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ISO: 17/24 GHz Interference Protection Details

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The Commission has released a Further Notice of Proposed Rulemaking (FNPRM) to address technical issues related to potential interference unique to the “reverse band” operating environment in the 17/24 GHz Broadcasting-Satellite Service (BSS). Earlier in this proceeding, the Commission sought comment on what measures were needed to address issues concerning reverse band operations. The Commission’s concerns included space-path interference between Direct Broadcast Satellite (DBS) and 17/24 GHz BSS satellites (space-path interference) and ground-path interference from DBS feeder links to 17/24 GHz BSS subscribers (ground-path interference). The Commission determined that the record generated on these issues was insufficient for the Commission to develop interference mitigation requirements. While the parties proposed general approaches, the Commission now seeks additional information to derive specific requirements.

Ground-path interference will occur when the signals from transmitting DBS feeder link earth stations operating in the 17.3-17.7 GHz band are detected at the receiving earth stations of 17/24 GHz BSS subscribers. Areas surrounding DBS feeder uplink stations will experience the worst ground-path interference. 17/24 GHz BSS operators who co-locate telemetry, tracking and command (TT&C) earth stations with the TT&C earth stations of DBS operators may have difficulty receiving the downlinked telemetry signal from the 17/24 GHz BSS space station.

The Commission recognizes that, while there currently are relatively few DBS feeder link and TT&C earth stations, DBS feeder link earth stations transmitting in the Earth-to-space direction may increasingly be located in more developed areas, raising the specter of increased interference into 17/24 GHz BSS subscriber antennas. The Commission also anticipates that future entrants, such as “tweener” short-spaced DBS systems and non-U.S. DBS satellites serving the U.S. market, could result in a proliferation of feeder link earth stations at multiple locations within the U.S.

In response to comments from DirecTV and EchoStar, the Commission tentatively concluded that existing DBS feeder link earth stations should not be subject to new interference-mitigation requirements imposed as a result of this proceeding. Therefore, the Commission will establish a protection zone within which 17/24 GHz BSS receiving earth stations will not be able to claim protection from existing DBS feeder uplink transmissions.

The Commission also invited comment on the methodology to be used within the proposed zone to coordinate DBS feeder links and 17/24 GHz BSS earth stations. Comments on the FNPRM are due on or before November 5, 2007, and reply comments are due on or before December 5, 2007.