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

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OFFICE OF THE SECRETARY

In the Matter of Application of	)	
	)	
Iridium LLC	)	File Nos. 187-SAT-P/LA-97(96)
	)	SAT-LOA-19970926-00147
Concerning the Use of the 1990-2025/	)	SAT-AMD-20001103-00156
2165-2200 MHz and Associated Frequency	)	
Bands for a Mobile-Satellite System	)	

PETITION FOR PARTIAL RECONSIDERATION

HUGHES ELECTRONICS
CORPORATION

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August 16, 2001

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PETITION FOR PARTIAL RECONSIDERATION

Hughes Electronics Corporation ("Hughes") hereby petitions for partial reconsideration of the Order and Authorization[1] issued by the International Bureau in the above-referenced proceeding. The Order grants Iridium authority to configure its space stations to receive Ka band feeder link uplinks in the face of an unrebutted showing of interference to Hughes's Spaceway system in the 29.25-29.5 GHz band. Thus, the Bureau should rescind the portion of the Order that grants Iridium authority to use the 29.25-29.5 GHz band, and should, at a minimum, defer consideration of the request for that authority until Iridium has met its burden under the Commission's rules to demonstrate that its feeder links can share with Spaceway and other Ka band GSO FSS licensees.

Hughes has an interest in this proceeding because Hughes is the parent company of Hughes Communications Galaxy, Inc., party to this proceeding and licensee of the Ka band GSO FSS SPACEWAY system,[2] and Hughes Communications, Inc., licensee of the Ka band

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1 *Iridium LLC,* DA 01-1636, File Nos. 187-SAT-P/LA-97(96), SAT-LOA-19970926-00147, SAT-AMD-20001103-00156 (rel. July 17, 2001) ("*Order*").

2 *Hughes Communications Galaxy, Inc.*, 13 FCC Rcd. 1351 (1997).

GSO FSS SpacewayEXP system.[3] Both the SPACEWAY system and the SpacewayEXP system are licensed to use the 29.25 - 29.5 GHz spectrum band.

I. INTRODUCTION AND SUMMARY

In 1997, Iridium filed an application to launch and operate a non-geosynchronous orbit ("*NGSO*") satellite system in the 2 GHz band to provide Mobile Satellite Service.[4] In addition to 2 GHz spectrum, Iridium requested 400 MHz of paired Ka band spectrum (19.3-19.7 GHz and 29.1-29.5 GHz) for feeder links.[5] Iridium's application included a request for waiver of Commission rule Section 25.258(c) with respect to its proposed use of the 29.25-29.5 GHz band, which is designated on a co-primary basis to GSO FSS and NGSO MSS feeder links. In September 1997, the Commission gave public notice of the acceptance for filing of the Ka band feeder link portion of Iridium's 2 GHz MSS application.[6]

Hughes Communications Galaxy, Inc. filed a timely Petition to Deny the Iridium request for feeder links at 29.25-29.5 GHz and a timely Reply to Iridium's Consolidated Opposition and Response.[7] Hughes petitioned to deny Iridium's application on two relevant grounds: (i) that Iridium's request for a waiver of rule Section 25.258(c) -- the repeating ground tracks rule -- was fundamentally inconsistent with the 28 GHz band plan, and (ii) that Iridium

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3 *Hughes Communications, Inc.*, DA 01-1686 (rel. August 3, 2001).

4 Application Of Iridium LLC To Launch And Operate The MACROCELL Satellite System, FCC File No. SAT-LOA-19970926-00147 (filed September 26, 1997) (the "*Iridium Application*").

5 Iridium Application at 7.

6 *See Satellite Policy Branch Information: Satellite Applications Accepted For Filing in the Ka Band*, Report No. SPB-106 (rel. October 15, 1997).

7 *See* Petition to Deny of Hughes Communications Galaxy, Inc., FCC File No. 187-SAT-P/LA-97 (filed December 22, 1997) ("*Hughes Petition*"); Reply of Hughes Communications Galaxy, Inc., FCC File No. 187-SAT-P/LA-97 (filed February 23, 1998) ("*Hughes Reply*").

failed to meet its burden under Commission rule Section 25.258(d) to demonstrate that its feeder link operations in the 29.25 - 29.5 GHz band could share with the GSO FSS systems, including Spaceway, that are authorized to utilize that band. Furthermore, as to the latter point, Hughes included a technical analysis with its Petition that showed that the Iridium feeder links would cause harmful interference to the licensed Spaceway system.[8] Iridium has never rebutted this technical analysis. Instead, as the Order notes,[9] Iridium has only indicated that it is "committed to complying with the Commission's rules and policies."[10]

In the Order, the Bureau dismisses the Hughes Petition as moot because the Commission recently eliminated the repeating ground tracks provision in rule Section 25.258(c).[11] However, the Bureau completely ignored Hughes's argument, and its unrebutted technical showing, that Iridium would interfere with Spaceway and therefore, that Iridium had not met its burden under rule Section 25.258(d). Instead, the Bureau authorized Iridium to configure its space stations to receive feeder link transmissions from earth stations, but refrained from providing Iridium authority to actually conduct uplink transmissions at Ka band.[12] The Bureau indicated that Iridium must request authority for uplink transmissions in an earth station application and must demonstrate in that application, among other things, that coordination with authorized Ka band GSO FSS operations is feasible.[13]

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8 Hughes Petition at Exhibit A.

