

JOINT STATEMENT OF
CHAIRMAN MICHAEL POWELL AND
COMMISSIONER KATHLEEN Q. ABERNATHY

In re: Amendment of Parts 2 and 25 of the Commission's Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band Frequency Range (ET Docket No. 98-206, RM-9147, RM-9245) (rel. May 23, 2002).

This proceeding has challenged the Commission to balance conflicting goals, promote competition through new technology, and minimize interference to existing licensees. We believe the Commission and its excellent staff have done an admirable job.

Nonetheless, we believe a few aspects of the decision deserve particular attention. First, the Commission has wisely chosen not to saddle the new Multichannel Video Distribution and Data Service (MVDDS) with regulatory burdens based on the types of services some expect it to provide. Instead the Commission has exercised regulatory restraint to allow MVDDS to evolve in the marketplace first and as a topic of regulation second. In addition, we believe the Commission wisely adopted strict interference rules for MVDDS operations to ensure a regulatory regime that is clear and enforceable, yet flexible. Although many well-intentioned proposals were considered, including compensation formulas, mandated service calls, mitigation zones and hundreds of precision measurements, we believe the Commission correctly chose the best approach in this Order that limits the equivalent power flux density (EPFD) at DBS receive sites. Although there has been some criticism of certain variables used in the technical analysis, we believe the Commission's engineering staff has developed a reasonable calculation methodology consistent with best engineering practices and the record in this proceeding.

What is MVDDS?

The short answer is that we do not know. Its name, Multichannel Video Distribution and Data Service, seems to suggest everything is possible – and perhaps it is. But the service rules the Commission has adopted do not require MVDDS to provide any particular kind of service – it could be a multichannel video, or data, or digital radio service, or any other permutation on spectrum use. The Commission was once in the business of requiring spectrum holders to provide a certain type of service. That approach failed because government is a very bad predictor of technology and markets – both of which move a lot faster than government. Over the past decade or so, the Commission has adopted more flexible service rules that bound a service based largely on interference limitations and its allocation (fixed or mobile, terrestrial or satellite). In this Order, we follow that flexible model for MVDDS.

Regardless of the type of service MVDDS ultimately is, if successful, it has remarkable potential to benefit the American people.

If successful, MVDDS creates the possibility of an additional competitive provider of MVPD service. That service is now dominated by the satellite and cable platforms. In turn, consumers spend a significant amount of their communications budget on these services. In response to the limited intermodal competition for MVPD services, the Commission has long sought to facilitate the development of a terrestrial wireless alternative, with limited success. MVDDS offers the possibility of another MVPD alternative.

Yet it is also quite possible that MVDDS will be used to provide a one-way data path for broadband services. Today that market too is dominated by two platforms – cable and wireline telephony. As demand for broadband increases, it will become increasingly important to Americans' communications needs. The Commission has sought to facilitate the development of a wireless alternative, thus far with limited success. MVDDS offers the possibility of another broadband alternative.

Because the Commission has not dictated what type of service MVDDS will become, we believe it is premature to impose obligations inherent in other service offerings (like Title VI cable television regulation or Title II common carrier regulation). For example, imposing must carry obligations on a broadband service does not serve the public interest; nor would open access be a reasonable regulation of MVPD service. Moreover, some mandates – such as must carry – are statutorily limited to certain platforms (such as cable or satellite).¹ It is not at all clear that we have the statutory authority to impose these obligations on other MVPD providers, such as MVDDS. Since we do not believe it is desirable or necessarily legal to impose these obligations, we would not do so here. Moreover, potential individual licensee’s business plans should not guide Commission policy because the Commission cannot know who will prevail at auction. Developing service rules based on one applicant’s business plan, even with the best of intentions, may inadvertently tip the auction in their favor. If MVDDS ultimately offers a service that fits squarely into one of our regulatory boxes, we can assess what additional regulatory safeguards, if any, are required. In the meantime, we are not troubled that a nascent service may initially not be constrained by legacy regulatory strictures.

