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FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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In the Matter of:

Establishment of Rules and Policies for the
Digital Audio Radio Satellite Service in the
2310-2360 MHZ Frequency Band

IB Docket No. 95-91
GEN Docket No. 90-357
RM No. 8610

DOCKET FILE COPY ORIGINAL

Comments of CD Radio

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Dated: September 15, 1995

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SUMMARY

CD Radio generally supports the Commission's key tentative decisions in the *Notice of Proposed Rulemaking* on satellite digital audio radio services ("DARS"). These conclusions include:

- satellite DARS will promote the public interest by providing a diverse and competitive range of radio offerings;
- satellite DARS will not harm conventional radio;
- satellite DARS should be regulated by flexible operational and technical rules that permit the service to respond rapidly to marketplace needs; and
- satellite DARS licensees should meet clear, but not severe, financial milestone requirements.

Implementation of these policies would provide a sound basis for the growth of the new service, and, in turn, promote increased diversity in audio programming and continuous nationwide coverage especially to underserved rural and remote areas, provide the listening public with high-quality aural signals, and generate high-technology jobs in the new industry.

None of that will occur, however, if the FCC maintains its current pace. Indeed, it is beyond cavil that the FCC has clearly not fulfilled its obligation under the Communications Act to reach a decision on new technologies and services *within one year of their being proposed*. CD Radio's application has now been on file for *five* years; a cut-off for the service was initiated three years ago. Over 13.5 red-tape years have been spent awaiting licensing, and further delay will cripple the industry before it begins.

Further delay and outright damage would be inflicted by some of the other policies considered in the *NPRM*. The four satellite DARS applicants are not mutually exclusive, could be licensed tomorrow, and are ready to begin building their systems. The anti-competitive interests of existing broadcasters would have the Commission instigate spectrum auctions, re-open the cut-off and artificially narrow the already-allocated spectrum. None of these options is lawful, equitable or sound public policy:

- the Commission has already determined that the entire 2310-2360 MHz should be allocated to satellite DARS;
- licensing qualified applicants with fewer than the available 12.5 MHz each will force them to provide less channels than necessary to attract niche audiences and become viable in the marketplace, as the history of cable radio shows;
- the Commission cannot lawfully re-open an already-held cut-off;
- even if legally feasible -- which it is not -- re-opening the cutoff would be extremely unfair to CD Radio, which has substantial equities based on reasonable expectations of Commission action;
- spectrum auctions may not be used in satellite DARS as there is no mutual exclusivity and ample precedent supporting other methods of license allocation;
- auctioning satellite DARS spectrum would diminish incentives for future entrepreneurs and -- in any case -- would raise little monies because of the necessity to provide substantial bidding credits to CD Radio; and
- permitting two or more satellite DARS licensees to aggregate their spectrum into a single system is anti-competitive and will destroy any opportunity for "second-round" use of the spectrum for DARS or other services.

The Commission should reject these options; fraught with legal peril, they will inevitably further delay, and possibly undermine, initiation of the service.

The Communications Act places upon opponents of new technologies the burdens of proof and persuasion. Here, somehow, the Commission seems to have reversed the burden; the fledgling satellite DARS industry is forced to defend itself from the slings and arrows of broadcasters who are actively trying to curtail or weaken this valuable service.

The FCC should finalize its service rules, reject auctions, and license qualified applicants from the current cut-off in the entire 50 MHz band. Prompt action cannot undo five years of delay, but it will at last start the clock on a new and valuable service for the American public.

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Comments of CD Radio

CD Radio Inc. ("CD Radio"), by its attorneys and pursuant to the above-captioned *Notice of Proposed Rulemaking (NPRM)*,¹ hereby comments on the Commission's proposed licensing policies and rules for the satellite digital audio radio service ("DARS"). As set forth below, the record already reflects that prompt adoption of pro-competitive rules, followed by the licensing of adequate amounts of spectrum, is in the public interest. The Commission should therefore proceed, as rapidly as possible, to finalize its proposed rules and authorize CD Radio and other qualified applicants to launch and operate their systems.

