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SUMMARY

AT&T supports the Commission's proposals to streamline the regulatory procedures associated with space and earth station licensing, as well as to update its Rules in various respects. As the Notice (§ 35) recognizes:

". . . government interference with market forces through unnecessary regulation is costly. Such costs include the actual out-of-pocket costs incurred by industry in complying with various regulatory requirements as well as by government in administering these regulatory schemes. The proposed amendments to Part 25 of [the] rules will decrease the regulatory burden on industry and will make the licensing process for earth and space stations more efficient."

Section I shows that the Commission's proposal to waive the space station construction permit requirement and allow applicants to proceed with construction "at their own risk" will avoid the administrative costs and burdens associated with the waiver process, and the required notice/acknowledgment will serve to apprise the Commission of industry activity. Similarly, the Commission's proposal to reduce the amount of detailed information required in a space station application and to allow applicants to file a consolidated system proposal containing information common to all space stations is much more efficient than requiring a separate application for each satellite. Likewise, there is no reason to continue to require licensees to submit an application for inclined orbit operation when the proposed letter notification is sufficient. AT&T suggests that because newer satellites have design lives of at least twelve years, upon request, the Commission should grant at

least two-year extensions of the initial ten-year license, so as to avoid the need for multiple STAs.

Section II shows that increasing the license term for C-band transportable earth stations is reasonable, as is the Commission's proposal to allow VSAT networks to complete construction over their ten-year license term. The Commission's proposal to update its Rules to reflect the requirements in the 1986 VSAT Order will consolidate and clarify this information. Specifically, the Rules should clarify that EIRP density limits must be met over the entire service area, so as to help eliminate industry confusion. Removal of bandwidth limits for digital VSAT carriers makes sense because the general interference level is determined by power density, irrespective of the total bandwidth over which the power density occurs.

Section III shows that, in order to minimize redundancy, the Commission should create the proposed new multipart form with various schedules to replace several existing FCC forms, and it should make the new form available to applicants in a software package. Also, the Commission's proposal to update the George Sharp Adjacent Satellite Interference Analysis data base to make it more useful for satellite and earth station applicants in the C, Ka and Ku bands should be adopted. The information requested of applicants would not be unduly burdensome and should not compromise any entity's confidential information.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)
)
)

Streamlining the Commission's)
Rules and Regulations for)
Satellite Application and)
Licensing Procedures)
_____)

IB Docket No. 95-117

COMMENTS OF AT&T CORP.

Pursuant to the Commission's Notice of Proposed Rulemaking ("Notice"), FCC 95-285, released August 11, 1995, and Section 1.415 of the Commission's Rules, 47 C.F.R. § 1.415, AT&T Corp. ("AT&T") submits these comments on the Commission's proposal "to streamline application and licensing procedures and requirements for satellite space and earth stations under Part 25 of [its] rules."¹

In the Notice, the Commission proposes "to eliminate outdated and cumbersome regulatory requirements, decrease unnecessary paperwork for applicants, and increase the efficiency of space and earth station licensing."² For

¹ Notice, ¶ 1.

² Id.

the reasons discussed below, AT&T broadly supports the Commission's proposals.

I. THE COMMISSION SHOULD ADOPT ITS PROPOSED REFORMS FOR SPACE STATION APPLICATION AND LICENSING.

The Notice proposes "to waive the construction permit requirement for space stations and allow potential applicants to begin construction of their satellites at their own risk prior to receiving a license."³ Applicants would be required to notify the Commission in writing that they are "beginning construction and acknowledge that they are proceeding at their own risk."⁴

Elimination of the construction permit requirement will provide operators with increased flexibility in commencing space station construction and allow the more rapid delivery of services to the public. Section 319(d) waivers of the construction permit requirement are granted routinely today, and requiring applicants to continue to seek such waivers serves no useful purpose. Indeed, as the Notice recognizes, some applicants erroneously regard the grant of a Section 319(d) waiver as "an implicit grant of a license and not simply as authority to construct at one's own risk."⁵ Elimination of the permit requirement will

³ Notice, ¶ 7.