Relatedly, we do not support adopting a rule barring DBS providers from holding an MVDDS license. We are generally extremely reluctant to artificially limit auction participants for any reason. We agreed to limit cable providers ability to bid in their own regions based on the well-reasoned economic analysis in the Order. In contrast, DBS providers explain that they may well have a need for a terrestrial MVDDS component as either a broadband pipe or as an alternative path to carry even more local signals. DBS providers contend that they are currently capacity constrained for broadband offerings and comprehensive local-into-local service. Indeed, the original vision for the new, terrestrial use of this spectrum was as a method for DBS licensees to get local broadcast signals to their subscribers.² Based on these factors, the best course is to allow DBS the opportunity to hold these licenses. There are two important caveats to this policy. First, MVDDS networks should not be utilized by DBS providers as a means of avoiding their carry-one carry-all responsibilities. Second, in the event that the EchoStar-DirectTV merger is approved, the Commission may need to re-examine the eligibility of the combined provider to bid for MVDDS. With these two caveats, we believe open eligibility to DBS best serves the interests of the American people by providing an alternative method to expand broadband and local broadcast carriage.

DBS Installations More than Thirty Days After MVDDS Begins Service

The dissent raises a legitimate concern about the fate of DBS antennas installed more than thirty days after initiation of MVDDS service.³ The interference limits in the new rules will apply to all existing DBS customers 30 days after the MVDDS provider notifies the DBS carriers that it intends to construct a tower. During this period, the MVDDS provider is responsible for ensuring that no DBS customers will experience greater than the mandated EPFD limit at the site of each DBS antenna. It is important to recognize that there may be substantial variation in the amount of interference based on antenna placement. That is, an antenna placed on an exposed roof may exceed the EPFD limit, while an antenna under the eaves of the same roof may not. Once the DBS provider is on notice of the pending MVDDS tower, it is reasonable to expect the DBS provider to place future antenna dishes so as to ensure that interference is minimized. The burden on DBS to act responsibly to avoid interference is consistent with the approach we have taken for similarly situated services and is consistent with our statutory charge.⁴ In

¹ See 47 U.S.C. § 614 (cable); 47 U.S.C. § 338 (satellite).

² See Northpoint Petition for Rulemaking, RM 9245, filed March 6, 1998.

³ The term “dissent” here and subsequently refers to Commissioner Martin’s dissent.

⁴ The Commission elsewhere requires primary users to incorporate protective measures, up to and including antenna replacement, to avoid receiving harmful interference. See, e.g., 47 C.F.R. 74.937(a) (“Should interference occur and it can be demonstrated that the existing [primary ITFS] receiving antenna is inadequate, a more suitable antenna

contrast, if we were to require the EPFD limit to be met for DBS antennas installed more than 30 days after notice of the MVDDS tower's construction, each MVDDS tower could be forced to "turn off" whenever a customer places their DBS antenna such that the EPFD limit is violated. Since DBS and MVDDS are likely competitors, the ability of any single DBS customer to force MVDDS off the air due to poor antenna placement would render the service unworkable.⁵ Whether by preventing MVDDS deployment in certain areas or showing some interference to new DBS deployments, there will be some limitations on each service as a result of our decision today. These are difficult choices – but we believe getting a new competitor for the vast majority of the American people outweighs the possible loss of a single competitor for a few.⁶

Calculation Methodological Concerns

Interference issues are among the most vexing public policy problems this agency faces. The Commission has defined "harmful interference"⁷ – but our service rules are generally based on a permissible level of interference that far more narrowly restricts operations. Here the Commission has followed the permissible interference course and determines that MVDDS service should not exceed an EPFD limit set in each of four regions.⁸ The EPFD limits are designed to limit the increase in average outage times to an average of 10%. Therefore if the average consumer loses service for 10 minutes a year, the EPFD figure is calculated so that the average increase would be to no more than 11 minutes of total outage a year. The 10% figure and the Commission's calculation methodology echoes the international approach adopted in this band for NGSO/DBS sharing.⁹ The 10% figure is also significantly less than the variation in outage times between different parts of the country, different satellites, different

should be installed. In such cases, installation of the new receiving antenna will be the responsibility of the [ITFS] system operator serving the receive site."); 47 C.F.R. 101.115(d) ("The Commission shall require the replacement of any [primary Fixed microwave directional] antenna . . . that does not meet performance Standard A . . . at the expense of the licensee operating such antenna, upon a showing that said antenna [is likely to] receive interference from . . . any other authorized antenna or applied for station whereas a higher performance antenna is not likely to involve such interference."); 47 C.F.R. 90.361 (finding that primary multilateration LMS systems cannot claim harmful interference from parts 15 and 97 operations that operate under certain conditions).