I. INTRODUCTION

In May of 1990, CD Radio inaugurated satellite radio by filing the first application to construct, launch, and operate a satellite system in order to provide high-fidelity digital audio to rural, mobile and other users. CD Radio then spent over \$15 million of its own -- *i.e.*,

¹ FCC 95-229 (June 15, 1995).

private investors' -- monies to refine its technical design and market strategy. As a result, CD Radio's satellite radio technology is today the most advanced of any in the world.²

Over half a decade later, the Commission is now taking the first steps to create a legal and regulatory regime to govern grant of applications filed by CD Radio and others, following up on its recent allocation of S-Band spectrum for the service.³ This extreme delay is largely the result of unwarranted opposition from existing broadcasters, which is especially troubling given that it frustrates the express mission of the FCC enumerated in Section 157 of the Communications Act:

It shall be the policy of the United States to encourage the provision of new technologies and services to the public. . . . The Commission shall determine whether any new technology or service proposed in a petition or application is in the public interest within one year after such petition or application is filed.⁴

It is a sad irony indeed that for all the recent focus of the Commission and the International Bureau on streamlining its process and reducing procedural delay,⁵ satellite DARS has languished, building over 13.5 "red-tape years" thus far: one application on file for five and one quarter years; three applications on file for two and three quarter years. The filing date for these comments is almost exactly three years after the Commission established its "cut-

² CD Radio has a pending request for pioneer's preference, PP-24. The record of that proceeding contains updated information on CD Radio's regulatory perseverance and technological innovations justifying a preference.

³ Digital Audio Radio Services, 10 F.C.C. Rcd 2310 (1995) [*Allocation Order*].

⁴ 47 U.S.C. § 157 (1994).

⁵ See Streamlining the International Section 214 Process, FCC 95-286 (July 17, 1995).

off" that gave fair opportunity for any would-be satellite DARS provider to apply to offer the service.

This "go slow" approach has tangible and far reaching detrimental consequences. First, the American public has been prevented for years from receiving satellite DARS. This particularly impacts rural and remote listeners, who would have received the benefit of additional radio signals, and consumers of minority and special interest programming who -- in all but the largest cities -- have little access to such content. CD Radio's planned offerings of ethnic and educational material have been thwarted by governmental inaction.

Second, the United States is in danger of losing global leadership in this area of satellite technology. The U.S. was far ahead when CD Radio first filed its application; the company worked closely with the FCC, the Department of Commerce, and the Department of Defense to find an appropriate spectral home for the service, which was later confirmed at WARC-92. But the years have slipped away and EUREKA -- a European/Canadian venture refining its technology in preparation for planned service by the end of the decade -- is catching up. If the U.S. does not act quickly, satellite DARS, an idea invented here, will first be implemented abroad. This missed opportunity could result in the loss of U.S. engineering and manufacturing jobs.

Third, continued delay could retard or even preclude the emergence of new communications ventures for years to come. Whenever new technologies and innovative services require not one but six years to be licensed -- not to mention another three years for construction of facilities before the offering of service -- commercial incentives will be diminished or destroyed altogether. Indeed, few, if any, new services or technologies would

be available to the public if the Commission's process were always this slow. In contrast to its experience with satellite DARS, it took the Commission only two years to license DBS television.

And what has been gained by delay? Only the private interests of the few: the existing broadcasters, aptly labelled as "luddites" by the United States Court of Appeals for the D.C. Circuit for their opposition to the creation of DBS service in the early 1980's.⁶ Nineteenth century England appropriately treated luddites -- workers fearful of being displaced who smashed new labor-saving textile machinery -- harshly. They were suppressed by the military and jailed. In America today, however, the political process apparently rewards such entrenched interests with the power to stall agency action and thus postpone new and useful services that would benefit the public. Particularly as the FCC's role in public policy is being reexamined, the Commission should demonstrate that it will be a leader, not merely a follower, in the introduction of new technologies.

