global MSS system of a non-U.S.-licensed, historically private, unaffiliated entity only once:

(a) The national market(s) of the foreign administration(s) coordinating and/or licensing a non-U.S.-licensed MSS system afford(s) U.S.-licensed MSS systems effective competitive opportunities; and

(b) U.S.-licensed MSS systems have access to 80 percent of the total population of the national markets of the non-U.S.-licensed MSS system's investors.

TRW urges the Commission to apply a similar, but more stringent, test with regard to the global MSS systems of IGO Spin-Offs, as set forth in Section V below.

B. ICO's Attempts To Shelter Its Own MSS System From Any "Critical Mass" Test Are Unabashedly Self-Serving.

In its comments, ICO offers the Commission an assortment of inconsistent and baseless arguments against the application of a "critical mass" test to U.S. Earth station applications for authority to communicate with the MSS systems of IGO Spin-Offs. TRW urges the Commission to see these arguments for what they are: a desperate attempt to prevent the establishment of a policy that will force ICO to compete fairly with U.S.-licensed MSS systems.

ICO acknowledges that the Commission specifically asked commenters addressing the application of a "critical mass" test with regard to non-U.S.-licensed MSS systems to propose a definition of the term "critical mass."[53/] Instead of responding to this invitation with such a definition, however, ICO merely complains that the Commission did not provide one itself.[54/]

ICO also argues that a "critical mass" test is inappropriate with respect to non-U.S.-

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53/ ICO Comments at 24-25 (citing NPRM, FCC 96-210, slip op. at 17 (¶ 47).

54/ ICO Comments at 24-25.

licensed MSS systems on the grounds that foreign countries other than the country whose administration licenses such a system will have no interest in whether that system obtains access to the U.S. market.[55/] Curiously, ICO argues elsewhere that the interests of foreign entities in U.S.-licensed MSS systems will give those entities' nations the incentive to open their markets to those systems.[56/] Obviously, then, investments in global MSS systems will give the governments of the investing entities the incentive to open their markets — and much more so when the investing entity is an arm of the government itself, as many of ICO's investors are — if the Commission employs a "critical mass" test with regard to non-U.S.-licensed MSS systems. It is partly for this reason that TRW has proposed an ECO-Sat test for applications to communicate with such systems that is based on investors' interests in those systems.

There is no basis for the claims of ICO and Kokusai Denshin Denwa Co., Ltd. ("KKD") that a "critical mass" test for applications to communicate with non-U.S.-licensed MSS systems would punish most investors in those systems for the "sins" of "a few" nations that keep their markets closed to U.S.-licensed MSS systems.[57/] Initially, TRW disputes the suggestion that only "a few" countries will keep their market entry barriers to U.S.-licensed MSS systems in place. To date, very few countries have offered to open their markets for satellite services to U.S. licensees at all.

55/ Id. at 35.

56/ See id. at 28-32, 39 n.62.

57/ Id. at 26; KKD Comments at 2.

Even if only "a few" nations with interests in a non-U.S.-licensed MSS system were to remain closed to U.S.-licensed MSS systems, however, TRW urges the Commission to keep in mind that all nations with interests in that system would benefit directly from the unfair advantage that the system would have over U.S.-licensed MSS systems, based on its broader foreign market access. There is no injustice in denying all investors in such a system the ill-gotten gains of anticompetitive behavior. On the contrary, the use of a "critical mass" test with regard to non-U.S.-licensed MSS systems will encourage investors in such systems to influence one another to adopt open market access policies, so as to be able to benefit from the entry of the systems in which they have invested into the U.S. market. Thus, under a "critical mass" test, the reduction or elimination of "free rider" activity on the part of nations that have invested in non-U.S.-licensed MSS systems will benefit the U.S. MSS market, U.S. MSS systems and investors in non-U.S.-licensed MSS systems.

V. The Commission Should Adopt TRW's Proposal That Applications To Communicate With The MSS Systems Of IGO Spin-Offs Be Subject To A More Stringent "Home Markets"/"Critical Mass" Test.

A. TRW's Proposed Test Addresses The Concerns Of The Many Commenters Recommending Close Scrutiny Of Any Proposed U.S. Market Entry By IGO Spin-Offs.

