

FAX COVER SHEET



DBSO-98-128

Name: Mr. Steve Sharkey
Company: FCC
Pages: 3

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Date: 4/13/98

From: Paul Anderson

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Comments: See attached fax copy. Original will be put in the mail today.

cc: Ms. Kimberly Baum (Fax: 202-418-7270 ; Phone: 202-418-0756
Mr. Paul Marrangoni (Fax: 202-418-1918 ; Phone: 202-418-2425



Log: DBSO-98-128

☐ 13 April 1998

Mr. Steve Sharkey
Chief, Satellite Engineering Branch
Satellite & Radio Communication Division
International Bureau
Federal Communications Commission
2000 M Street, N.W.
Washington, DC 20554

Re: Application of Diversified Communication Engineering, Inc.
for an Experimental License

Dear Steve:

DIRECTV, Inc. has a number of serious concerns about the request by Diversified Communication Engineering, Inc. to operate an experimental 12 GHz station within the city of Austin, Texas. The signal levels as currently proposed in the application will result in significant interference to our subscribers.

First, DIRECTV has a large number of subscribers in the vicinity of the test location. There are between 500 and 1000 active subscribers in the four zip code areas surrounding the test site. These subscribers' signal reception quality must be protected.

Subscribers within the DCE calculated 6 dB or 4.8 dB C/I Ratio Contour will clearly have satellite signals interrupted during the period of testing. No mention is made in the application of any action that would be taken to ensure that subscribers in this area will be shielded from this interference source. This is clearly unacceptable.

Subscribers outside the DCE calculated 6 dB or 4.8 dB C/I ratio contour will have their clear sky margin reduced to near zero for locations close to these contours. These sites will be extremely sensitive to rain fades when the experimental transmitter is operating.

To obtain some perspective on an appropriate level of protection from inter-service interference sources, one can examine Annex 4 of Appendix 30. This Annex requires an equivalent I/N ratio of -23 dB for inter-service interference levels from GSO FSS sources (see Document JTG 4-9-11/46, Table 1, Column E, Row 10). Assuming an operational C/N in the Austin, Texas area of about 14 dB, this then requires a C/I value of 14-(-23) or 37 dB to meet Annex 4 inter-service interference criteria. To obtain this level of protection, an operational DBS receiver (assuming line of sight operation) would have to be located up to approximately 8 miles away from this experimental transmitter site to experience C/I levels of about 35 dB or less. Thus, subscribers in a wide area around this transmitter site will have their clear sky margins reduced, making them more sensitive to rain fade events and reducing their quality of service.

Page 2
DBSO-98-128
April 13, 1998

For an experimental license to be granted in a populated area such as Austin, Texas, the following requirements would have to be met. The test area is considered as any location in the greater Austin, Texas area:

1. All subscribers located within the 6 dB contour are required to have DBS signal reception protected at all times. Ideally this would be realized without the subscriber needing to take any action on his or her part, or requiring access to his or her property by any test personnel to install shielding. With respect to subscribers within the projected unshielded 6dB C/I contour, we would need additional time to coordinate notice to the subscribers of any impending test and to provide a contact point to report interference. In the event interference is reported, a mechanism would need to be established by which the test could immediately be terminated.
2. If testing is to proceed under any weather conditions, then the C/I ratio as seen by any subscriber anywhere in the test area, shielded or unshielded, must be 35 dB or greater.
3. If testing is restricted to clear weather conditions, then the C/I ratio as seen by any subscriber in the test area due to the experimental transmissions must be 20 dB or greater. This will reduce the clear sky C/N by 1 dB from 14 to 13 dB, which can be considered acceptable on a temporary basis only.

Sincerely,



Paul R. Anderson
Director,
DIRECTV

cc: Kimberly Baum, Satellite Engineering Branch
Paul Marrangoni, Chief, Experimental Licensing Branch, OET