The Congress already has declared as much. Hence, Section 157 of the Act also contains a provision allocating the burden of proof in the licensing of new technologies:

Any person or party . . . who opposes a new technology or service proposed to be permitted under this Act shall have the burden to demonstrate that such proposal is inconsistent with the public interest.⁷

⁶ National Association of Broadcasters v. FCC, 740 F.2d 1190, 1197 (D.C. Cir. 1984).

⁷ 47 U.S.C. § 157(a).

In allocating spectrum for satellite DARS, the Commission rightly found the overall "proposal" in the public interest.⁸ The same test should govern the Commission's selection of service rules: advocates of rules that would hobble satellite DARS or protect existing broadcasters from possible competition should bear the burden of proof and persuasion in this proceeding. As described in detail below, broadcasters cannot meet this burden.

For the same reason, the Commission should reject proposals to void the long since expired cut-off deadline for the filing of applications. It would be grossly unfair to put satellite DARS applicants through more than ten years of red-tape delay and then restart the entire process for the benefit of new parties. Moreover, the inevitable result of re-opening the application process will be less spectrum for each licensee, a prospect that would undermine the economic viability of the companies involved and doom the service before it begins. For these reasons, the Commission, rather than reserving any allocated spectrum, should assign all 50 MHz to qualified licensees.

Nor should the Commission consider spectrum auctions in the DARS service. Because the existing DARS applicants are not mutually exclusive, they plainly are not subject to competitive bidding under the existing legislation. Indeed, the satellite DARS applicants have submitted concurrently with their opening comments in this proceeding a spectrum assignment plan that permits the licensing of four competitors without mutual interference. Auctions, therefore, could only be held by creating *artificial* mutual exclusivity, which is squarely prohibited under the law and unsound as a matter of policy. Moreover, because license assignments could be made today, the sole possible public policy justification for

⁸ *Allocation Order*, 10 F.C.C. Rcd at 2314.

auctions is raising money for the treasury, something the statute forbids the agency to consider.

Auctions, expanding cut-offs, and shaving spectrum share a common fault: the principal effect of such proposals would be further delay in the provision of satellite DARS to the American public.⁹ This is the unmistakable reason existing broadcasters have suddenly and ironically become advocates of auctions and new cut-offs, at least in a service other than their own. Further, the Commission must weigh any hypothetical benefits of these policies against the certain postponement of a new and useful service to the American listening public.

The time for delay is long past. The Commission should adopt flexible rules that allow satellite DARS to reach the marketplace and, once there, to compete fairly. As a new service, satellite radio cannot be hamstrung with a host of protectionist policies that will vitiate its acceptance in the marketplace. Rather, the Commission should use the model of direct broadcast satellites, and formulate rules that foster the growth of a fledgling competitor in a crowded audio entertainment marketplace now dominated by radio broadcasting (\$10.8 billion in annual revenues),¹⁰ compact disks (\$8.5 billion in annual revenues) and cassette tapes (\$3 billion in annual revenues).¹¹

⁹ In addition, re-opening the cut-off or subjecting the spectrum to auctions would destroy incentives for proponents of a new service to free up scarce spectrum, negotiate among themselves to eliminate mutual exclusivity, and fight the protectionist claims of existing licensees as the satellite radio proponents have done in this case.

¹⁰ Donna Petrozzello, "Radio Stocks Flourish in First Half," *Broadcasting & Cable*, July 10, 1995 at 35.

¹¹ Recording Industry Association of America, 1994 Statistics (Feb. 17, 1995).

In these comments, CD Radio addresses the most important issues first: how much spectrum should be licensed and to whom (and how) should it be licensed? On these issues, CD Radio strongly opposes portions of the Commission's tentative conclusions. The first part of these comments provides evidence that -- in these areas -- some roads cannot be taken: they are simply illegal, unfair, and poor public policy. But, apart from the amount of spectrum to be licensed, and how that should be accomplished, CD Radio largely concurs with the agency's tentative conclusions. With the sole exception of broadcasters with anticompetitive motives, there is widespread agreement that satellite DARS is in the public interest and should be licensed expeditiously. In the second half of these comments, CD Radio addresses these less controversial issues.