Numerous commenters agree that it is essential for the Commission to take full account of any and all privileges, immunities and other advantages that IGO Spin-Offs may enjoy as a result of ongoing or former ties to the IGOs that created them in considering U.S. Earth

station applications to access the satellite systems of those Spin-Offs.[58] As one commenter observes:

> The IGOs retain extraordinary capabilities to compete unfairly, many of which the Commission acknowledges. As multinational governmental treaty organizations, the IGOs are endowed with special privileges and immunities. The IGOs receive favorable tax treatement and in many instances are exempt from national regulation. The IGOs currently enjoy dominant market positions in the international satellite services markets, and typically the IGO member entities are the primary (if not only) suppliers of satellite services within their countries. Moreover, as the Notice recognizes, the progeny of the IGOs are likely to retain many of those advantages, because they will enjoy a treaty-based heritage and will continue to have significant government ownership.[59]

TRW believes that the Commission can best address any unfair advantages that the MSS system of an IGO Spin-Off may enjoy as a result of ties between the Spin-Off and its IGO by granting such a system U.S. market access only after:

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[58] See, e.g., AT&T Comments at 14-17 (Commission should examine applications to access systems of IGO Spin-Offs by means of enhanced public interest test); Columbia Comments at 21-25 (Commission should apply special "critical mass" test with respect to such systems, and insist on U.S.-licensed system access to 80 percent of total population of nations represented by entities investing directly or indirectly in an IGO Spin-Off's system); DIRECTV Comments at 20 (only if ICO is found to be truly separate from Inmarsat should it be treated just like any other global MSS system); Comments of Japan Satellite Systems, Inc. at 6 (treat IGO affiliates like private companies only if they undergo genuine privatization); Lockheed Comments at 13-24 (apply same market access policies to Inmarsat's Spin-Off but take into account competitive advantages of any privileges, immunities and related benefits it enjoys); Loral Comments at 27-28 (take into account any benefits enjoyed by an IGO Spin-Off that its predecessor enjoyed, whether or not any ties now exist between the two organizations); Orbcomm Comments at 5-8 (consider U.S. market entry by IGOs or their progeny by means of a "critical mass" test as well as an additional test examining potential adverse impact of such entry on competition with the United States and abroad).

[59] Orbcomm Comments at 6 (citations omitted) (emphasis added). See also GAO Report at 10-14 (raising concerns as to continuing role of Inmarsat in ICO, and the impact thereof on ICO's ability to block access to its competitors).

(a) The national market(s) of the foreign administration(s) coordinating and/or licensing the IGO Spin-Off's MSS system afford(s) U.S.-licensed MSS systems effective competitive opportunities; and

(b) U.S.-licensed MSS systems have access to 80 percent of the total population of all nations represented by entities investing directly or indirectly in the IGO Spin-Off's MSS system; and

(c) U.S.-licensed MSS systems have access to the top 10 markets (ranked by population) represented by nations or other entities investing directly or indirectly in the IGO Spin-Off's MSS system.[60/]

After the Commission has applied this enhanced ECO-Sat test, TRW urges it to scrutinize an application for access to the MSS system of an IGO Spin-Off by means of an enhanced public interest test focusing on the nature of the relationship between the IGO and its Spin-Off.[61/]

B. The Commission Should Disregard ICO's Claim To Be A Private Entity Without Intergovernmental Privileges Or Immunities.

The attempts of ICO and Comsat to depict ICO as a private entity lacking in any intergovernmental privileges or immunities are neither accurate nor appropriate.[62/] This proceeding is not the proper forum in which to debate the merits of any new, non-U.S.-licensed entity's proposed entry to the U.S. market. Nevertheless, because ICO and Comsat

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60/ See TRW Comments at 18-26.

61/ See id. at 34-36. The Commission should not be misled by ICO's claim that the Commission would encourage more privatization in the international satellite marketplace by presuming that IGO affiliates are truly private entities. ICO Comments at 45. In reality, the adoption of such a presumption would only invite entities such as ICO that have the benefit of intergovernmental privileges and immunities to exploit those advantages so as to eliminate competition within the United States and abroad. The result would render the entire exercise of IGO privatization pointless.

62/ See ICO Comments at 29, 31, 42-44; Comsat Comments at 30 n.53.

have attempted to place ICO's desire to enter the U.S. market at issue, TRW is compelled to respond to their grossly misleading assertions.