⁴ Id.

⁵ Id.

avoid the administrative costs and burdens associated with the waiver process, and the proposed notice/acknowledgment will serve to apprise the Commission of industry activity, without any possibility of misunderstanding that the applicant is, in fact, undertaking construction "at its own risk."

Similarly, the Commission's proposal to eliminate the requirement that applicants for new space stations submit detailed information on estimated investment and operating costs for the expected life of the facility; revenue requirements; number, geographic distribution of, and access to, earth stations; demand for services and entities to be served; "historical use" (for existing operators); and launch arrangements will also substantially streamline the application process.⁶ Moreover, as the Commission recognizes, investment and operating cost information is typically considered sensitive business information which -- although not required for the Commission to make its public interest determination -- has often engendered litigation between competitors.⁷ As the Notice acknowledges, an applicant's financial qualifications are assessed based on other material that is, and will

⁶ Notice, ¶¶ 9-10.

⁷ Notice, ¶ 9 and n.12.

continue to be, required under the Commission's rules.⁸ Detailed demand information is unnecessary, because an applicant would not commit the vast investment required to construct a satellite system, if it did not anticipate substantial demand and revenue to be gained from its use. The requirement that existing operators simply identify whether they are adding or replacing a satellite is sufficient for the Commission's determination of orbital spectrum assignments.

The Commission's proposal to allow applicants to submit a "consolidated system proposal containing information common to all space stations" is much more efficient than requiring a separate application for each proposed space station.⁹ Likewise, requiring fixed-satellite system operators to file an annual report (instead of the current semi-annual report) will reduce the "paperwork burden on . . . applicants and the Commission while still ensuring that the Commission receives the required information on a regular basis."¹⁰ Moreover, allowing operators "to describe only how each transponder is being used and identify the total capacity or percentage of time each transponder is actually used for transmission and

⁸ Id. See Section 25.140(b)-(e) of the Commission's Rules, 47 C.F.R. § 25.140(b)-(e).

⁹ Notice, ¶ 11.

¹⁰ Notice, ¶ 13.

the amount of unused system capacity in the transponder" (rather than the detailed utilization information now required) is sufficient for the Commission to ensure that a satellite is using the spectrum efficiently.¹¹

Elimination of the requirement to file an application for authority to operate a geostationary satellite in an inclined orbit would also serve the public interest.¹² As the Notice acknowledges, "[i]nterference has not proven to be a problem" with satellites operating in inclined orbit, and, indeed, the International Telecommunication Union ("ITU") has removed the five-degree inclination orbit limit.¹³ In these circumstances, there is no reason to continue to require licensees to submit an application for inclined orbit operation.

AT&T proposes that because newer satellites have design lives of at least twelve years (whereas satellite radio licenses are issued for ten years), the Commission should grant satellite license renewals for a period of at

¹¹ Notice, ¶ 14.

¹² Under the proposal, the licensee would be required to notify the Commission in writing within 30 days of commencement of inclined orbit operation. Notice, ¶ 15. Also, the licensee's notification would have to include information as to date of commencement of inclined orbit, the initial inclination, the annual rate of change in inclination, and the expected end-of-life of the satellite. Id.

¹³ Notice, ¶ 15.

least two years.¹⁴ Otherwise, four six-month renewal Special Temporary Authorizations ("STAs") would be required for a twelve-year satellite.