⁵ The dissent notes that the majority "allows MVDDS licensees to cause harmful interference . . . after one year . . . even if it is caused by a change in MVDDS operation." Yet the Order concluded that any major modification would trigger a new one year period during which complaints could be filed. Major modifications include: any change in frequency tolerance, bandwidth, emission type, transmit antenna height more than 3 meters, antenna polarization, in the radius of a circular area of operation, or any change in any other kind of area operation. See 47 CFR § 1.929(d)(1).

⁶ A similar argument applies to DBS interference complaints that arise more than a year after the MVDDS service is installed. Any interference issues should be detected and repaired in a reasonable time – and providing all parties a year to "get it right" strikes a reasonable balance of the interests.

⁷ See 47 C.F.R. 2.1 ("harmful interference" is defined as "interference which endangers the functioning of a radionavigation service or of other safety services or seriously degrades obstructs, or repeatedly interrupts a radiocommunication service.. . .") Harmful interference has never been defined on a service specific basis. Therefore the dissent's criticism of our "failure" to do so here also rings hollow. Prior to initiation of service and for one year thereafter, existing DBS subscribers may bring a claim asserting MVDDS has exceeded the EPFD limit. The MVDDS base transmitter must then turn off if it exceeds the cap.

⁸ The four regions were created to account for variations in DBS reliability due to changes in rainfall and the satellite power and antenna gain pattern for different locations.

⁹ The DBS community reached a voluntary agreement on NGSO/DBS sharing with the same 10% figure. The 10% for NGSOs is also an "average" and is based on the construction and operation of 3.5 NGSO systems. In that case, the parallel calculations were based on data from 14 U.S. cities – rather than the 32 cities used for our calculations here.

providers or weather variations in a given region from year to year. For example, the outage levels from different DBS dishes serving New York currently vary dramatically: 200.1 minutes per year from the satellite at 101°, 1323.6 minutes per year from the satellite at 110°, and 822.1 minutes per year from the satellite at 119°. Based on this multitude of variables, the Commission adopted rules that create average interference thresholds. Of course, in some averaged areas, the outage time will be less and in other areas more.

To the extent that individual market areas have rain or other characteristics not adequately captured by the regional EPFD limits, the Commission has adopted a safety valve approach that allows licensees to petition the Commission for a distinct EPFD limit for that license area.¹⁰

The Commission's calculations are very conservative and likely overstate the amount of additional interference that will result from MVDDS operations. None of these calculations take into account any natural shielding or manmade attenuation that occurs for the vast majority of DBS antennas. Our calculations essentially assume the worst case scenario – that no attenuation due to natural shielding or manmade structures occurs. This is a highly unlikely event and as a result the model will generally overstate the amount of increased interference that any individual DBS subscriber may experience. The Commission model also adopted a conservative assumption regarding a second key variable – the relative strength of the DBS and MVDDS signals. The model assumed a rain-faded DBS signal and a full strength MVDDS signal. Yet rain would likely impact the MVDDS signal as well, further reducing outage times.

The dissent attempts to make much of the alleged imprecision of the Commission's EPFD figures and the alleged corresponding lack of protection for DBS subscribers. While these arguments may seem facially persuasive, the Order adopts a more sound approach. As an initial matter, the dissent fails to describe how it would calculate these figures, and instead second-guesses our engineering staff's calculations. It appears, however, that one of the dissent's proposed alternatives would be to impose a "hard and fast" 10% limit per service area. Even putting aside the failure to acknowledge the conservative assumptions about shielding and the strength of the MVDDS signal set out above, there is no technical way to achieve, in all cases and in all circumstances, the "hard and fast" 10% limit the dissent claims as its goal. As in all of our proceedings where the Commission grants licensees the privilege of accessing public airwaves that are necessarily shared with others, it strives to achieve rational sharing rules. And in all cases the licensees utilize the spectrum with the knowledge that interference protection will not be exactly the same across the country with diverse terrain and atmospheric conditions.