As discussed below, CD Radio urges the Commission to license the entire 50 MHz of spectrum to the existing applicants, adopt flexible service rules that permit satellite radio to take root and grow, and reject the efforts of broadcasters to sow the spectrum with salt just as the planting begins.

II. THE COMMISSION SHOULD ESTABLISH FOUR 12.5 MHz SPECTRUM ASSIGNMENTS IN THE SATELLITE RADIO BAND

A. There is an Appropriate Amount of Spectrum Necessary to Operate a Commercially Viable and Diverse Satellite DARS System

The Commission's *NPRM* asks a host of questions regarding the appropriate amount of spectrum that should be assigned to qualified DARS applicants.¹² The FCC's interest

¹² *NPRM*, ¶¶ 31-33.

stems from an apparent desire to narrow the total amount of S-Band spectrum that will be licensed to qualified applicants. Below, CD Radio shows that the Commission cannot and should not limit the spectrum allotted to the pending applicants. Before addressing that issue, however, it is necessary to review the current market constraints that should guide the Commission's decision as to how much spectrum should be licensed.

The amount of spectrum licensed dictates the number of channels that a satellite DARS licensee can provide. The number of channels provided by each licensee, in turn, is most appropriately determined by analyzing consumer demand, which is best evidenced by the number of channels provided by marketplace competitors. This analysis leads to the conclusion that each satellite DARS licensee must begin with enough spectrum to offer between 30 and 40 CD-equivalent channels.¹³

The service most directly comparable to satellite DARS is so-called "cable radio," the premium audio service offered via cable television and Direct-TV satellite-to-home television. Two companies currently offer nationwide, multi-channel, digital subscription radio services: DMX, whose largest shareholder is TCI, and Music Choice, which is owned by a consortium of media companies that include Time Warner, Sony, and EMI. Each of these companies entered the market with systems that provided 30 channels of CD-quality subscription music.

¹³ The discussion that follows covers CD-quality equivalent channels which -- on the CD Radio system -- offer an audio quality comparable to current compact disks. CD Radio plans to use some of those channels for voice-quality audio services, such as cultural, ethnic, educational and foreign language programming. Under the current CD Radio design, any CD-quality channel may be split into four voice-quality channels. In its current design, CD Radio also plans to use one CD-quality equivalent bit stream as a control channel and another for telemetry.

Both companies increased service to 60 channels in 1995, with expansion to 120 channels scheduled for late 1995.

It is instructive to recount briefly the history of DMX, the nation's largest cable radio operator, with respect to channel capacity and the market for cable radio. While DMX began development of a 12 channel cable radio service in 1988 (expanding to 18 channel service in 1989), it learned through market research that consumers would not pay for a radio service with such limited channel capacity. Indeed, DMX determined that the service needed to attain a certain critical mass of formats in order to attract subscribers sufficient to become economically viable. Subscribers would only go to the trouble and expense of paying for radio, something requiring them to change their habits, if they perceived ample value in the offering. Subscribers would have to be attracted to several formats, or feel that other family members might use the service at different times to listen to various formats. Below a critical mass of perceived value, there did not appear to be a market for cable radio.

In 1990, DMX concluded that this critical mass was at least 30 channels, with increased channel capacity thereafter as soon as possible. In 1992, DMX launched its 30 channel service, increasing it to 60 channels in 1995, and announcing plans to expand to 120 channels later this year.

Satellite radio is subject to the same marketplace hurdles as these services and must be permitted to initiate service with a comparable number of channels as they did at the outset -- at least 30. DMX and Music Choice, of course, are not subject to regulatory

constraints on number of channels.¹⁴ Nonetheless, these services are a close analog to satellite DARS because they offer digital radio channels on a subscription basis to half the homes in the United States via cable and to most homes via direct broadcast satellite.¹⁵ Accordingly, cable radio provides a solid basis with which to assess the importance of programming diversity to securing a subscriber base.