II. THE COMMISSION SHOULD ALSO ADOPT ITS PROPOSED REFORMS FOR EARTH STATION APPLICATION AND LICENSING.

The Commission proposes to increase the license term for temporary fixed C-band earth stations (transportables) from one year to ten years. This is reasonable because "most, if not all, parties providing transportable services in the C-band are seeking to provide service for more than one year."¹⁵ Therefore, "[i]ncreasing the license term will allow applicants to engage in long-term business planning, reduce the administrative burden on the agency associated with processing these renewals, and reduce the regulatory burden on licensees."¹⁶ At the same time, retention of the requirement that C-band transportables continue to coordinate their activities with terrestrial facilities and the proposed notification of the FCC's Columbia Operations Center of the "coordination

¹⁴ The Commission has authority to renew the term of a space station license for up to ten years. See Communications Act of 1934, as amended, 47 U.S.C. § 307(c), and Sections 25.120(b), (d) of the Commission's Rules, 47 C.F.R. §§ 25.120(b), (d).

¹⁵ Notice, ¶ 17.

¹⁶ Id.

contour of the proposed . . . site" will enable the Commission to monitor transportable operations.¹⁷

The Commission's proposal to eliminate the requirement that an applicant for a Very Small Aperture Terminal ("VSAT") Network complete construction of its network within 48 months of license grant and instead to allow VSAT licensees to complete construction over the course of their ten-year license term is reasonable. It will give operators "greater flexibility in their financial and construction planning," and, because licensees have been aggressive in building their networks, it is appropriate to eliminate this outmoded requirement.¹⁸ Similarly, elimination of the annual reporting requirement for the number of VSAT stations constructed is no longer necessary because of the maturity of this industry segment.¹⁹

¹⁷ Notice, ¶ 18.

¹⁸ Notice, ¶ 19.

¹⁹ Notice, ¶ 20. Consistent with these initiatives to eliminate unnecessary regulation, the Commission should also eliminate the licensing requirement for all international receive-only earth stations in the fixed-satellite service that operate with U.S.-licensed fixed-satellites. The public benefits of this proposal (increased service options, reduced customer cost, promotion of rapid service introduction, and freeing Commission resources) are consistent with the Notice's proposals for earth stations. See Amendment of Section 25.131 of the Commission's Rules and Regulations to Eliminate the Licensing Requirement for Certain International Receive-Only Earth Stations, 8 FCC Rcd. 1720 (1993).

The Commission's proposal to update its Rules to reflect criteria for VSAT networks established in the VSAT Order will consolidate and clarify this information.²⁰ Specifically, the Commission would, in Section 25.134 of the Rules, replace the term "power densities" with the more specific term "EIRP [effective isotropically radiated power] densities," which is used in the VSAT Order. Also, it would include the maximum Hub EIRP of 78.3 dBW to reflect restrictions which have been in effect since 1986.

Section 25.134 should also be updated to specify that the satellite EIRP density limits be met over the service area, as specifically required by the VSAT Order. As an interference source, it makes no sense but to specify maximum EIRP density over the entire service area footprint (including at the peak EIRP), regardless of which contour intersects the intended receive earth station. Clarification of this requirement would help eliminate industry confusion over this issue.

The Commission's proposal to replace the current prior-authorization requirement for "minor" modifications to an operating earth station with notice 30 days after the modification is completed, should be adopted. By definition, such modifications do not have the potential to

²⁰ Routine Licensing of Large Networks of Small Antenna Earth Stations Operating in the 12/14 GHz Frequency Band, Declaratory Order, 1986 FCC LEXIS 3692 (1986) ("VSAT Order").

increase interference to adjacent satellites, and thus an application is unnecessary.²¹

The Commission also proposes to eliminate the bandwidth limitation for digital VSAT carriers in "light of the increasing demand to operate with wider bandwidths."²² The Notice asks "whether applying the existing power density limits for narrow band digital VSAT carriers to other narrow or wide bandwidth digital carriers would provide sufficient power for a viable service and whether removing the bandwidth limits will have a negative effect on the two degree spacing policy."²³

Removing the bandwidth limits for digital VSATs should not have a negative effect on the Commission's two-degree spacing policy. From a technical perspective, it makes sense to eliminate the bandwidth limitation reference for the routine licensing of VSAT networks because the general interference level, for carriers with uniform power distribution, is determined by power density, irrespective of the total bandwidth over which the power density occurs. Thus, a wideband carrier is no more interfering than a narrowband carrier with the same power density. Power

²¹ Notice, ¶ 23.