Fundamentally, the dissent's two stated goals are mutually exclusive. The very use of any generalized formula requires that some consumers will experience a greater than 10% increase in outage times. For example, even if the Commission were to average the satellite orbital position, power, and antenna gain pattern across five DBS satellites (as the dissent argues), any individual DBS customer is likely only to receive service from one. Then, under this standard, by definition some subscribers would experience greater than 10% interference, thereby violating the steadfast limit. Similarly, in 2001 Louisville Kentucky may have received 50 inches of rain, and the dissent would have us base that service area's EPFD limit on last year's rainfall amount. Yet this year Louisville may receive half that amount, resulting in a significant increase in the outage time percentage for the entire service area – once again, violating the steadfast limit. So even if one believes in a "hard" limit – there is no practical sustainable way of achieving it.¹¹ In fact, it would seem to require an impossibly burdensome and complex individualized real-time dynamic measurement at each DBS subscriber's home.

¹⁰ Significantly the sum total of the entire range of EPFDs across all 32 markets and all three satellites is less than 8 dB. We note that DBS providers would have the right to petition for special relief from our rules even if we chose not to adopt a specific safety valve procedure. *See, e.g.*, 47 CFR §§ 1.2, 1.3.

¹¹ Similarly the dissent criticizes the model for failing to weight the rainfall data based on the population. For example by weighting Los Angeles at four times the weight given to Denver based on population. Yet if such

If we move beyond these inconsistencies, it appears the dissent's concerns are not with the formula used to calculate the EPFD limits – rather the concerns are with weather prediction and failure to include two DBS satellite orbital locations in the interference calculation. Thus, it is the input data points for two variables in the formula – rather than the calculation itself that appears to motivate the dissent.

The EPFD limits are based on at least seven key variables – satellite orbital position, power, antenna gain pattern, receiver elevation angle, antenna size, gain and pattern, and a propagation and rain model. Each DBS customer has a unique combination of these variables – plus a unique shielding pattern based on where the dish is installed, etc. So even assuming some of the variable modifications in the dissent were adopted, there would still be thousands of customers that would have interference levels above and below what the model produces. Each customer has a distinct combination of a particular satellite with a particular orbital position, power and antenna gain pattern. Each customer would also have distinct receiver elevation angle, antenna size, gain and pattern. Finally each customer has distinct weather conditions.¹²

Fundamentally, the dissent is mostly concerned about the imprecision of weather forecasting. While we recognize that reasonable people can disagree about the best method, the Commission has exercised its reasoned technical judgment with the advice and consultation of the FCC engineering staff to arrive at the regionalized rainfall estimates. The dissent argues that the Commission should predict annual rainfall in each of 354 areas.¹³ Others argued that the Commission should conduct measurements at each MVDDS transmitter. We believe that a regionalized approach that divides the country into four rainfall zones is appropriate. Yet rainfall varies significantly from year to year and even within the same region. The Commission used the top 32 cities to generate the regionally averaged rainfall data. When plotted they appeared to cluster into four sets, each representing a relatively small incremental change in EPFD characteristics. For example, under the -172.1 EPFD limit for the Northwest, there is a 9.3% average potential increase in outage times in Sacramento, 9.8% in Seattle, 9.9% in Portland, and 10.5% in San Francisco. Our engineering staff also did some random sampling of additional locales to confirm the legitimacy of the regional figures. For example, applying the regional average to Alaska yields an average increase in outage times of 5.4% and for Hawaii 11.5%. As a technical matter these measurements confirm that the overall rainfall data and the regionalized figures are reasonable. Although more data points (through the addition of more locales or the tower-by-tower approach) could be added, we believe they would add little to the accuracy of the EPFD.

The assertion that the Order “ignored” two satellites is inaccurate. The Commission decided to utilize three satellites because those three (101, 110 and 119) are the only orbital locations with full coverage of the United States and provide the overwhelming majority of service to DBS subscribers today.¹⁴ Including the two satellites would actually make the ultimate calculations less precise because they would give equal weight to satellites that do not provide service to a similar number of consumers. In order to

weighting were to occur it would only further diminish the weight given to the rural areas that the dissent later argues need to be given greater weight.

¹² Obviously each customer also has a unique DBS antenna mount with particularized shielding and protection dynamics that are not accounted for in any proposed formula. These protections make the actual occurrence of the predicted interference levels unlikely.