9 Order at ¶ 10.

10 Consolidated Opposition and Response of Iridium LLC, FCC File No. 187-SAT-P/LA-97, at 2 (filed Feb. 2, 1998) ("*Iridium Opposition*").

11 Order at ¶ 10.

12 Order at ¶ 11.

13 *Id.*

II. THE BUREAU'S FAILURE TO ADDRESS HUGHES'S INTERFERENCE SHOWING IS ARBITRARY AND CAPRICIOUS

Commission and Bureau decisions must consider all of the evidence presented to it[14] and must respond to well-supported arguments that are contrary to the Commission's ultimate decision.[15] Thus, the Commission may not cavalierly dismiss arguments with which it does not agree.[16] The Bureau has completely failed to meet these requirements with regard to Hughes's unrebutted technical showing that the Iridium feeder links will cause harmful interference to the licensed Spaceway system in the 29.25-29.5 GHz band.

Simply put, the Bureau's Order completely ignored Hughes's timely and well-founded argument, and technical showing, that Iridium would interfere with the Spaceway system, and, therefore, that Iridium had not met its burden under rule Section 25.258(d). While Hughes does not dispute that the Commission's recent action to repeal rule Section 25.258(c) removed from consideration Hughes's argument against Iridium's request for a waiver of that rule Section, that Commission action had no impact on Hughes's additional argument, and its technical showing, which are based on rule Section 25.258(d). The Bureau's failure to address this argument is arbitrary and capricious and therefore the Bureau must rescind the portion of the Order that grants Iridium feeder link authority in the 29.25-29.5 GHz band.

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14 *See Schurz Communications v. FCC,* 982 F.2d 1043, 1050 (7th Cir. 1992) (vacating an FCC rule because key concepts were left unexplained and key evidence was overlooked); *Bechtel v. FCC*, 957 F.2d 873, 881 (D.C. Cir. 1992) (Commission must address serious challenges).

15 *Illinois Public Telecommunications Association v. FCC*, 117 F.3d 555, 564 (D.C. Cir. 1997).

16 *Id.*

III. THE BUREAU'S DECISION TO DEFER SUBSTANTIVE CONSIDERATION OF UPLINK ISSUES IS ILLOGICAL AND VIOLATES THE RIGHTS OF KA BAND GSO FSS LICENSEES

The Bureau's decision to grant Iridium authority to construct and launch satellites for its 2 GHz MSS system with Ka band feeder link capability in spite of Hughes's unrebutted showing that Iridium will be unable to comply with the Commission's sharing rules for NGSO MSS feeder links at Ka band is illogical and inconsistent with established law and policy. Therefore, it is arbitrary and capricious[17] and provides a separate basis for the Bureau to rescind the grant to Iridium of feeder link authority in the 29.25-29.5 GHz band. At bottom, in the Order, the Bureau passed substantively on only half of Iridium's Ka band feeder link proposal -- the downlink portion -- and deferred consequential consideration of the other half of the proposed system -- the uplink portion -- to some undetermined point in the future, while authorizing Iridium to proceed *in toto* with the launch, deployment and operation of its proposed satellite system. The Bureau's decision to proceed in this manner is unprecedented and, if not overturned, will have detrimental effects on other authorized users of the 29.25-29.5 GHz band and violate their rights.

As the Commission -- and the Bureau -- has recognized countless times before, satellite systems are composed of two inseparable halves, the uplink and the downlink. Although the Commission does license transmitting earth stations separately from space stations, the

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17 *See Motor Vehicle Manufacturers Association of the United States v. State Farm,* 463 U.S. 29, 46-57 (1983); *Schurz Communications v. FCC,* 982 F.2d 1043, 1050 (7th Cir. 1992) (vacating an FCC rule because key concepts were left unexplained and key evidence was overlooked); *Flagstaff Broadcasting Foundation v. FCC,* 979 F.2d 1566 (D.C. Cir. 1992) (the court will set aside an action by the Commission when it fails to provide a reasoned basis for its decision); *MCI Telecommunications Corp. v. FCC,* 842 F.2d 1296 (D.C. Cir. 1988) (citing the "irrationality of the FCC's approach"); *Communications Satellite Corp. v. FCC,* 836 F.2d 623 (D.C. Cir. 1988) (citing FCC's failure to explain its departure from prior practice).

Commission has traditionally required, and continues to require, that an applicant for a space station license submit a "comprehensive proposal for the entire [satellite] system."[18] The Commission requires that this comprehensive proposal include abundant detail regarding the character of both the proposed uplink and the proposed downlink transmissions.[19] Among other parameters inextricably related to earth station performance, the FCC requires that applicants include, "details of link noise budget, typical or baseline earth station parameters, modulation parameters, and overall link performance analysis (including an analysis of the effects of each contributing noise and interference source)."[20] An application that does not include this required information would not comply with the FCC rules and would be subject to dismissal. Since the Commission's rules *require* submission of this information, the Bureau's tortured finding that that same information is completely irrelevant to grant of Iridium's space station application is indisputably arbitrary and capricious.

The Commission's policy of requiring a comprehensive proposal is rational and sound and simply reflects that a satellite system requires both uplinks and downlinks to function. Indeed, without a full and complete picture of both the uplink and downlink characteristics of a proposed system, the Commission cannot comprehensively evaluate -- on a pre-launch basis -- the radiofrequency compatibility of the proposed system with other planned or existing radiocommunication systems. This decision here would effectively render meaningless many aspects of the Commission's space station licensing rules,[21] and is contrary to the fundamental

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18 *Fixed-Satellite Service*, 93 FCC2d 1260, 1265 (1983) ("Appendix B").