In this respect, TRW directs the Commission's attention to the ongoing proceeding regarding Comsat's application to participate in the procurement of ICO facilities.[63/] In that proceeding, TRW and other parties have supplied the Commission with overwhelming evidence that ICO is nothing more than the fourth satellite generation of Inmarsat, and will rely on Inmarsat to provide for it all functions that a truly independent company would provide for itself.[64/] The Commission must not allow ICO and Comsat to use the instant proceeding to obtain a judgment on ICO's status that Comsat cannot justify in a forum where that status is properly under consideration.

The Commission should know that a widespread perception exists both in the United States and abroad that ICO and Inmarsat are, for all intents and purposes, one and the same entity. Indeed, so pervasive is this perception that the top executive at Hughes Electronics Corp., one of only two non-Inmarsat-Signatory owners of ICO, was quoted as stating that ICO (known at the time as Inmarsat-P) would be successful against the U.S. MSS systems because "[w]ith the kind of signatories Inmarsat has, you have an advantage over other systems. We

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63/ Application of Comsat Corporation for Authority to Participate in the Procurement of Facilities of the I-CO Global Communications Limited System (File No. 106-SAT-MISC-95) (filed May 1, 1995) ("Comsat Application").

64/ See, e.g., Petition to Deny of TRW Inc., File No. 106-SAT-MISC-95 (filed June 23, 1995) (detailing the existence of so many fundamental ties between Inmarsat and what is today ICO that the two constitute virtually one and the same entity); Reply of TRW Inc., File No. 106-SAT-MISC-95 (filed August 31, 1995) (providing further analysis of these ties).

are going to be able to operate in a lot of places where some other systems will not be able to get in."[65] The executive went on to note that "[t]here is a competitor to [ICO] that is having a hard time because they do not have the right to operate everywhere they want."[66]

There are, in fact, numerous, contractual and financial ties between ICO and Inmarsat, and the two nominally separate organizations make no attempt to disguise their plans to share each other's services and facilities with a view towards an ultimate merger.[67] ICO's recent incorporation of Inmarsat's competitive principles regarding the ties between Inmarsat and ICO into the Memoranda of Association of ICO Global Communications (Operations) Limited ("ICO(O)") and ICO Global Communications (Holdings) Limited ("ICO(H)") will do little to prevent ICO from acting as an extension of Inmarsat.[68] TRW questions whether Cayman Islands law — to which both ICO(O) and ICO(H) appear to be subject — will ever be enforced so as to ensure that the members of these entities abide by the entities' respective Memoranda

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65/ Interview with Michael T. Smith, Space News, October 9-15, 1995, at 22. A copy of this interview is attached hereto as Appendix A.

66/ Id.

67/ As TRW has previously observed, the Subscription Agreement between ICO and Inmarsat specifically contemplates the eventual "harmonization and evolution of the range of services" offered by ICO and Inmarsat and the use or sharing of each entity's services or facilities by the other. See Petition to Deny of TRW Inc., File No. 106-SAT-MISC-95 (filed June 23, 1995), at 4-5; Comsat Application, Exhibit 2 (Subscription Agreement), Schedule 2 at § 4. As but one illustration of the dangers inherent in this blurring of organizational boundaries, TRW notes the Executive Branch's previously expressed concern that the exclusive right of ICO and its investors to use the Inmarsat name and logo throughout the world will allow them "to reap the commercial competitive advantages of Inmarsat's reputation." Executive Branch Letter at 3-4. Such is not the behavior of a truly private, independent entity.

68/ Contra, ICO Comments at 44.

of Association. In any case, Cayman Islands law permits a company to alter, add to or modify its Memorandum of Association by Special Resolution.[69] ICO(O) and ICO(H) have already done so in order to incorporate the Inmarsat principles, and can easily do so again to remove them.

ICO's various arguments to the effect that it has no special ability to gain access to foreign markets[70] are undermined by the direct and indirect interests that numerous foreign government entities hold in ICO. It is no secret that Inmarsat — holder of a significant ownership interest in ICO — consists mostly of Signatories owned and/or directed by member governments.[71] In addition, the vast majority of the other ownership interests in ICO are held by these very same government-owned and/or directed Signatories.

The assertion that these investments will not give the investing governments a reason to give ICO market access simply strains credulity. In fact, the interests of numerous foreign governments in ICO give those governments an obvious incentive to discriminate against ICO's U.S.-licensed competitors when those competitors seek comparable market access

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69/ The Companies Law (1995 Revision) §§ 9, 23, 59 (Cayman Islands), reprinted in Commercial Laws of the World, Cayman Islands, at 13-14 (Dec. 1995).

