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

In the Matter of	)		
	)		
SATELLITE CD RADIO, INC.	)	File Nos.	49/50-DSS-P/LA-90;
	)		58/59-DSS-AMEND-90;
	)		44/45-DSS-AMEND-92
Application for Digital Audio	)		
Radio Service Satellite System[1]	)		

REPLY TO SUPPLEMENTAL COMMENTS OF SATELLITE CD RADIO, INC.

Pursuant to Section 1.45 of the Commission's Rules,[2] Digital Satellite Broadcasting Corporation ("DSBC"), hereby submits its reply to the *Supplemental Comments* filed by Satellite CD Radio, Inc. ("CD Radio") on November 9, 1994. DSBC urges the Commission to use the responses to CD Radio's *Supplemental Comments* to prepare a *Notice of Proposed Rulemaking* suggesting DARS service rules and a method of licensing applicants as well as addressing other outstanding public interest and regulatory policy issues. To that end, DSBC submits its comments on CD Radio's *Supplemental Comments* and proposed rules and hereby files it own proposed DARS service rules for comparative purposes.

As an initial matter, DSBC believes that the most prudent path for the Commission is to adopt a simple and flexible regulatory framework for this new service. The Commission

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[1] Although CD Radio has filed its *Supplemental Comments* only in its application proceeding, the issues it raises are relevant to all DARS applicants and, thus, should be considered in all pending application proceedings. American Mobile Radio Corp., File Nos. 26/27-DSS-LA-93, 10/11-DSS-P-93; Digital Satellite Broadcasting Corp., File Nos. 28-DSS-LA-93, 12/13-DSS-P-93; Primosphere Limited Partnership, File Nos. 29/30-DSS-LA-93, 16/17-DSS-P-93.

[2] 47 C.F.R. § 1.45 (1993).

has recognized that new services, especially satellite services, are risky propositions that require regulatory flexibility with regard to service offerings and methods of financing in order to thrive. Therefore, service rules should not limit relationships or business decisions that may help these new and unproven services develop. Flexibility will permit DARS operators to investigate services and methods of financing that will ensure the development of a healthy service that is responsive to consumer demand.

In contrast, constraints on this nascent service may reduce its desirability to the public and increase operators' costs and risks, thereby reducing the ability to secure financing and decreasing the probability that a viable service will be initiated. As a result, DSBC proposes rules that include only minimal regulatory restraints on financial structure, ownership and operations.[3]

It is with these general principles in mind that DSBC hereby submits proposed service rules. DSBC's rules are the result of discussions held by the four DARS applicants, which were focused on creating service rules that provide for efficient use of the spectrum and a mechanism to grant licenses for spectrum assignments.[4] As CD Radio notes, the applicants worked cooperatively to develop rules that would accommodate all concerns. Consensus on

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[3] The Commission recognized the benefits of minimal regulation of developing services such as DARS in its treatment of the Direct Broadcast Satellite ("DBS") industry. There, the Commission adopted a regulatory scheme that allowed the business judgements of the individual applicants to shape the financial structure and the type of services offered. *Direct Broadcast Satellite Order*, 90 FCC 2d 676 (1982). DSBC urges similar regulatory treatment for DARS. If, at a later date, the Commission decides that the DARS industry requires further regulation, it will be in a position to develop rules specifically tailored to the industry as it has developed.

[4] See *Supplemental Comments* of CD Radio at 2.

all rules, however, remained just beyond the applicants' grasp.[5]

The proposed rules submitted by DSBC and CD Radio agree in many respects. Where they diverge it is the result of differences in system design, corporate structure and business plans. Those rule disparities are briefly discussed below. DSBC expects that these differences can be harmonized and should not stand in the way of the Commission preparing a *Notice of Proposed Rulemaking*.

Financial Qualifications. The Commission should be wary of imposing regulations that may discourage investment or prohibit creative methods of financing an expensive and risky venture. Thus, DSBC proposes that the Commission adopt the relaxed financial qualifications standard successfully employed in the DBS service.

