB
Density toward Horizon	-37.0	dB(W/MHz)
Density toward Horizon	-61.0	dB(W/4 kHz)
Additional losses toward victim	10.0	dB
Boundary Limit in flux density	-107.6	dB(W/(m^2*MHz))
Required distance	301.9	m

Table 1 – Required Distance to -77.6 dBm/(m^2 * MHz) Limit

The distance calculated is in Table 1 is along the azimuth of the main lobe of the antenna. The formula used to calculate the required distance is:

SQRT(10^((Density toward horizon - Additional losses – Boundary Limit)/10) / (4 * PI()))

The above calculation provides a simple baseline estimate of the required separation distance in the direction of the main lobe of the antenna. An additional loss of 10 dB over free space is also included to account for clutter. This conservative estimate is well below the median value for clutter loss for the distance as calculated by the statistical model of Recommendation ITU-R P.2108.

To perform a more detailed analysis of the other directions around the antenna, the software tool Visualyse Pro by Transfinite Systems, Ltd[1] was used.

To perform the analysis, the 4.1 m antenna pattern was imported into Visualyse, then a link defined to use appropriate power per MHz reflecting the values used in the FCC license application. The antenna was configured to point at the ViaSat-2 satellite at 69.9° W.L. in order to establish the operational azimuth and elevation angles.

To measure the PFD in the area around the Viasat SAN antenna, a reference antenna was created in Visualyse with 50.4 dBi gain. This is needed because Visualyse performs its calculation using power density not PFD. The 50.4 dBi gain effectively converts the power density value to a PFD value so Visualyse displays the results in terms of PFD. The gain of a meter square area at 28.1 GHz is calculated in dBi as $G = 10 * \log(4 * \pi / \lambda^2)$, where $\lambda = 1.06$ cm at 28.1 GHz

As Visualyse works in dBW rather than dBm, the -77.6 dBm/(m^2 * MHz) is converted to dBW/(m^2 * MHz) by subtracting 30 dB.

An area analysis region is created around the SAN earth station and the reference antenna is then moved in small steps all around the area to measure the value of received power at each location step. The display settings of the area analysis are set to -107.6 to reflect the PFD limit in dBW. Once the area analysis has been completed, the contour can be exported as a .kmz file for viewing in Google Earth or other GIS mapping software such as MapInfo or ArcGIS.

Figure 1 shows the contour as calculated by Visualyse and imported into GIS mapping software. The blue line shows the contour of the earth station at the currently licensed location, and the green line shows the contour at the modified location. When importing the contours into GIS mapping software it can be observed that the earth station contours are located entirely within Carver county. A search of the IBFS database for other earth stations licensed in the 27.5-28.35 GHz band indicates that there are no other earth stations licensed in these bands in this county.

The modified contour (green) is located entirely within census block 1000. Block 1000 has 242 people. The contour at the currently licensed location also covers a portion of census block 1006, which has a population of zero.

The population for Carver county is 91,042 which is less than 450,000, and the 450 population limit of 25.136(a)(1)(ii) applies. As illustrated in Figures 1 and 2, the contour covers a small portion of the census block. However, even if the contour covered the entire geographic area of that census block (which it clearly does not), the total population of 242 is well below the 450

[1] https://www.transfinite.com/content/professional

population limit. Thus, the actual population in the partial coverage of the contour is well within that limit. No further analysis of actual population covered is required.

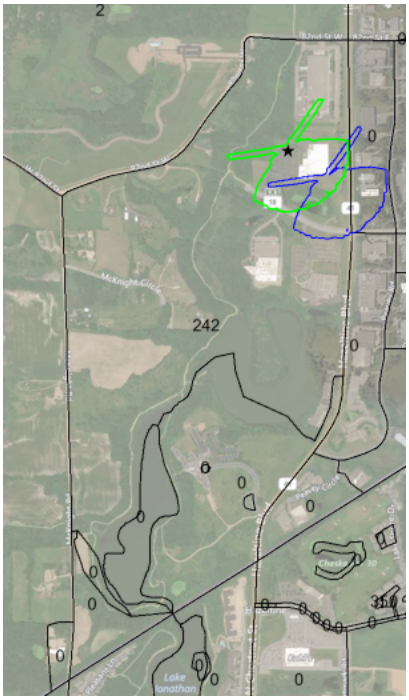

Figure 1 – Census block view of contour

The area covered by the -77.6 dBm/(m^2 * MHz) contour does not contain any major event venue, urban mass transit route, passenger railroad, or cruise ship port. In addition, by inspection in Google Earth and GIS mapping software tools, the contour does not cross any roadway that is identified as an Interstate, Other Freeway and Expressway, or Other Principal Arterial, in the Federal Highway Administration Office of Planning, Environment, and Realty Executive Geographic Information System map.[2]

[2]https://hepgis.fhwa.dot.gov/fhwagis/#.

Figure 2 – Minneapolis SAN -77.6 dBm/(m^2 * MHz) PFD contour