70/ ICO Comments at 29-32, 44.

71/ Of the 78 Inmarsat signatories, 73 are national government regulators and/or government-owned providers of telecommunications services. See Inmarsat Member States, Signatories, Investment Shares and Council Membership, Inmarsat Doc. ASSEMBLY/11/1/ADD/1, Revised Annex IV (Jan. 23, 1996). The only Inmarsat Signatories that do not have government ownership are those from Canada, Chile, New Zealand, the United Kingdom (where the government does holds a "golden share" permitting it to veto action by its Inmarsat Signatory, British Telecom), and the United States. Of course, all of the Parties to the Inmarsat Convention are national governments.

abroad. Many of the entities investing in ICO, for example, participate in the consortium of European Postal, Telephone and Telegraph entities known as CEPT. A working group of CEPT, PT22, has recently developed a spectrum plan for the 1.6/2.4 GHz bands that are to be used by ICO's U.S. competitors which can, at best, be described as punitive.[72/] The PT22 band plan was sponsored and vigorously pursued by the United Kingdom, which, not coincidentally, is the notifying administration for ICO's satellite network for International Telecommunication Union coordination purposes.[73/] In addition, the nine European administrations initially voting for this competitively disadvantageous band plan — Germany, Norway, Sweden, the United Kingdom, Turkey, Italy, France, Portugal and Romania — are all Inmarsat Signatories holding either direct or indirect financial interests in ICO. Not surprisingly, ICO is the one entity that is decidedly favored by the CEPT PT22 band plan.[74/]

The Executive Branch has urged the Commission to hold any application that would

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72/ See Appendix B hereto.

73/ ICO Comments at 4. Recently, the PT22 group has been developing a proposal that would exclude from licensing consideration any 1.6/2.4 GHz band MSS system that is not brought into operation by a date certain (which could be as early as January 1, 2000). This provision, too, is punitive and discriminatory, as it conflicts with the ITU regulations which permit the date of a system's "bringing into use" to be up to nine years from the date of advance publication. In the case of the U.S. MSS Above 1 GHz systems, the nine-year period expires on April 28, 2001.

74/ See Appendix B at 2-3. Thus, ICO's claim to be a strong advocate "of open, competitive and non-discriminatory market access for itself and its competitors" rings hollow. ICO Comments at 5. TRW notes that the objections raised to the Commission's proposed ECO-Sat test by the Delegation of the European Commission ("EC") in the EC's informal, late-filed comments in this proceeding are remarkably similar to those raised by ICO, and equally lacking in merit. See EC Comments (filed with the U.S. Department of State on August 9, 1996).

permit ICO services to be provided in the United States in abeyance until such time as empirical data on the ability of U.S. handheld telecommunications service providers to secure nondiscriminatory access to foreign markets can be obtained.[75] TRW urges the Commission to follow this recommendation, and to view the blatantly anticompetitive activities of ICO's investors within CEPT PT22 as proof that the time for granting U.S. market access to ICO is by no means at hand.

C. ICO Must Not Be Permitted To Enter The U.S. Market In The Guise Of Inmarsat.

Certain commenters, including Comsat, seek Commission consent in this proceeding to the domestic provision of Inmarsat's "traditional" services.[76] In view of the possibility of an eventual "convergence" of Inmarsat and ICO — which would presumably render services provided by the two nominally separate entities indistinguishable — the possibility cannot be ignored that Inmarsat may seek a contractual arrangement with ICO by which these "traditional" Inmarsat services would be provided via space segment licensed to ICO.

Any provision of handheld MSS via the facilities of an IGO Spin-Off within U.S. territorial boundaries by any entity would necessarily constitute U.S. market entry by that Spin-Off. The Commission must therefore subject any such activity to the ECO-Sat test that it ultimately adopts for IGO Spin-Offs, as well as to the enhanced public interest test for such

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[75] Executive Branch Letter at 4.

[76] See Comsat Comments at 10-25; BTNA Comments at 10.

entities that it proposes in the NPRM.[77]

VI. An Expanded "No Special Concessions" Policy Or An "Effect On Competition" Test Are Insufficient Alternatives To An ECO-Sat Test For Applications to Access Non-U.S.-Licensed MSS Systems.