19 47 C.F.R. § 25.114 (2000).

20 47 C.F.R. § 25.114(c)(8) (2000).

21 For example, while the Bureau indicates that Iridium will need to make the showing required by rule Section 25.203(k) in a subsequent earth station application, Order at ¶

tenant of agency law that an agency simply may not ignore rules that it does not choose to follow.

The Commission has recognized the inseparable interrelationship between the earth station side of one satellite system and the operations of an adjacent satellite system. In the DISCO II proceeding, the Commission needed to develop rules to facilitate meaningful access to the U.S. market by foreign licensed satellite systems. The Commission acknowledged that it had no basis for licensing a foreign satellite system a second time, and that it would address access by foreign systems by licensing the earth station segment instead. However, the Commission similarly recognized that earth station applications are not considered in processing rounds and that, unless the Commission provided a way for foreign systems to participate in U.S. processing rounds, those systems could be precluded procedurally from meaningful access to the U.S. market.[22] Thus, the Commission developed a "letter of intent" mechanism that allows foreign systems the ability to participate in a processing round.

The converse is just as true here. Just as the Commission recognized that it would be unfair and illogical to tell foreign systems that they cannot participate in a processing round, where the underlying rights to the orbital arc will be assigned among competing applicants, it is similarly unfair and illogical for the Bureau to have licensed Iridium to construct and launch its system with its proposed Ka band feeder links, subject only to the caveat that Iridium will need to request authority in an earth station application to transmit uplinks and that Iridium will need to "demonstrate that its system can share the spectrum with other authorized services" in that

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11, rule Section 25.114(c)(6(iii) also requires that the 25.203(k) showing be made in the application for space station authorization.

22 *See DISCO II Report and Order* at ¶¶ 183-188; *Amendment of the Commission's Regulatory Policies to Allow Non-U.S.-Licensed Space Stations to Provide Domestic and International Satellite Service in the United States*, 11 FCC Rcd 18178, ¶ 16 (1996).

application. It is unfair and illogical to do so because the rights of authorized Ka band GSO FSS systems, who are entitled to have their objections to Iridium's feeder link request considered as part of the processing of Iridium's application, will be compromised in meantime.

Specifically, the Bureau's decision to defer resolution of the uplink interference issue, as a practical matter, significantly and irrevocably biases the ultimate outcome of that aspect of the Iridium system exclusively in Iridium's favor. The Order in no way limits Iridium's ability to construct, launch and operate the space segment of its proposed system with the requested Ka band feeder link capability. In fact, the Order does not even indicate that Iridium's decision to proceed with construction and launch is "at its own risk" and that Iridium cannot be heard to rely in any manner on the grant of the feeder link authorization if this issue is not resolved in its favor in a subsequent earth station application. Allowing Iridium to make huge capital expenditures in building its modified system in reliance on its license and then to launch the satellites for its modified system into space makes it *inevitable* that the Commission will allow Iridium to operate its Ka band feeder links, despite the potential for significant interference with Spaceway and other Ka band GSO FSS systems. As a practical matter, once these Iridium spacecraft are launched, they cannot be pulled back to earth and modified. Indeed, in recognition of the practical problems associated with allowing a satellite system applicant to launch before the Commission grants its authorization, there appear to be no cases where the Commission has allowed a satellite system applicant to actually *launch* satellites "at its own risk."

Thus, the Bureau's approach of deferring the uplink interference issue until an applicant presents an earth station application at some, undefined, date in the future effectively allows *Iridium* to determine when, or if, the Commission will ultimately resolve an uplink

interference issue that threatens to harm Hughes and other authorized Ka band GSO FSS systems. By tying the resolution of the issue, without bound as to time, to a future filing that is outside the Bureau's control, the Bureau has, as a practical matter, impermissibly ceded control of the resolution this critical interference issue to Iridium. Affected Ka band GSO FSS systems must, therefore, proceed with the expenses associated with the design, construction and deployment of their systems, licensed to operate at 29.25-29.5 GHz, without knowing how the Commission will ultimately resolve the interference issues posed by Iridium's Ka band feeder links in that same band.

Indeed, the Bureau's approach ignores the critical fact that the Commission effectively has no jurisdiction over foreign earth stations that may be used for feeder link stations for the Iridium system. Thus, having fully licensed the satellite portion of the Iridium system, the Commission apparently will have no authority over this issue should Iridium arrange to have feeder link uplink earth stations in other countries (such as Canada and Mexico) to avoid the Commission's jurisdiction and the limitation placed in this system license. Furthermore, as is the general practice in the industry today, the applicants for the feeder link earth station licenses to service the Iridium system may not be Iridium itself, but instead could be unrelated third parties who may have no knowledge about this critical problem. Thus, there is no logical basis for the Bureau's assumption that Iridium will have to meet its obligations under Section 25.258(d) sometime in the future.[23] It is just as possible that (i) Iridium itself never files such an earth station application, or (ii) one or more of Iridium's feeder link operations is located outside the United States, and that there is not subsequent chance for Hughes to address the interference issues presented by the Iridium system at the Commission.

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23 *See* Order at 11 ("Iridium must request authority for earth-to-space transmissions in an earth-station application.").