To achieve economic viability, satellite DARS systems -- like cable radio -- must have channel capacity sufficient to cater to a number of unserved or underserved niche listeners. Indeed, without the assurance that satellite DARS will have enough channels to serve such listeners, the service will likely be seen as intolerably risky by the financial community.¹⁶ In their 1994 media report, Veronis Suhler & Associates state that 21 percent of all recorded music sold is in narrow categories, such as classical, gospel, jazz and the like.¹⁷ This important segment of the market (largely ignored by terrestrial broadcasters) underscores both the potential benefit of satellite DARS and the importance to its success of numerous radio formats -- and, therefore, sufficient channel capacity.

¹⁴ Nor, as discussed below, has their existence appeared to hurt traditional broadcasting. *See infra* at pp. 75-77.

¹⁵ Music Choice services are now distributed by high-power DBS satellite on the Hughes DirecTV system. It is offered as part of the basic programming packages. DMX currently is implementing plans for a 120 channel system on the PRIMESTAR direct-to-home service.

¹⁶ Satellite DARS is in some ways riskier than cable radio, as it requires its listeners to purchase, up-front, a new car radio. The Commission should weigh this difference when considering the appropriate amount of spectrum licensed in the new service.

¹⁷ The Veronis, Suhler & Associates Communications Industry Forecast/Radio Broadcasting (July 1995) at 125.

Thus, 30-40 channels is the right number for satellite DARS, especially in view of the capacity of other pay aural services which offer over 100 channels. A licensing system that permitted fewer channels would not only increase system costs, but undermine customer acceptance of the service. Either of these occurrences could cripple the viability of a new satellite radio industry in its infancy.

Attached as Appendix B is an analysis by Robert Briskman of CD Radio of the spectrum required to support high-quality audio service. Mr. Briskman demonstrates that, using reasonable compression coding and error correction schemes, a licensed bandwidth of 12.5 MHz will provide 35 useful CD-quality channels. Licensing less than that amount of spectrum will result in a corresponding drop in the number of possible channels, thereby undermining the feasibility of satellite DARS service. The Commission should therefore provide applicants with spectrum sufficient to meet market demands for 30-40 high quality channels: four "slots" of 12.5 MHz.

B. The *NPRM* Does Not, and Cannot, Support Failure to License the Lower 10 MHz to Current Satellite DARS Applicants

In the *NPRM*, the Commission ponders licensing less than the full amount of spectrum. The *NPRM* contends that this would ease international frequency coordination with other countries, including Canada.¹⁸ Based on the Commission's review of a CD Radio study previously submitted,¹⁹ the FCC tentatively suggests not assigning the lower 10

¹⁸ *NPRM*, ¶ 66.

¹⁹ See Letter from Michael Yourshaw to Cecily Holiday, attaching *2310-2360 MHz Frequency Band Coordination Between Canada and the United States*, filed Feb. 14, 1994

MHz of the band, assertedly due to a concentration of Canadian fixed stations there. CD Radio vigorously opposes this approach for five reasons.

First, the Commission has misinterpreted the CD Radio study to reach its tentative conclusion. As the agency well knows, coordination with fixed links is relatively simple: only fixed receivers pointed toward the geostationary arc (*i.e.*, south and “up”) potentially could be interfered with. Of the approximately 200 Canadian fixed receivers in the band, CD Radio has found only two with this geometry, making this a “one percent” type of problem. Such minor interference issues are efficiently resolved in frequency coordination, by careful re-engineering or re-pointing. Indeed, similar issues arise -- and are routinely solved -- today when C-band satellite transmissions coordinate with co-frequency fixed links here in this country. Such issues certainly are not considered grounds for keeping spectrum from being used productively in service of the American public.²⁰

Appendix C, sworn to by Robert Briskman, the author of the prior study on coordination with neighboring countries (including Canada), shows that the Commission has misinterpreted the CD Radio study in several key respects:

- The Commission overestimates the number of Canadian fixed stations. Current records show 166 receivers, not 186.
- Whatever number of stations there are, the CD Radio study demonstrated that satellite DARS signals could successfully coordinate with adjacent-country fixed stations through beam shaping, careful controlling of beam-edge power

(*cited in NPRM*, ¶ 66 n.68).