A. ICO's Recommendation That The United States "Lead By Example" In Adopting A "No Special Concessions" Policy Is A Siren's Call That The Commission Must Not Follow.

According to ICO, the Commission can best ensure a fully competitive domestic and international market for MSS not by adopting an ECO-Sat test, but by (a) unilaterally prohibiting U.S. MSS system licensees from acquiring or enjoying special arrangements that unfairly disadvantage any U.S.- or non-U.S.-licensed MSS system operator (for reasons other than spectrum scarcity), and (b) urging national regulators in the home markets of non-U.S.-licensed MSS systems to do the same.[78] ICO's suggestion is completely unsatisfactory, even without regard to the irony of its proposal that the Commission address the issue of foreign satellite access to the U.S. market by imposing an additional burden on U.S. satellite licensees.

Although ICO states that it "is confident" that national regulators in foreign countries would follow the United States' example in adopting such a "no special concessions" policy,[79] it admits that other nations may not follow that example for an indeterminate period of time[80]

77/ NPRM, FCC 96-210, slip op. at 25 (¶ 73).

78/ ICO Comments at 37-41.

79/ Id. at 40.

80/ Id. at 41.

— thus leaving U.S.-licensed MSS systems with spotty access to foreign consumers around the globe. ICO's apparent solution — i.e., that U.S.-licensed MSS operators plead their cases to the notifying administration of an offending non-U.S.-licensed MSS system, to the WTO, or to other "multilateral institutions"[81] — is no solution at all, as U.S. MSS system operators would find it impossible to obtain effective relief on a timely basis. In the meanwhile, of course, ICO would be able to make use of its numerous ties to foreign governments and its international image as an arm of Inmarsat to gain asymmetrical access to virtually all significant foreign markets. ICO's proposal is thus no substitute for the type of ECO-Sat test for MSS proposed by TRW herein.

B. Comsat's Proposed "Effect On Competition" Test Is Vague And Ineffectual.

Comsat recommends that, instead of employing an ECO-Sat test in evaluating applications for communications with non-U.S.-licensed MSS systems, the Commission should adopt a simple public interest test to measure the effect on competition in the U.S. market of entry by such systems.[82] Comsat's proposed test is hopelessly vague and, premised as it is on the false notion that "few of the major foreign markets are in fact closed to U.S.-licensed MSS providers,"[83] would do nothing whatsoever to ensure that U.S.-licensed MSS systems ever obtain market access abroad.

81/ Id. at 41 n.63.

82/ Comsat Comments at 27-29.

83/ Id. at 28.

Comsat's proposed test is so amorphous as to be unworkable.[84/] In fact, the "effect on competition" test would provide non-U.S.-licensed MSS systems with no guidance at all as to the requirements that they must meet to gain entry to the U.S. market, nor would it give the Commission a clear standard with which to judge applications for such entry. The natural consequence would be endless rounds of litigation, unfairly delayed access to the U.S. market by non-U.S.-licensed systems, and a great waste of the Commission's limited resources.

TRW believes that, without the encouragement provided by an ECO-Sat test of the kind that it proposes, foreign administrations would have no cause to open their markets to U.S.-licensed MSS systems. Faced with Comsat's unpredictable "effect on competition" standard, in fact, foreign administrations are likely to impose their own vague standards that would entangle U.S.-licensed MSS systems in battle after legal battle in each foreign market they wish to enter. The Commission should therefore employ the ECO-Sat test that TRW proposes for such regulatory purposes, and consider the effect on competition of U.S. market entry by non-U.S.-licensed MSS systems merely as part of the public interest test that the Commission proposes to apply after conducting its ECO-Sat analysis.

VII. The Commission Must License Mobile Earth Stations Used For Communications With MSS Systems.

Finally, TRW urges the Commission to dismiss out of hand Comsat's proposal that the Commission refrain from licensing mobile Earth stations used for communications with MSS

84/ Even Intelsat, which urges that the Commission employ the same test for purposes of considering U.S. market entry by IGOs, is forced to concede that the test is "much more subjective than either the ECO-Sat test or the [NPRM's] other alternative IGO tests." Intelsat Comments at 7-8.

systems.[85] There is no basis for Comsat's assertion that the licensing of such terminals would be "wildly impractical."[86] Comsat ignores the fact that the Commission has already established rules for the blanket licensing of the mobile user transceivers that will communicate with U.S.-licensed MSS systems.[87] There is no reason why the Commission cannot employ similar rules for the licensing of mobile Earth stations that would communicate with non-U.S.-licensed MSS systems (incorporating, of course, the ECO-Sat test). Given the roaming capability that global MSS systems are designed to afford and the facility with which mobile Earth stations communicating with those systems may be transported across national borders, the Commission must license such Earth stations; if it does not, it will abdicate any effective control over the entry of non-U.S.-licensed MSS systems into the U.S. market.