Indeed, even if Iridium (or a third party) files an earth station application with the Commission in a timely manner, there is no basis for concluding that such an application will be processed in a manner that affords Hughes or other affected Ka band GSO FSS licensees their procedural rights. The Commission does not have a procedure, and the Bureau has not proposed one, for considering earth station applications as a part of a processing round.[24] Thus, the affected Ka band GSO FSS licensees simply have no basis for knowing when, if ever, the potential for interference with their systems, from Iridium's system, will be resolved.

These examples highlight the Bureau's irrational and unexplained departure from prior law and policy and its failure to properly safeguard the rights of affected parties. Indeed, the only plausible "benefit" of the Bureau's approach in this matter is to expediently grant Iridium the result it sought at the expense of affected Ka band GSO FSS licensees. The Bureau found an inventive way to circumvent the legitimate interference concerns raised in the record in this proceeding, yet in so doing the Bureau illegally sidestepped the Commission's very own longstanding processing rules and requirements. Those rules implement statutory protections that are fundamental to the Commission's functions. Those protections must be dealt with squarely.

IV. CONCLUSION

By deferring any meaningful consideration of one half of Iridium's feeder link request, the Bureau's Order (i) represents an arbitrary and capricious departure from past Commission policy and practice and (ii) will impermissibly prejudice current Ka band GSO FSS licensees and future Ka band applicants. The Bureau should reconsider its decision and defer

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24 As noted above, *see supra* note 22 and accompanying text, the absence of a mechanism for treating earth station applications as part of a processing round is the very reason that the Commission developed a "letter of intent" mechanism to ensure foreign satellite systems would have meaningful access to the U.S. market.

action on Iridium's Ka band feeder link request until Iridium has sufficiently demonstrated that it has complied with the Commission's rules regarding use of the 29.25-29.5 GHz band.

Respectfully submitted,

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August 16, 2001

CERTIFICATE OF SERVICE

I hereby certify that I have this sixteenth day of August, 2001, caused a true copy of the foregoing "Petition for Partial Reconsideration" to be served by first class mail, postage prepaid, on the following:

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	)	90-SAT-AMEND-98(20)
Concerning the Use of the 1990-2025/	)	SAT-LOA-19970926-00149
2165-2200 MHz and Associated Frequency	)	SAT-AMD-19980318-00021
Bands for a Mobile-Satellite System	)	SAT-AMD-20001103-00159

PETITION FOR PARTIAL RECONSIDERATION AND CLARIFICATION

HUGHES ELECTRONICS
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PETITION FOR PARTIAL RECONSIDERATION AND CLARIFICATION

Hughes Electronics Corporation ("Hughes") hereby petitions for partial reconsideration and clarification of the Order and Authorization[1] issued by the International Bureau in the above-referenced proceeding. The Order grants Boeing authority to configure its space stations to receive Ka band feeder link uplinks in the face of legitimate and unresolved interference concerns with respect to the GSO FSS in the 29.25-29.5 GHz band and in contravention of the Commission's long-standing processing round rules and procedures. Thus, the Bureau should rescind the portion of the Order that grants Boeing authority to use the 29.25-29.5 GHz band, and should, at a minimum, defer consideration of the request for that authority until Boeing has met its burden under the Commission's rules to demonstrate that its feeder links can share with Ka band GSO FSS licensees. The Bureau should also clarify that Boeing's provision of AMS(R)S does not grant Boeing any status superior to the status GSO FSS systems authorized now or in the future to use the 29.25-29.5 GHz band.

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1 *The Boeing Company,* DA 01-1631, File Nos. 179-SAT-P/LA-97(16), 90-SAT-AMEND-98(20) (rel. July 17, 2001) ("*Order*").

Hughes has an interest in this proceeding as a party and because Hughes is the parent company of Hughes Communications Galaxy, Inc., licensee of the Ka band GSO FSS SPACEWAY system,[2] and Hughes Communications, Inc., licensee of the Ka band GSO FSS SpacewayEXP system.[3]

I. INTRODUCTION AND SUMMARY

As is recounted in the Order, in 1997, Boeing filed an application to launch and operate a non-geosynchronous orbit ("*NGSO*") satellite system in the 2 GHz band to provide Mobile Satellite Service and Aeronautical Radionavigation Satellite Service.[4] In addition to 2 GHz spectrum, Boeing's 2 GHz MSS application requested 109 MHz of paired Ku band spectrum (11.591-11.7 GHz and 14.391-14.5 GHz) for feeder links.[5] In March 1998, the Commission gave public notice of the acceptance for filing of Boeing's 2 GHz application, along with several other 2 GHz MSS applications.[6] However, the Commission indicated in that March 1998 public notice that it was not placing Boeing's Ku band spectrum request on cut-off and that a separate processing round was required for Boeing's Ku band feeder link spectrum request.[7]

Thereafter, the Commission included Boeing's Ku band feeder link spectrum request in the November 1998 public notice that commenced the first Ku band NGSO FSS

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2 *Hughes Communications Galaxy, Inc.*, 13 FCC Rcd. 1351 (1997).

3 *Hughes Communications, Inc.*, DA 01-1686 (rel. August 3, 2001).

4 Satellite System Application in the 2 GHz Mobile-Satellite Service & Aeronautical Radionavigation-Satellite Service, FCC File No. SAT-LOA-19970926-00149 (filed September 26, 1997) (the "*Boeing Application*").