²⁰ In the technical study, CD Radio noted that if all applicants used cross polarization, the lower portion of the band *could* remain unused. That study did not conclude that foregoing the lower 10 MHz was necessary to effectuate coordination with Canada.

flux densities and other means. Indeed, as described in the Appendix, coordinating with adjacent country fixed stations that do not typically point toward the geostationary orbit is relatively simple. Any current DARS applicant, including CD Radio itself, could operate in the lower 12.5 MHz of the band.

- Inter-governmental coordination -- such as is now occurring with Canada regarding an L-Band mobile satellite system -- is the normal way for adjacent countries to resolve frequency conflicts. Countries may have to make compromises and systems may have to limit power or improve directivity, but that is accomplished normally in coordination. It is unusual indeed, and inconsistent with years of Commission practice, to carve out portions of the band *ab initio* before coordination begins. Put differently, it is unwise to enter into coordination with adjacent countries already having announced a significant concession.
- Many other methods exist -- described in the appendix -- that could reduce the potential for interference between U.S. satellite DARS licensees and adjacent country systems.

Because the *NPRM's* reliance on the CD Radio study to justify its proposed exclusion of the lower 10 MHz is based on a misunderstanding, the Commission has no factual basis upon which to conclude that it should license only 40 MHz. The relative unimportance of this consideration is evident from the willingness of all of the applicants to be located in the lower 10 MHz.²¹

Second, excluding the lower 10 MHz from licensing is inconsistent with prior Commission decisions. Only a few months ago, in its January 1995 *Report and Order* allocating the S-band spectrum to satellite radio, the Commission determined to make the entirety of the 2310-2360 MHz band available for satellite DARS. The Commission specifically rejected the idea -- advocated by broadcasters -- that only a portion of the

²¹ See the Joint Comments of the DARS Applicants, filed this day.

spectrum be allotted to the new service. Rather, the agency concluded that "no purpose would be served in imposing a limit on the use of the DARS allocation at this time."²² The Commission provides no reason -- nor does one exist -- for this sudden reversal.²³

Third, the immediate availability of the 10 MHz of spectrum that would be reserved under the *NPRM* is vital to the commercial viability of satellite DARS licensees. As described above, from a consumer demand perspective *at least* 30-40 channels will be required to gain an audience that is willing to pay for radio. Narrowing the spectrum licensed would threaten the marketplace viability of the new service.

Fourth, licensing only four-fifths of the available band robs the public of valuable new services. Wisely, the Commission has moved away from holding spectrum in reserve for future services. A decision to reserve the spectrum -- for whatever reason -- forgoes for all time the consumer benefits from immediate licensing and use of the spectrum; spectrum lying fallow is simply wasted.²⁴ By licensing all 50 MHz at this time, the Commission will

²² *Allocation Order*, 10 F.C.C. Rcd at 2315.

²³ Courts have made clear that the Commission cannot divert from prior policy determinations without reasoned analysis. *See, e.g., Greater Boston Television Corp. v. FCC.*, 444 F.2d 841, 852 (D.C. Cir. 1970) ("[A]n agency changing its course must supply a reasoned analysis indicating that prior policies and standards are being deliberately changed, not casually ignored."), *cert. denied*, 403 U.S. 923 (1971); *Achernar Broadcasting Company v. FCC*, 1995 U.S. App. LEXIS 22656 *22 (D.C. Cir. Aug. 18, 1995) (finding FCC decision to deny applications arbitrary and capricious because the Commission did not explain and justify new policy of general application); *Telecommunications Research & Action Ctr. v. FCC*, 800 F.2d 1181, 1184 (D.C. Cir. 1986) ("When an agency undertakes to change or depart from existing policies, it must set forth and articulate a reasoned explanation for its departure from prior norms."). *See also Committee For Community Access v. FCC*, 737 F.2d 34, 37 (D.C. Cir. 1984) (quoting *Greater Boston*).