DARS is a new high-technology service that holds great promise. However, it is also a high risk and capital intensive venture. Attracting financial support for a new venture frequently is difficult until after the Commission has completed its licensing process. This is especially true for innovative new satellite services that are unproven in the financial community. It is difficult for entrepreneurial applicants with limited internal resources to meet stringent financial qualification requirements until after licensing takes place, putting entrepreneurs at a considerable disadvantage. Therefore, the Commission has permitted applicants for such new satellite services to fulfill their financial qualifications requirements through other, less rigid, methods.

For example, in the DBS service the Commission did not impose rigorous financial

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[5] A majority of applicants agreed that the four pending applications could be accommodated in the 50 MHz proposed for DARS and, therefore, are not mutually exclusive. Letter to Cecily Holiday from Richard E. Wiley, Douglas J. Minster, and Howard Liberman, dated November 17, 1993. DSBC reaffirms its conclusion that mutual exclusivity is not an issue in the DARS application proceedings.

qualifications standards, but rather required applicants to proceed with due diligence in constructing their facilities according to a schedule of milestones.[6] The Commission utilized a relaxed financial standard in the expectation that it would promote introduction of innovative satellite services. The same factors justifying flexible financial qualifications requirements in DBS apply with equal force in DARS. Thus, DSBC proposes an identical standard for DARS.[7]

Spectrum Assignments. DSBC proposes that frequency blocks be assigned by the Commission at the time an applicant is authorized to commence construction. This creates certainty regarding frequency assignments which permits efficient planning and optimization of a DARS system for a particular frequency band. In addition, it enables a permittee to begin international coordination in its frequency assignment much earlier than if it must wait to discover in which frequencies it will operate.[8]

Temporary Use of Frequencies. DARS rules should not address the temporary use of a greater than proportionate share of DARS spectrum. While temporary use by the first operator(s) on station might avoid frequencies lying fallow for a short time, prescribing the temporary use may be disruptive and contrary to the public interest.[9]

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[6] 47 C.F.R. § 100.19(b) (1993).

[7] The flexibility of the DBS due diligence standard has proved effective. DBS applicants were permitted sufficient time to find financial support for their service proposals. As a result, two DBS service operators are currently enjoying great success and additional DBS services are expected to launch in the next 36 months. More important, consumers are enjoying new high-quality video services throughout the United States.

[8] *Advanced Communications Corporation*, 6 FCC Rcd. 2269 at 2272 (1991) (uncertainty regarding specific frequency assignments hinders international coordination).

[9] For example, a licensee using the frequencies of another DARS service provider may establish a customer base or digital audio services that can not continue to be supported by the quantity of spectrum ultimately available to that licensee after other service providers are on-station. The temporary occupant would

On the other hand, DARS operators should be permitted to create relationships with other DARS licensees and third parties that will promote the success of this new service. Under some conditions, allowing one licensee to use the frequencies of another DARS operator, pursuant to mutual agreement, might fall into the class of relationships that could prove beneficial to initiation of DARS.[10] Silence on the issue of temporary use will permit private negotiation to promote rapid implementation of service and encourage efficient use of spectrum while preserving the rights of DARS permitees.

Finally, the Commission must be cautious to determine that any rules it adopts will not limit post-permit/license settlements and ventures between applicants that have proven efficient or procompetitive in the context of other services. Given the cost and risk involved in initiating a new, innovative, but unproven satellite service, restricting the types of services that DARS operators may offer or limiting the relationships that service providers may enter into could prove fatal.

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then be faced with the choice of reducing its services, discontinuing service to some customers, or seeking to utilize frequencies that are rightfully assigned to another licensee.

[10] For example, the DARS rules should not prohibit a relationship comparable to that entered into by United States Satellite Broadcasting Co., Inc., and Hughes Communications Galaxy, Inc. The agreement of two DBS licensees to share a common technical infrastructure while maintaining separate billing and customer service organizations permitted the efficient initiation of competitive and affordable DBS services.

DSBC joins CD Radio in urging the Commission to proceed to take prompt action on service rules for DARS. The preparation of a *Notice of Proposed Rulemaking* incorporating DSBC's proposal, CD Radio's proposal and any other inputs the Commission might receive will encourage open debate on issues that will permit the Commission to develop final service rules and license qualified DARS applicants.

Respectfully Submitted

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Its Attorneys

November 23, 1994

Proposed Rules and Regulations

1. The Table of Contents for Part 25 is revised to read as follows:

PART 25- SATELLITE COMMUNICATIONS
Subpart A - General

Sec.

