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Federal Communications Commission
Office of the Secretary

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

Re: Applications of Row 44, Inc. (Call Sign E080100)

FCC File Nos. SES-LIC-20080508-00570; SES-AMD-20080619-00826; SES-AMD-20080819-01074; SES-AMD-20080829-01117; SES-STA-20080711-00928

Ex Parte Presentation

Dear Ms. Dortch:

LiveTV, LLC ("LiveTV") is writing to urge the Commission to conduct a careful review of the significant interference issues raised by the applications of Row 44, Inc. referenced above, before the Commission considers granting Row 44 any testing or operational authority.

LiveTV is a leading provider of live in-flight entertainment to airlines around the world. We offer up to 36 channels of Ku-band satellite TV, more than 100 channels of Sirius XM radio, and two-way wireless connectivity for passengers that supports e-mail, short messaging service (SMS), and instant messaging (IM). Our two-way wireless services currently are provided over the terrestrial network and we are actively exploring the use of Ku band FSS spacecraft to provide true broadband services to our customers.

If these new satellite-based aeronautical services are to succeed, they must operate in an interference-free environment, and not cause interference themselves. Otherwise, customers, including the airlines, could quickly lose confidence and become unwilling to purchase them. This is particularly important in the case of new applications of FSS capacity for aeronautical broadband service, where the interference likely will be transient, and the source of the interference likely will be difficult to track and resolve.

In that context, hasty deployment of any system, including the one proposed by Row 44, that ends up causing interference could harm the industry as a whole, and thus slow down the deployment of similar broadband services by LiveTV and others. This is why LiveTV has an interest in Row 44's pending proposal to provide aeronautical service over FSS spacecraft.

LiveTV urges the Commission to require that Row 44 fully detail how it will avoid the potential for interference that arises from the dynamics of flight, which could result in Row 44's antenna transmitting unwanted energy in the wrong direction and to the wrong spacecraft. Based on the geometry of the proposed Row 44 antenna, the beamwidth will be highly asymmetric with respect to antenna boresight (narrowest in the antenna Azimuth plane and widest in the Elevation plane). This geometry will not comply with the FCC's antenna pattern requirements for operating with FSS spacecraft when the antenna pattern is projected on the GEO plane as a result of the aircraft's changing position and attitude with respect to the target satellite.

This non-compliance is further exacerbated by any antenna misalignment induced by aircraft dynamic motion. Based on LiveTV's extensive experience with airborne antenna positioning systems for satellite communications, we believe a 0.2° peak pointing accuracy is optimistic under typical commercial transport aircraft operational envelopes. Additionally, it does not appear that Row 44 has accounted for the deleterious effects on polarization purity resulting from any aerodynamic radome that will need to enclose the proposed antenna system. Low-profile aerodynamic radomes inherently degrade the polarization discrimination at high angles of signal incidence, resulting in larger cross-polarized interference contributions. These effects vary rapidly as a function of look angle from the aircraft antenna to the target satellite, and occur outside the domain of typical antenna polarization control mechanisms. LiveTV is particularly concerned that Row 44 proposes to operate near the maximum permitted power levels without sufficiently substantiating how it plans to mitigate these significant interference contributions.

In the cases where Row 44 admits that it may cause interference, Row 44 simply proposes to shut off service to paying customers, without explaining precisely how it will do so in a timely fashion, without obtaining a commitment from its customers to avoid situations where interference is expected, and without committing to scrupulously record the time, manner and location of each of its transmissions, so that Row 44 can readily be identified as the source of any interference that it does cause.

Row 44's application presents fundamentally different technical issues than those raised by the aeronautical FSS proposals made by other applicants, and approved by the Commission, in the past. By using high-performance antennas, or by significantly reducing transmit power, previous applicants designed their mobile networks from the outset so that they never would be expected to have any more impact on adjacent spacecraft than a typical VSAT terminal. In stark contrast, Row 44 proposes to operate at power levels that are close to the maximum permitted for a regular, stationary, parabolic VSAT antenna, while its antenna system does not have similar performance characteristics, nor is it stationary.

Moreover, by Row 44's own analysis, there are situations expected in normal commercial flights across the country where the Row 44 network will need to shut down to avoid interference. Clearly, the operation of the Row 44 system presents far more significant interference risks than any other aeronautical FSS terminal proposed before it.

LiveTV urges the Commission to require Row 44 to clearly demonstrate in writing how its system design would operate on a non-interference basis, or to otherwise bring its

transmit power levels into line with those the Commission has approved before in the case of aeronautical FSS applications. Only after Row 44 makes such a showing should the Commission allow Row 44 to conduct testing to determine whether its theoretical design will work in practice. In the absence of such a showing, the FCC should deny or dismiss the Row 44 applications.

In accordance with Section 1.1206 of the Commission's rules, the original and one copy of this letter are being filed with your office on this date.

Sincerely yours,



Jeff Frisco
Chief Technology Officer
LiveTV

cc: Helen Domenici
Rod Porter
Gardner Foster
Robert Nelson
Fern Jarmulnek
Steve Spaeth
Karl Kensinger
Andrea Kelly
Scott Kotler