¹³ The dissent's most recent draft adds the failure to use Nielsen's Designated Market Areas (DMAs) to its criticisms. Although we are sympathetic to the use of DMAs, the Commission does not have a blanket license from Nielsen to use these designations. The Commission pursued possible use of DMAs with Nielsen during this proceeding, but ultimately concluded that use of DMAs could raise copyright infringement issues. To the extent the FCC can overcome this legal hurdle, the use of DMAs may well serve the public interest.

¹⁴ The dissent makes much of some city data that shows a potential increase in unavailability of 20-30%. However that data is largely from the satellite at 110 degrees – a satellite that is scheduled to be retired long before MVDDS is due to be deployed.

assure that customers receiving service from these two satellites do not suffer from dramatically different interference, the staff sampled data from these locations in assessing the accuracy of the other numbers. The staff concluded that the two excluded satellite slots have similar operating characteristics to the other three. Thus, there are sound interference reasons for looking predominantly to the three satellites that provide most DBS service.¹⁵ The dissent also later argues that the Order failed to adopt the Mitre Report's recommendation that EPFD be based on a single satellite with the largest baseline of unavailability.¹⁶ Yet such an approach would, by necessity, render the first criticism (ignoring two satellites) completely irrelevant because under the Mitre approach we would ignore four of the five. The Commission rejected the Mitre approach because the satellite that would have set the baseline is soon to be retired.

Concerns were also raised regarding the final drafting of the item that should be addressed.¹⁷ In response to the draft item, the dissent raised some concerns about various aspects of the Order that had not previously been discussed. Some of those concerns were well thought-out and prompted the majority to rethink its position and further explain its rationale.¹⁸ Those steps improved this Order – and in turn resulted in a higher quality product for the American people. At the end of the day that should be the goal of all the Commissioners. It is ours. And while ideally we would engage in the dialogue at an earlier stage, continuous improvement of our items is the right thing to do. The end result is one that this Commission can and should be proud of – efficient and effective spectrum sharing on a broad scale that allows us to license an entirely new service.

Why an auction?

Broadwave USA (commonly known as Northpoint), and its affiliates, have vigorously argued that an auction is not required or in the public interest for these licenses. Northpoint arrived at the Commission many years ago with a proposal for a new and innovative way to share the DBS spectrum. Today, thanks in large part to its fine work and diligence, that service will go forward. Many have claimed that Northpoint deserves a nationwide 500 MHz terrestrial license for free based on its regulatory and technical efforts to make this service a reality. We sympathize with the sentiments that underlie these claims. There is little question that had it not been for Northpoint, the MVDDS service would not be ready to move forward today. Northpoint has put significant time and resources into developing its service model as well as its Commission and congressional advocacy over a long period of time. We applaud these efforts. But the statute does not support exempting this spectrum from auction nor does it grant Northpoint the exclusive privilege it seeks. We also do not believe other licensing distribution mechanisms that avoid mutual exclusivity are appropriate for this service. While we understand the equitable basis for Northpoint's claims, we cannot support that equitable concern trumping the auction regime Congress created in the statute, or the value of allowing other competitors to vie for a chance to offer service to the public. If Northpoint's service model is a winner, the market will reward it just as it has done for other technology companies.

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¹⁵ The selectivity of the dissent's data points is illustrated by its discussion of the Seattle market. The dissent chooses to analyze Seattle's increase in outage times based on a satellite designed to serve the Eastern United States.

¹⁶ The satellite with the largest baseline outage time is actually at 119 degrees. In February 2002 Echostar launched a new more powerful satellite to this orbital position.

¹⁷ There is nothing procedurally inappropriate in making changes, substantive or non-substantive, after adoption to further elucidate the rationale for the Commission's decision. Such revisions are permissible when all non-dissenting Commissioners concur in the changes. Here all of the Commissioners who supported the relevant sections agreed to the post-adoption edits.

¹⁸ The Commission did not alter the fundamental policy approach – that an EPFD based on a average increase of 10% in outage time was appropriate.

This has been an extremely difficult docket for the Commission, but I believe we have arrived at a policy that appropriately balances the competing interests while allowing an important new service to move forward. We look forward to an auction for these licenses and the provision of the corresponding new services to the American people.