Subpart B - Applications and Licenses

EARTH STATIONS

SPACE STATIONS

PROCESSING OF APPLICATIONS

FORFEITURE, TERMINATION, AND REINSTATEMENT OF STATION AUTHORIZATION

Subpart C - Technical Standards

25.205 Minimum angle of antenna elevation.

25.206 Station identification.

25.207 Cessation of emissions.

25.208 Power flux density limits.

25.209 Antenna performance standards.

25.210 Technical requirements for space stations in the Fixed-Satellite Service.

25.211 Video transmissions in the Domestic Fixed-Satellite Service.

25.212 Narrowband transmissions in the Fixed Satellite Service.

25.213 Inter-Service coordination requirements for the 1.6/2.4 GHz Mobile-Satellite Service.

25.251 Special requirements for coordination.

25.252 Maximum permissible interference power.

25.253 Determination of coordination distance for near great circle propagation mechanisms.

25.254 Computation of coordination distance contours for propagation modes associated with precipitation scatter.

25.255 Guidelines for performing interference analyses for near great circle propagation mechanisms.

25.256 Guidelines for performing interference analyses for precipitation scatter modes. [Reserved]

Subpart D - Technical Operations

Subpart E - Developmental Operations

Subparts F - G -- [Reserved]

Subpart H - Authorization to Own Stock in the Communications Satellite Corporation

25.503 - 25.504 [Reserved]

25.505 Persons requiring authorization.

25.506 - 25.514 [Reserved]

25.515 Method of securing authorization.

25.516 - 25.519 [Reserved]

25.520 Contents of application.

25.521 Who may sign applications.

25.522 Full disclosures.

25.523 Form of application, number of copies, fees, etc.

25.524 [Reserved]

25.525 Action upon applications.

25.526 Amendments.

25.527 Defective applications.

25.528 - 25.529 [Reserved]

25.530 Scope of authorization.

2. The authority citation for Part 25 continues to read as follows:

AUTHORITY: Sections 101 - 404, 76 Stat. 419 - 427; 47 U.S.C. 701 - 744, Sec. 4, 48 Stat. 1066, as amended; 47 U.S.C. 154. Interprets or applies Sec. 303, 48 Stat. 1082, as amended; 47 U.S.C. 303.

3. A new paragraph is added, in alphabetical order, to Sections 2.1 and 25.201 to read as follows:

Satellite Digital Audio Radio Service ("SDARS"). A radiocommunication service in which digital signals are transmitted by a system of space stations and complementary terrestrial stations to fixed and mobile stations.

4. Section 25.114 is amended by revising paragraph (c)(18), to read as follows:

§ 25.114. Applications for space station authorizations.

* * *

(c) * * *

(18) Detailed information demonstrating the financial qualifications of the applicant to construct and launch the proposed satellites. Applications for domestic and mobile satellite systems shall provide the financial information required by §25.140(b)-(e) or §25.142(a)(4). Applications for SDARS systems shall comply with the requirements of §25.144(b)(3). Applications for international satellite systems authorized pursuant to Establishing of Satellite Systems Providing International Communications, 50 FR 42266 (October 18, 1985), 101 FCC 2d 1046 (1985), recon. 61 RR 2d 649 (1986), further recon. 1 FCC Rcd 439 (1986), shall provide the information required by that decision.

5. Section 25.120 is amended by adding paragraph (d)(3) as follows:

§25.120 License term and renewals.

* * *

(d) Space stations.

* * *

(3) For systems in the satellite digital audio radio service, the license term will begin at 3 a.m. EST on the date that the licensee certifies to the Commission that it has successfully placed its proposed satellite(s) in orbit and is ready to commence operations and its operations will fully conform to the terms and conditions of the SDARS system authorization. The license term for a space station and complementary terrestrial stations shall be concurrent.

6. A new Section 25.144 is added to read as follows:

§25.144 Licensing provisions for the 2.3 GHz satellite digital audio radio service.

(a) Definitions.

(i) "System." The term "system" means the constellation of one or more SDARS space stations and complementary terrestrial stations that an individual applicant or licensee proposes to construct, launch and operate.