5 Boeing Application at 4; Technical Supplement of The Boeing Company at 1 (filed January 8, 1999).

6 *See Satellite Policy Branch Information: Satellite Applications and Letters of Intent Accepted For Filing in the 2 GHz Band*, Report No. SPB-119 (rel. March 19, 1998).

7 *Id.*

processing round.[8] Boeing participated in the Ku band NGSO FSS processing round in support of its feeder link request, including filing a Technical Supplement dealing with inter- and intra-service sharing issues.[9] In November 2000, Boeing filed an amendment to its application that sought to replace its requested 109 MHz of paired Ku band feeder link with 400 MHz of paired Ka band spectrum at 19.3 - 19.7 and 29.1 - 29.5.[10] Boeing's Ka band spectrum request included the 29.25 - 29.5 GHz band, which is designated on a co-primary basis to GSO FSS and NGSO MSS feeder links.

Both Hughes's SPACEWAY system and Hughes's SpacewayEXP system are licensed to use the 29.25 - 29.5 GHz spectrum band. Hughes petitioned to deny or defer Boeing's amended application, *inter alia*, on the following grounds: (i) that Boeing had not met its burden under the Commission's rules to demonstrate that its feeder link operations in the 29.25 - 29.5 GHz band could share with the GSO FSS systems, including Spaceway and SpacewayEXP, that are authorized to utilize that band; and (ii) that Boeing's request for Ka band spectrum was not timely filed to be considered in the second Ka band processing round, and, therefore, the Bureau could not process Boeing's Ka band spectrum request until the conclusion of the second Ka band processing round.[11] Hughes also requested that the Bureau make clear in

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8 *See Satellite Policy Branch Information: Cut-off Established for Additional Applications and Letters of Intent in the 12.75-13.25 GHz, 13.75-14.5 GM, 17.3-17.8 GHz and 10.7-12.7 GHz Frequency Bands*, Report No. SPB-141 (rel. November 2, 1998).

9 Technical Supplement of The Boeing Company (filed January 8, 1999); *see also* Consolidated Petitions to Deny or Hold in Abeyance of The Boeing Company (filed June 30, 1999); Consolidated Opposition and Response of The Boeing Company (filed August 4, 1999); Consolidated Reply of The Boeing Company (filed August 16, 1999).

10 Amendment to Application of The Boeing Company at 8, FCC File No. SAT-AMD-20001103-00159 (filed November 3, 2000) ("*Boeing Amendment*").

11 Petition to Deny or Defer of Hughes Electronics Corporation, FCC File No. SAT-AMD-20001103-00159, at 3 (filed December 14, 2000) ("*Hughes Petition*").

any authorization issued to Boeing that Boeing is not entitled to any coordination preference in the Ka band by reason of Boeing's provision of AMS(R)S.[12]

Boeing made two filings to respond to the arguments of Hughes and other interested parties regarding Boeing's amended application, including filing two technical supplements to support its position that its Ka band feeder links could share with licensed and prior-filed Ka band GSO FSS systems.[13] Hughes and other interested parties, including PanAmSat Corporation, filed responses to either or both these Boeing filings.[14]

In the Order, the Bureau did not rule dispositively on the concerns of Hughes and others that Boeing had not met its burden under the Commission's rules to demonstrate that its proposed Ka band feeder links could share with authorized Ka band GSO FSS systems. Instead, the Bureau authorized Boeing to configure its space stations to receive feeder link transmissions from earth stations, but refrained from providing Boeing authority to actually conduct uplink transmissions at Ka band.[15] While the Bureau recognized that Hughes and other parties had raised legitimate concerns about Boeing's technical showings, the Bureau's rationale for deferring consideration of technical sharing issues associated with Boeing's feeder link uplink

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12 *Id.* at 8-9; *see also* Written Ex Parte Presentation of Hughes Electronics Corporation, FCC File Nos. 179-SAT-P/LA-97(16), 90-SAT-AMEND-98-(20), SAT-LOA-19970926-00149, SAT-AMD-19980318-0021, SAT-AMD-20001103-00159, at 11-12 (filed February 14, 2001) ("*Hughes Ex Parte*").

13 Opposition and Response of the Boeing Company, FCC File No. SAT-AMD-20001103-00159 (filed January 16, 2001); Technical Supplement, FCC File No. SAT-AMD-20001103-00159 (filed May 7, 2001).

14 *See* Hughes Ex Parte, Response of PanAmSat Corporation, FCC File No. SAT-AMD-20001103-00159 (filed February 21, 2001); Written Ex Parte Presentation of Astrolink International, LLC, FCC File Nos. 179-SAT-P/LA-97(16), 90-SAT-AMEND-98, SAT-LOA-19970926.00149, SAT-AMD- 199803 18-002 1, SAT-AMD-20001103-00159 (filed February 21, 2001); Response of PanAmSat Corporation, FCC File No. SAT-AMD-20001103-00159 (filed May 22, 2001).

15 Order at ¶ 16.

transmissions was that Boeing must request authority for uplink transmissions in an earth station application and that that earth station application would provide an appropriate venue for consideration of those technical concerns.[16]

With regard to Hughes's argument that the Bureau could not process Boeing's Ka band spectrum request until the conclusion of the second Ka band processing round, the Order held that Boeing's request could be processed because the Bureau had contemporaneously granted the timely filed NGSO MSS feeder link requests of Iridium and Globalstar, and neither Iridium nor Globalstar had objected to Boeing's amended application. The Bureau totally ignored Hughes' argument that the Boeing feeder link request must be considered in the context of a new processing round, where any additional Ka band spectrum requests of other satellite applicants also could be considered.[17] Nor did the Bureau explain why it included Boeing's Ku band feeder link request in a processing round, but failed to treat Boeing's Ka band request the same way.

