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The Federal Communications Commission has adopted new rules to expand the use of spectrum in the 17 gigahertz band to transmit data to Earth. This decision allows the spectrum, which previously had been reserved for feeder links and direct broadcast satellite (DBS) service, to be used by any geostationary satellite operators providing fixed-satellite service. It also is noteworthy because the FCC rejected requests to set this spectrum aside for terrestrial wireless use and instead affirmed that it should be used for satellite services.

Historically, 17 GHz spectrum has been used for feeder links, which send signals from the Earth to satellites, but the FCC made the band available to DBS operators for space-to-Earth transmissions in 2007. This decision makes the spectrum from 17.3 to 17.7 GHz and 17.7 to 17.8 GHz available to other satellite service operators using geostationary satellites to reach fixed customer locations. The new rules also authorize blanket licensing of earth stations in the 17 GHz frequencies, including earth stations used in moving vehicles. The FCC expects that the new spectrum will be used to support broadband operations – and that satellite operators will take advantage of spot beam technology to reuse the spectrum efficiently across the US.

As the FCC has done in other proceedings where it has opened up spectrum to new uses, the decision adopts safeguards to protect existing users. These include requirements that satellites operating at 17 GHz be separated in space, power limits, frequency reuse and coordination requirements, and other technical limitations on operation. It also protected some existing earth station operations from harmful interference and revised its coordination requirements for new earth stations in the band.

While the rules allow geostationary satellites to operate in the 17 GHz band, they do not address non-geostationary (NGSO) satellites. In response to requests from NGSO operators, the FCC asked for comment on issues affecting whether this band should be made available for such operations, including if there is a need for more spectrum for NGSO operations and the technical feasibility of sharing the band between geostationary and NGSO satellites while protecting incumbent users. Comments and reply comments on these questions will be due 60 and 90 days, respectively, after notice of the decision is published in the Federal Register.

This decision fits squarely within the FCC's recent history of expanding spectrum availability for broadband services and requiring spectrum to be shared between existing and new users to support that goal. It also is a relatively rare example of a decision that specifically supports satellite broadband, rather than focusing on terrestrial services. As a result, satellite operators in the US will have access to significant additional spectrum to support their broadband services, and to meet increasing demand for those services.

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