CONCLUSION

For the foregoing reasons, the Commission should proceed with the design of its ECO-Sat test and other regulatory mechanisms for the regulation of U.S. market entry by non-U.S.-licensed MSS systems as set forth in the TRW Comments and discussed herein. The Commission should affirm both its commitment to the principles underlying its ECO-Sat test and its intention to apply those principles to the MSS systems of IGO Spin-Offs in a manner that takes account of any intergovernmental privileges and immunities or other advantages that

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85/ Comsat Comments at 34 n.57.

86/ Id.

87/ See Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Mobile Satellite Service in the 1610-1626.5/2483.5-2500 MHz Frequency Bands, 9 FCC Rcd at 5936, 6016-17 (¶¶ 208-209) (1994).

such entities may enjoy as a result of their current or former ties to the IGOs that created them. In this last regard, the Commission should follow the Executive Branch's recommendation to hold any decision affecting U.S. market access by ICO in abeyance until such time as it becomes clearer whether U.S.-licensed MSS systems will have nondiscriminatory access to other national markets.

Respectfully submitted,

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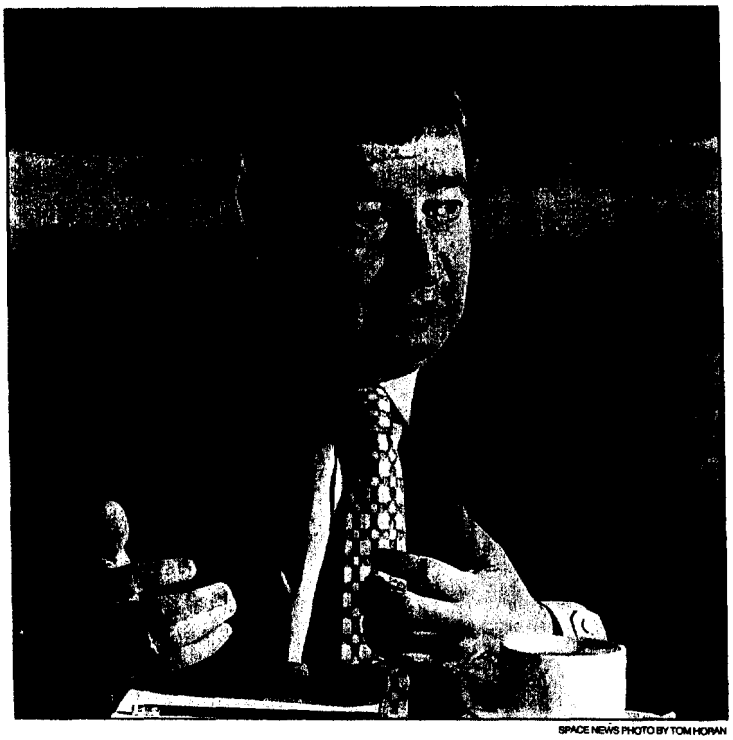
APPENDIX A

NEWSMAKER FORUM



SPACE NEWS PHOTO BY TOM HORAN

Michael T. Smith

Vice Chairman
Hughes Electronics Corp.

Michael T. Smith has risen steadily through the corporate ranks of General Motors since joining the firm almost 30 years ago.

Smith, 52, held a variety of financial management positions before being named vice chairman of Hughes Electronics Corp. in 1992. The subsidiary of General Motors Corp. has annual sales of more than $14 billion.

The Worcester, Mass., native had been vice president and chief financial officer of Hughes Electronics from the time it was formed in 1985, when General Motors acquired Hughes.

Los Angeles-based Hughes Electronics owns both Hughes Space and Communications and Hughes Communications Inc. The former builds spacecraft such as the HS 601 communications satellites; the latter is pursuing the Spaceway broadband communications service and a nationwide direct-to-subscriber radio service.

Smith, who recently transferred from southern California to Alexandria, Va., enjoys hitting the ski slopes and traveling with his family in his free time.