²² Notice, ¶ 25.

²³ Id.

density is then the determining factor regarding sharing between narrowband and wideband services.

The existing power density limits are satisfactory as the acceptance criteria for routine licensing of large VSAT networks.²⁴ New services, however, especially those using compressed digital video ("CDV")/single channel per carrier ("SCPC") carriers from 3 mb/s to roughly 10 mb/s, require EIRP densities in excess of the +6 dBW/4 KHz routine licensing limit to provide sufficient power for a viable service. Some of these CDV/SCPC carriers operate with EIRP densities as high as +14 dBW/4 KHz. The use of smaller receive-only antennas and higher availability requirements necessitate the use of higher power. Because these carriers leave unused bandwidth on the satellite transponder, there is room to coordinate their operation by using frequency offsets. However, some of the newer services, including wideband CDV/multiple channel per carrier ("MCPC") carriers from roughly 19 mb/s to 45 mb/s, which consistently operate with EIRP densities from +7 to +10 dBW/4 KHz, typically use most of the transponder bandwidth and therefore cannot

²⁴ Most VSAT network carriers operate just under the EIRP density limit, while using most of the transponder power and bandwidth. For example, optimal use of an AT&T TELSTAR 401 transponder's power of +47 dBW maximum EIRP and bandwidth of 54 MHz results in an EIRP density of 4.2 dBW/4 KHz, for an average carrier spacing factor of 1.4 and an output backoff of 3 dB. This, in turn, results in a power density input to the earth station antenna well below the -14 dBW/4 KHz limit for all but the smallest antennas.

normally be offset in frequency by any significant amount to effect coordination. Fortunately, these carriers are generally not overly sensitive to interference including FMTV, yet they have proven to be non-interfering into more sensitive VSAT carriers. If these higher EIRP density levels prove to be non-interfering in the long-term, the Commission should consider raising the limit for routine licensing to simplify and facilitate the licensing process for these wideband services. Further study would be required to see if the 1986 limit of +6 dBW/4 KHz may be out-of-date and whether current operating levels warrant raising it. In all events, the routine licensing power density limits do not need to be altered to accommodate the higher power densities exhibited by some of these newer services. Rather, newer services that exceed the routine licensing power density limits can be handled according to the requirements in Section 25.134 of the Rules, in which carrier-to-interference analyses are performed and conflicts are handled through the adjacent-satellite coordination process.

AT&T proposes that the routine licensing of VSAT networks be extended to include those antennas smaller than 1.2 meters in diameter that meet the antenna sidelobe gain requirements for two-degree spacing. For example, AT&T now uses 0.95 meter elliptical antennas in its VSAT networks, which meet the $29-25 \times \log[\theta]$ sidelobe gain limit at least as well as a standard 1.2 meter antenna. These

antennas transmit with input power density less than the -14 dbW/4 kHz limit for routine licensing. The suggested revised rule would permit a larger group of antennas to qualify for routine licensing.

III. THE COMMISSION SHOULD ADOPT ITS "GENERAL PROPOSALS."

The Commission proposes to create a new multipart form consisting of a main form and various schedules that would replace several existing FCC forms.²⁵ This would "enable an applicant to accomplish a number of different activities using one form and selected schedules rather than many different forms that contain unnecessary or redundant information."²⁶ As the Notice recognizes, adoption of this proposal would "reduce regulatory and administrative burdens and create a more efficient application process."²⁷ AT&T suggests that the Commission make available to applicants the main form and associated schedules in a software package to facilitate completion of the relevant information. This would be consistent, for example, with the fact that the

²⁵ Notice, ¶ 26. The forms that would be replaced are FCC Forms 430 (Licensee Qualification Report), 493 (Application for Earth Station Authorization or for Modification of Station License), 702 (Application for Consent to Assignment of Radio Station Construction Permit or License for Stations in Services Other Than Broadcast), and 704 (Application for Consent to Transfer of Control).