Finally, although the Bureau accepted Hughes's position that Boeing not be permitted to claim any greater coordination status for any Ka band feeder links by reason of Boeing's desire to provide AMS(R)S,[18] the actual condition imposed by the Bureau on the Boeing authorization only expressly applies to 2 GHz Mobile-Satellite Systems.[19]

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16 *Id.*

17 Hughes Petition at 5-7.

18 *See* Order at ¶ 38-39.

19 Order at ¶ 44e.

II. THE BUREAU'S DECISION TO DEFER SUBSTANTIVE CONSIDERATION OF UPLINK ISSUES IS ILLOGICAL AND VIOLATES THE RIGHTS OF KA BAND GSO FSS LICENSEES

The Bureau's decision to grant Boeing authority to construct and launch satellites for its 2 GHz MSS system with Ka band feeder link capability in spite of the Bureau's acknowledgement that the current record contains legitimate, unresolved questions about Boeing's ability to comply with the Commission's sharing rules for NGSO MSS feeder links at Ka band is illogical and inconsistent with established law and policy. Therefore, it is arbitrary and capricious.[20] At bottom, in the Order, Bureau passed substantively on only half of Boeing's Ka band feeder link proposal -- the downlink portion -- and deferred consequential consideration of the other half of the proposed system -- the uplink portion -- to some undetermined point in the future, while authorizing Boeing to proceed *in toto* with the launch, deployment and operation of its proposed satellite system. The Bureau's decision to proceed in this manner is unprecedented and, if not overturned, will have detrimental effects on other authorized users of the 29.25-29.5 GHz band and violate their rights.

As the Commission -- and the Bureau -- has recognized countless times before, satellite systems are composed of two inseparable halves, the uplink and the downlink. Although the Commission does license transmitting earth stations separately from space stations, the Commission has traditionally required, and continues to require, that an applicant for a space

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20 *See Motor Vehicle Manufacturers Association of the United States v. State Farm,* 463 U.S. 29, 46-57 (1983); *Schurz Communications v. FCC,* 982 F.2d 1043, 1050 (7th Cir. 1992) (vacating an FCC rule because key concepts were left unexplained and key evidence was overlooked); *Flagstaff Broadcasting Foundation v. FCC,* 979 F.2d 1566 (D.C. Cir. 1992) (the court will set aside an action by the Commission when it fails to provide a reasoned basis for its decision); *MCI Telecommunications Corp. v. FCC,* 842 F.2d 1296 (D.C. Cir. 1988) (citing the "irrationality of the FCC's approach"); *Communications Satellite Corp. v. FCC,* 836 F.2d 623 (D.C. Cir. 1988) (citing FCC's failure to explain its departure from prior practice).

station license submit a "comprehensive proposal for the entire [satellite] system."[21] The Commission requires that this comprehensive proposal include abundant detail regarding the character of both the proposed uplink and the proposed downlink transmissions.[22] Among other parameters inextricably related to earth station performance, the FCC requires that applicants include, "details of link noise budget, typical or baseline earth station parameters, modulation parameters, and overall link performance analysis (including an analysis of the effects of each contributing noise and interference source)."[23] An application that does not include this required information would not comply with the FCC rules and would be subject to dismissal. Since the Commission's rules *require* submission of this information, the Bureau's tortured finding that that same information is completely irrelevant to grant of Boeing's space station application (even though there is a legitimate question in the record regarding interference to other systems) is indisputably arbitrary and capricious.

The Commission's policy of requiring a comprehensive proposal is rational and sound and simply reflects that a satellite system requires both uplinks and downlinks to function. Indeed, without a full and complete picture of both the uplink and downlink characteristics of a proposed system, the Commission cannot comprehensively evaluate -- on a pre-launch basis -- the radiofrequency compatibility of the proposed system with other planned or existing radiocommunication systems. This decision here would effectively render meaningless many aspects of the Commission's space station licensing rules,[24] and is contrary to the fundamental

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21 *Fixed-Satellite Service*, 93 FCC2d 1260, 1265 (1983) ("Appendix B").

22 47 C.F.R. § 25.114 (2000).

23 47 C.F.R. § 25.114(c)(8) (2000).

24 For example, while the Bureau indicates that Boeing will need to make the showing required by rule Section 25.203(k) in a subsequent earth station application, Order at ¶

tenant of agency law that an agency simply may not ignore rules that it does not choose to follow.

The Commission has recognized the inseparable interrelationship between the earth station side of one satellite system and the operations of an adjacent satellite system. In the DISCO II proceeding, the Commission needed to develop rules to facilitate meaningful access to the U.S. market by foreign licensed satellite systems. The Commission acknowledged that it had no basis for licensing a foreign satellite system a second time, and that it would address access by foreign systems by licensing the earth station segment instead. However, the Commission similarly recognized that earth station applications are not considered in processing rounds and that, unless the Commission provided a way for foreign systems to participate in U.S. processing rounds, those systems could be precluded procedurally from meaningful access to the U.S. market.[25] Thus, the Commission developed a "letter of intent" mechanism that allows foreign systems the ability to participate in a processing round.