He spoke about Hughes' business outlook in an interview with Space News *staff writer Jennifer Heronema.*

Q: Why do you think Inmarsat P will be successful against such global satellite phone competitors as Iridium and Globalstar?

A: There are other factors besides [satellite system] cost and quality that you have to look at when you have a worldwide system.

Which one of these systems offers the most opportunity to have the proper landing rights in various countries? [Landing rights are the legal authority to operate satellite systems in a country.]

With the kind of signatories Inmarsat has, you have an advantage over other systems. We are going to be able to operate in a lot of places where some other systems will not be able to get in.

There is a competitor to Inmarsat P that is having a hard time because they do not have the right to operate everywhere they want.

Q: Was it a strategic error for Hughes to focus on satellite manufacturing even when it meant selling satellites to Inmarsat P competitors?

A: I do not know if it is a strategic error or not. I think we have earned a reputation over the years for providing a high quality, reliable product to those customers who can pay the bill.

Q: Why has Hughes increased its efforts in the satellite services business?

A: As time goes on and we look at where we want to put our risk-related dollars, some of these other activities look more attractive to us than just manufacturing. Profits are made on the service side of this business. What we have done in the video distribution business through Hughes Communications points that out to us.

Q: What were the issues that took so long to resolve between Hughes and Inmarsat P?

A: There were lots of different things. We are not a signatory. So, on their part there was some discussion of "Geez, we need to make a profit on this thing, and maybe Hughes should have different rights than other equity holders."

There also was the issue of wholesale rights.

Q: You want to be an Inmarsat P service provider?

A: Not necessarily, but we would like to have the option in the United States.

Q: Then you obviously think Inmarsat P will get approval to operate in the United States?

A: Yes.

Q: What is your opinion of the possibility of MCI getting into the direct broadcast satellite television (DBS) business? Do you consider that as much of a threat to DirecTV?

A: No. It does not matter if it is MCI, AT&T, Bell South, anybody. When we built and designed the system, we put a very conservative estimate of what we thought we would have as a business. The breakeven is in the range of 3 million to 4 million subscribers.

We knew full well there were three separate orbital slots [assigned locations in geostationary orbit for DBS systems serving the U.S. market] and that somebody — if we were successful — would follow us into them.

It is fortuitous that MCI has raised the issue of an auction [for a DBS license]. We ordinarily do not support auctions, but in this case, it is going to help us because it is going to delay the process of a competitor using that orbital slot.

Q: Do you think there will be a fight over the slot?

A: Yes, there will be a fight over it. It will take the U.S. Federal Communications Commission a while to get the auction rules out, hold the auction, announce the results and award the slot.

Q: Is Hughes interested in bidding for that slot?

A: Absolutely.

Q: Could you give a figure of how much the slot is worth to Hughes?

A: No. We do not support auctions normally because we have enjoyed the fruits of orbital slots without paying for them. We do not want to see an ugly precedent decided every time we are going to require a slot. But in this case, it is to our benefit because it will delay the process of our competitor.

It does not matter who it is. It points out that there is a business there. You get the likes of MCI coming after it, it just shows that we did the right thing. The marketplace is there for those who get there first.

Q: Do you think MCI underestimates the difficulty of putting together a direct broadcast system?

A: I don't know. It is not a simple undertaking. They are a big company in a similar kind of business as far as data and voice transmission. I think they can handle it.

Q: What are your thoughts on McDonnell Douglas' interest in acquiring a satellite manufacturer?

A: I have heard Harry Stonecipher [McDonnell Douglas president and chief executive officer] talk before.

He also wants an avionics company.

I think he is looking over his shoulder at what some of his friends in the aircraft business have done, but I am not aware of any specific intent on their part to do anything with anybody.

Q: Does acquiring a satellite manufacturer make any sense for them?

A: I think he is looking at his competition, and they have vertically integrated launch capability with satellite capability.

We have always worked the opposite by trying to keep launchers separate.

We wanted a real competitive launch industry out there, but we do not have it.

Q: What are your views on launch quotas with China and Russia?

A: We would just as soon not see the quotas. We would like to see a worldwide competitive market.

Look at what we have done with reducing the cost of satellites over time. Basically, there is not enough launch competition. A lot of people have rockets, but they do not all carry the same payloads.