(ii) "Usable bandwidth." The term "usable bandwidth" means that portion of the 2310-2360 MHz band that is usable by the SDARS licensees. This term is deemed to be the entire 2310-2360 MHz band, but may be changed from time to time by the Commission or by mutual agreement of SDARS applicants or licensees.

(iii) "Frequency assignment." The term "frequency assignment" means a subsection of the usable bandwidth exclusively assigned to a single DARS licensee.

(b) System application requirements:

(1) Each application for a system authorization in the satellite digital audio radio service in the above-referenced bands shall describe in detail the proposed satellite digital audio radio service system, setting forth all pertinent technical, legal, and financial qualifications of the applicant. Applicants must also file information demonstrating compliance with all requirements of this section.

(2) Applicants for a satellite digital audio radio service system must identify the power flux density produced within its frequency assignment at the Earth's surface by each space station of their system and the EIRP of terrestrial stations located along the United States border to allow a determination of whether coordination with terrestrial services is required under international footnote 751B of §2.106 of the Commission's Rules.

(3) Milestones.

(a) Parties granted authorizations shall proceed with diligence in constructing satellite digital audio radio service systems. Permitees shall be required to comply with a schedule of milestones established at authorization. The SDARS milestones are as follows, based on the date of authorization:

(1) One year: Complete contracting for construction of first space station or begin space station construction.

(2) Two years: If applied for, complete contracting for construction of second space station or begin second space station construction.

(3) Six years: In-orbit operation of at least one space station.

(c) Permissible communications. SDARS systems in these bands are authorized to transmit to fixed, mobile, and transportable receivers. Complementary terrestrial stations are authorized to repeat transmissions from space stations for reception by fixed, mobile, and transportable receivers.

(d) Frequency assignment policies.

(1) Each system authorized under this section will be conditioned upon construction, launch and operation milestones. The failure to meet any of the milestones contained in an authorization will result in its cancellation, unless such failure is due to circumstances beyond the operator's control or unless otherwise determined by the Commission upon proper showing in any particular case.

(2) Spectrum assignments will be made for each system as follows:

(i) All licensees are limited to the usable bandwidth in the 2310-2360 MHz band.

(ii) The usable bandwidth will be divided into one frequency assignment for each licensed system from the initial processing group. Should any initial system license be canceled by the Commission for failure to comply with the requirements of this section, the number of frequency assignments shall be redetermined and frequency assignment bandwidth shall be re-divided pro-rata.

(iii) Unless the licensees agree otherwise, each licensee shall be initially assigned the highest frequency assignment remaining available on the date of authorization. Frequency assignments assigned pursuant to this subsection are assigned on an exclusive basis.

(iv) Each operational system may employ cross polarization within its frequency assignment and may transmit cross polarized emissions in other frequency assignments by mutual agreement of the licensee of that frequency assignment.

(v) Each system operator will reduce its bandwidth occupancy by 0.1 MHz to create two 0.2 MHz assignments adjacent to the edge of the frequency assignment for location of telemetry beacons.

(3) SDARS licensees may utilize any modulation technique.

(e) Reporting requirements. All operators of satellite digital audio radio service systems shall, on June 30 of each year, file a report with the Common Carrier Bureau and the Commission's Laurel, Maryland field office containing the following information:

(1) Status of space station construction and anticipated launch dates, including any major problems or delays encountered;

(2) A listing of any non-scheduled space station outages for more than thirty minutes and the cause(s) of such outages;

(3) Identification of any space stations not available for service or otherwise not performing to specifications, the cause(s) of these difficulties, and the date any space station was taken out of service or the malfunction identified.

7. Section 25.202 is amended by adding a new paragraph (a)(4), as follows:

§ 25.202. Frequencies, frequency tolerance and emission limitations.

* * *

(a) * * *

(4) The following frequencies are available for use by the satellite digital audio radio service:

2310-2360 MHz: Space-to-Earth (primary)

CERTIFICATE OF SERVICE

I hereby certify that on this 23rd day of November, 1994, copies of the foregoing *Reply to Supplemental Comments of Satellite CD Radio, Inc.* were served by hand delivery*, or first class mail, postage prepaid, to the parties on the attached service list.

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