The converse is just as true here. Just as the Commission recognized that it would be unfair and illogical to tell foreign systems that they cannot participate in a processing round, where the underlying rights to the orbital arc will be assigned among competing applicants, it is similarly unfair and illogical for the Bureau to have (i) recognized that there is a bona fide dispute regarding interference from Boeing's proposed feeder links with licensed Ka band GSO FSS systems (including those just granted in the Second Ka band Processing Round), and (ii) then licensed Boeing to construct and launch its system with those feeder links, subject only to

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16, rule Section 25.114(c)(6(iii) also requires that the 25.203(k) showing be made in the application for space station authorization.

25 *See DISCO II Report and Order* at ¶¶ 183-188; *Amendment of the Commission's Regulatory Policies to Allow Non-U.S.-Licensed Space Stations to Provide Domestic and International Satellite Service in the United States*, 11 FCC Rcd 18178, ¶ 16 (1996).

the caveat that Boeing will need to request authority in an earth station application to transmit uplinks and that Boeing will need to demonstrate that it can share spectrum with other authorized services in that application."[26] It is unfair and illogical to do so because the rights authorized Ka band GSO FSS systems, who are entitled to have their objections to Boeing's feeder link request considered as part of the processing of Boeing's application, will be compromised in meantime.

Specifically, the Bureau's decision to defer resolution of the uplink interference issue, as a practical matter, significantly and irrevocably biases the ultimate outcome of that aspect of the Boeing system exclusively in Boeing's favor. The Order in no way limits Boeing's ability to construct, launch and operate the space segment of its proposed system with the requested Ka band feeder link capability. In fact, the Order does not even indicate that Boeing's decision to proceed with construction and launch is "at its own risk" and that Boeing cannot be heard to rely in any manner on the grant of the feeder link authorization if this issue is not resolved in its favor in a subsequent earth station application. Allowing Boeing to make huge capital expenditures in building its modified system in reliance on its license and then to launch the satellites for its modified system into space makes it *inevitable* that the Commission will allow Boeing to operate its Ka band feeder links, despite the potential for significant interference with Ka band GSO FSS systems. As a practical matter, once these Boeing spacecraft are launched, they cannot be pulled back to earth and modified. Indeed, in recognition of the practical problems associated with allowing a satellite system applicant to launch before the Commission grants its authorization, there appear to be no cases where the Commission has allowed a satellite system applicant to actually *launch* satellites "at its own risk."

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26 Order at ¶ 16.

Thus, the Bureau's approach of deferring the uplink interference issue until an applicant presents an earth station application at some, undefined, date in the future effectively allows *Boeing* to determine when, or if, the Commission will ultimately resolve an uplink interference issue that threatens to harm Hughes and other authorized Ka band GSO FSS systems. By tying the resolution of the issue, without bound as to time, to a future filing that is outside the Bureau's control, the Bureau has, as a practical matter, impermissibly ceded control of the resolution this critical interference issue to Boeing. Affected Ka band GSO FSS systems must, therefore, proceed with the expenses associated with the design, construction and deployment of their systems, licensed to operate at 29.25-29.5 GHz, without knowing how the Commission will ultimately resolve the interference issues posed by Boeing's Ka band feeder links in that same band.

Indeed, the Bureau's approach ignores the critical fact that the Commission effectively has no jurisdiction over foreign earth stations that may be used for feeder link stations for the Boeing system. Thus, having fully licensed the satellite portion of the Boeing system, the Commission apparently will have no authority over this issue should Boeing arrange to have feeder link uplink earth stations in other countries (such as Canada and Mexico) to avoid the Commission's jurisdiction and the limitation placed in this system license. Furthermore, as is the general practice in the industry today, the applicants for the feeder link earth station licenses to service the Boeing system may not be Boeing itself, but instead could be unrelated third parties who may have no knowledge about this critical problem. Thus, there is no logical basis for the Bureau's assumption that Boeing will have to meet its obligations under Section 25.258(d)

sometime in the future.[27] It is just as possible that (i) Boeing itself never files such an earth station application, or (ii) one or more of Boeing's feeder link operations is located outside the United States, and that there is not subsequent chance for Hughes to address the interference issues presented by the Boeing system at the Commission.

Indeed, even if Boeing (or a third party) files an earth station application with the Commission in a timely manner, there is no basis for concluding that such an application will be processed in a manner that affords the affected Ka band GSO FSS licensees their procedural rights. The Commission does not have a procedure, and the Bureau has not proposed one, for considering earth station applications as a part of a processing round.[28] Thus, the affected Ka band GSO FSS licensees simply have no basis for knowing when, if ever, the potential for interference with their systems, from Boeing's system, will be resolved.

These examples highlight the Bureau's irrational and unexplained departure from prior law and policy and its failure to properly safeguard the rights of affected parties. Indeed, the only plausible "benefit" of the Bureau's approach in this matter is to expediently grant Boeing the result it sought at the expense of affected Ka band GSO FSS licensees. The Bureau found an inventive way to circumvent the legitimate interference concerns raised in the record in this proceeding, yet in so doing the Bureau illegally sidestepped the Commission's very own longstanding processing rules and cutoff requirements. Those rules implement statutory

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27 *See* Order at 7 ("Boeing must request authority for earth-to-space transmissions in an earth-station application."); Order at ¶ 10 ("reasonable likelihood that Boeing can and will make such a showing once it submits earth–station applications").