²⁴ In the Matter of the Application of Inner City Broadcasting Corporation, For Additional Time to Construct MMDS station WLW749 at Savannah, Georgia, 9 F.C.C. Rcd

ensure that Americans can receive more rapidly the public interest benefits flowing from productive use of the spectrum.

Finally, given the scant justification for excluding the lower 10 MHz from licensing, CD Radio suspects that the agency's coordination rationale is merely a thinly veiled excuse to hold spectrum open for new applicants from whom auctions can raise additional monies. As described below, however, re-opening the cut-off and holding auctions under these circumstances clearly would violate the competitive bidding legislation. The Commission would be creating artificial mutual exclusivity and impermissibly considering possible auction receipts for the treasury. Both are forbidden by the Act, and neither should be done here.

1025, 1025 (1994) (quoting Notice of Proposed Rulemaking, 104 F.C.C.2d 116, 122-123 (1986)) (refusing additional time for construction because "[t]he public is best served when new services are brought on line as rapidly as possible"); Mobilcom Pittsburgh, Inc. For Renewal of License, 8 F.C.C. Rcd 351, 351 (1992) (FCC's "conviction that spectrum should not lie fallow where there are applicants ready and willing to use it" justifies the cancellation of authorizations for channels not loaded to 100 mobiles within five years); Norris Satellite Communications, Inc., 7 F.C.C. Rcd 4289, 4291 (1992) ("The general principle underlying our financial qualification standards is that scarce orbit-spectrum resources should not lie fallow."); Advanced Television Systems and Their Impact upon Existing Television Broadcast Service, 7 F.C.C. Rcd 3340, 3342 (1992) ("requiring transmission capability by a date certain ensures that valuable spectrum will not lie fallow and that the benefits of technological advances will be made available to the public promptly"); Interactive Video Data Services, 6 F.C.C. Rcd 1368, 1372 (1991) ("benefit of proposing entry criteria and requiring construction benchmarks is to reduce the number of speculators who would hold the licenses and allow the spectrum to lie fallow awaiting the highest bidder"). *See also* Radio Frequencies Above 40 GHz, 9 F.C.C. Rcd 7078, 7087 (1994) ("The important objective is to open this spectrum for commercial development and to eliminate the current regulatory barriers and uncertainties that now prevent this spectrum from being used.").

C. The Appropriate Number of Satellite DARS Assignments Is Four and the Spectrum Should Be Divided Fairly Among Them

In the *NPRM*, the Commission questions the appropriate number of service providers and how the spectrum should be licensed.²⁵ The FCC solicits comments on other licensing models -- such as DBS or PCS -- that might be appropriate here. The agency also asks what should happen if one or more applicants fail to implement their proposals.²⁶

Initially, CD Radio notes that it is no accident that there are four applicants for licenses in the satellite DARS allocation. The Commission's three year-old cut-off invited applications from any source. More than four applied initially, but the applicants winnowed down through a market-based process. At great expense to its investors, CD Radio was able to reduce the number of applicants to accommodate the available spectrum. (Obviously, CD Radio would not have incurred such a cost if it believed that the number of applicants would again be increased.) Consistent with its past actions, CD Radio continues to believe that four licensees is the proper number for several reasons.

Most importantly, four applicants in 50 MHz gives each licensee access to spectrum barely sufficient for a viable service. As described above, a license bandwidth of 12.5 MHz gives all licensees the opportunity to begin by offering up to 30-40 CD-quality channels, permitting them to gain marketplace acceptance. At the same time, the current four licensees fit within the 50 MHz allocation *without being mutually exclusive*. Four is the proper

²⁵ *NPRM*, ¶ 32.

²⁶ *Id.*