²⁶ Notice, ¶ 26.

²⁷ Id.

Commission's Gettysburg office has made available FCC Form 600 for Land Mobile Radio Services on a floppy diskette, which has proven very useful to applicants.²⁸

The Commission also proposes to update its Adjacent Satellite Interference Analysis ("ASIA") data base for use by satellite and earth station applicants in the C, Ka and Ku bands.²⁹ Specifically, the Commission would have all satellite operators voluntarily provide on a floppy diskette the characteristics of their satellite network in a format consistent with the ASIA program, as well as on paper for inclusion in the public record. The Notice asks questions concerning the type of earth station data that should be submitted, whether ASIA should be adopted as the standard for interference calculations, the need to update the ASIA program, and whether there are issues of data confidentiality.

AT&T currently provides George Sharp ASIA analysis of representative satellite service carriers with each application to construct, launch and operate a new C, Ku band or hybrid satellite. The analysis includes each carrier's effect on, and how they, in turn, are affected by,

²⁸ AT&T encourages the Commission to continue and expand its use of the Internet as an additional method of distributing forms, notices, reports, and the like. AT&T has already taken advantage of the Commission's "Web home page" to access this type of information.

²⁹ Notice, ¶¶ 29-30.

adjacent satellite carriers. The ASIA information requested by the Commission is included as one or two tables with each analysis. This information could readily be copied onto a diskette in the same format as it is entered into the ASIA program, and then provided to the Commission.

The information AT&T provides is not proprietary, and AT&T assumes that comparable information from other operators is likewise intended to be publicly available. Thus, there should be no confidentiality issue. AT&T believes that access to the ASIA data from other operators, in a standard format, would be a useful means to expedite the interference analysis process.

The George Sharp ASIA program is currently the "standard" for producing interference calculations for domestic satellite applications, and can continue as such for the application process in the C and Ku bands.³⁰ However, AT&T employs various carrier-to-interference ("C/I") programs for the day-to-day analyses required to

³⁰ The unique differences in AT&T's recently-proposed Ka band satellite system, including on-board regeneration and signal processing and multiple spot beams, required separate and distinct uplink and downlink interference considerations not readily compatible with the ASIA program. See Application of AT&T Corp. for Authority to Construct, Launch, and Operate the VoiceSpan® System of Twelve Satellites in the Ka-Band Domestic and International Fixed-Satellite Service and to Construct Four Partial Ka-Band Satellite Ground Spares, filed September 29, 1995. Modifications to make the ASIA program more flexible are therefore necessary to permit its use for Ka band interference analysis.

deal with sources of interference and for use in coordination. AT&T's C/I programs generally use commercial spreadsheet software, and AT&T populates the spreadsheets with standard C/I formulas and relevant satellite transmission and service carrier parameters, including those obtained from adjacent operators and from ITU publications. AT&T's in-house C/I programs include parameters not considered in the ASIA program, such as path loss, transponder attenuator and beam gain differentials, and carrier frequency offsets. Unlike the ASIA program, AT&T's C/I programs can be easily modified to accommodate the particular needs of the user. Therefore, AT&T anticipates continued reliance on these in-house programs, even if the Commission adopts its proposed modifications to the ASIA process.

The Commission's proposal to eliminate Sections 25.252 to 25.256 of its Rules and instead to reference Appendix 28 of the ITU Radio Regulations in Section 25.251 should be adopted, because, as the Commission notes, Appendix 28 changes so frequently, that its Rules are rarely up-to-date.³¹ AT&T suggests that all other external sources needed to complete the international coordination should also be clearly referenced in Section 25.251.

³¹ Notice, ¶ 32.

CONCLUSION

For these reasons, the Commission should adopt the streamlining proposals set forth in the Notice, as well as those suggested herein.

Respectfully submitted,

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