28 As noted above, *see supra* note 25 and accompanying text, the absence of a mechanism for treating earth station applications as part of a processing round is the very reason that the Commission developed a "letter of intent" mechanism to ensure foreign satellite systems would have meaningful access to the U.S. market.

protections that are fundamental to the Commission's functions. Those protections must be dealt with squarely.

III. THE BUREAU DID NOT RESPOND RATIONALLY TO HUGHES'S KA BAND PROCESSING ROUND ARGUMENT

As discussed above, Hughes argued in its Petition that, in compliance with longstanding Commission policy, Boeing's request for Ka band spectrum needed to be considered in the context of a Ka band processing round and that because Boeing's request for Ka band spectrum was not filed prior to the cut-off date for the then-pending Second Ka Band Processing Round, Boeing's feeder link request must be considered in a subsequent Ka band processing round.[29] Hughes's interest in, and basis for, making this argument was its authorized and applied for[30] use of the 29.25-29.5 GHz band for Spaceway and SpacewayEXP. As a GSO FCC licensee in these bands, Hughes has a reasonable and legitimate expectation under the Commission's rules that (i) later-filed, potentially-conflicting requests for this spectrum will be treated in a processing round with the procedural protections that are provided under Commission precedent, and (ii) late-filed applications would be treated in a subsequent processing round where other Ka band requests filed after the cutoff for the Second Round could be considered.[31]

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29 Hughes notes that it raised two procedural issues regarding Boeing's amended application. Namely, the Ka band processing round issue discussed herein and an argument that Boeing's request for additional, different feeder link spectrum in its amendment was a major amendment, which required that the Commission treat Boeing's 2 GHz MSS application as a "newly filed" application to be processed after the conclusion of the then-current 2 GHz MSS processing round. These issues are separate and independent and Hughes does not address the major amendment issue in this Petition.

30 SpacewayEXP has subsequently been authorized to use this spectrum. *Hughes Communications, Inc.*, DA 01-1686, at ¶ 26 (rel. August 3, 2001).

31 *See Petition of PanAmSat Licensee Corp. to Reopen the Ka-Band Satellite Application Processing Round*, DA 96-178 (rel. February 21, 1996).

The Bureau's response to Hughes's argument -- that it had contemporaneously licensed the two timely-filed applications for Ka band NGSO MSS feeder links in the Second Ka band processing round -- simply does not respond to or address either the prejudice to Hughes's authorized systems or the Commission precedent[32] in this area. Simply put, the Bureau has not explained why it departed from longstanding precedent to give contemporaneous consideration -- either inside or outside of the processing round -- of Boeing's untimely request for Ka band feeder links with those applicants who timely filed, or why the Bureau has not deferred the untimely Boeing request for consideration in a third Ka band processing round. Indeed, the Bureau has not even attempted to explain why it included Boeing's initial Ku band feeder link request in a processing round, but failed to treat Boeing's Ka band request the same way. Especially in view of the legitimate concerns raised about interference with Ka Band GSO FSS licensees from Boeing's feeder links, the Bureau's failures are arbitrary and capricious.

IV. THE BUREAU SHOULD CLARIFY THAT BOEING IS NOT ENTITLED TO A COORDINATION PREFERENCE WITH RESPECT TO KA BAND GSO FSS LICENSEES

As the Order notes, Hughes argued in its pleadings in response to the Boeing amendment that the Commission should make clear in any authorization that enables Boeing to provide AMS(R)S via its requested 2 GHz MSS system that Boeing is not entitled to any coordination preference or any other special treatment by reason of its provision of AMS(R)S.[33] Hughes's concern in this regard was that Boeing not be entitled to a preference in coordinating its requested Ka band feeder links at 29.25-29.5 GHz with Ka Band GSO FSS licensees that are authorized to use the same spectrum. In the Order, the Bureau seems to agree with the concerns

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32 *See id.*

33 Hughes Ex Parte at 11-12.

of Hughes and certain 2 GHz system applicants and explicitly provided in Boeing's authorization that "Provision of [AMS(R)S] . . . shall not grant The Boeing Company any status superior to the status of other 2 GHz Mobile-Satellite Service systems."[34] The text of this condition, however, applies only to 2 GHz MSS systems and does not by its explicit terms address Hughes's concern. Thus, Hughes requests that the Commission clarify the condition on Boeing's license to indicate that "Provision of [AMS(RS)] . . . shall not grant The Boeing Company any status superior to the status of other 2 GHz [MSS] systems *or any GSO FSS systems authorized to use the 29.25-29.5 GHz band now or in the future.*"

V. CONCLUSION

By deferring any meaningful consideration of one half of Boeing's feeder link request, the Bureau's Order (i) represents an arbitrary and capricious departure from past Commission policy and practice, (ii) will impermissibly prejudice current Ka band GSO FSS licensees and future Ka band applicants, and (iii) arbitrarily departs from the Commission's processing round protections and precedent. The Bureau should reconsider its decision and defer action on Boeing's Ka band feeder link request until (i) Boeing has sufficiently demonstrated that it has complied with the Commission's rules regarding use of the 29.25-29.5 GHz band, and (ii) the Bureau commences a third Ka band processing round and includes the Boeing request in that round.

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[34] Order at ¶ 44e.

Respectfully submitted,

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August 16, 2001

CERTIFICATE OF SERVICE

I hereby certify that I have this sixteenth day of August, 2001, caused a true copy of the foregoing "Petition for Partial Reconsideration and Clarification" to be served by first class mail, postage prepaid, on the following:

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