What we found interesting with McDonnell Douglas was that with a little bit of work on their part, they could increase the capacity of the Delta rocket. They have picked up most of our 601 launches [Hughes will launch at least 10 of its HS-601 communications satellites on the planned Delta 3 rocket], and will give more competition to both Ariane and Atlas.

We would like to see lots of competition and open launches without control all over the world.

Q: Is it your view that the long-term purpose of the quota system was to deal with overcapacity in the American launch industry?

A: I do not believe that for a minute. There is not enough capacity for launch capability. We have pointed out a number of studies to the [U.S.] Commerce Department and others who are interested in the shortage. There are other reasons for the quotas.

Q: Do you support the movement in Congress to dismantle the Commerce Department?

A: No. I think the Commerce Department serves a useful purpose. It has been very helpful, especially in this administration.

APPENDIX B

CEPT BAND PLAN - DISCRIMINATION IN EUROPE

After three years of intense effort, in 1994 the FCC adopted a frequency band plan in CC Docket No. 92-166 which (in the view of most participants) fairly assigned the spectrum available for user links in the new Above 1 GHz mobile satellite service (the so-called "Big LEO" systems). The Commission's plan split the band by technology:

	Uplink
1610 - 1621.35 MHz	to be shared by the licensed CDMA systems (although there were four CDMA applicants, only two have been licensed: Odyssey (TRW) and Globalstar (Loral Qualcomm))
1621.35 - 1626.5 MHz	to be utilized by the single TDMA system (Iridium)
	Downlink
2483.5 - 2500 MHz	Since Iridium is bi-directional in the L-band, the entire S-band downlink was assigned to be shared by the CDMA systems

In recent months, after seeing the difficulties encountered in attempting to secure spectrum rights in other countries, the several U.S. licensed systems have indicated a desire to review again the desirability of operating worldwide according to the band plan adopted by the FCC for domestic service.

Over the last several months, however, the European Postal Telephone and Telegraph consortium (CEPT) has been developing a spectrum allocation plan of its own; one that blatantly discriminates against the licensed US systems. The current draft recommended CEPT proposal:

Uplink

1610 - 1618.25 MHz	reserved for global CDMA systems (such as the US Big LEOs)
1618.25 - 1622.375 MHz	reserved for regional European systems
1622.375 - 1626.5 MHz	reserved for global TDMA systems (e.g., Iridium)

Downlink

2483.5 - 2491.75 MHz	reserved for global CDMA systems
2491.75 - 2495.875 MHz	reserved for regional European systems
2495.875 - 2500 MHz	to be decided

The only other frequency bands currently being proposed for the Big LEO systems are the 2GHz bands proposed by ICO (the Inmarsat venture). Here, CEPT has determined to set aside the entire 30MHz worldwide allocation for either "to be decided" or to "regional and global systems" as a group — namely, ICO. The attached Draft ERC Decision on the Harmonized Use of Spectrum, Annex 4 to Doc. CEPT/ERC/PT22(96)32, Antalya, 8-10 July 1996 details the foregoing summary. The major problems for U.S. systems contained in these proposals are the following:

1. The 4.125 MHz in the uplink *reserved only for European systems* is in the more desirable part of the 1610-1621.35 MHz band away from interference problems with RAS and Glonass, which the U.S. licensed Big LEOs would have to contend with.

2. Of equal concern is the fact that *one-half* of the downlink band is not available to Odyssey or Globalstar, the two U.S. licensed CDMA Big LEOs. Not only has PT22 reserved 4.25 MHz for European Regional systems, it continues to hold back another 4.25 MHz at the top end of the band for no rational purpose (other than to make the lives of the U.S. Big LEOs more difficult).

3. The band limiting constraints set forth in Items 1 and 2 have real-world consequences to system viability. Due in part to beam management techniques necessary to avoid self-interference, restrictions on sub-band assignments in Europe will place additional constraints on the assignment pattern in Central Asia, and the latter, in turn, can further constrain assignments in East Asia. Including analysis of capacity limitations occasioned by these effects, TRW estimates that the CEPT band plan could reduce European revenue for the Odyssey system by at least 30% (and possibly as much as 50%).

4. Of significance in both cases is Note 4 to Annex 1, requiring that Regional European systems which can coordinate with the Global systems utilize the band segment designated for Global systems -- thus making their viability more problematic — *while still reserving the same large amount of spectrum for other European systems* (that may or may not materialize). In this connection, it is important to note that there are *no* separate reservations for regional systems in the 2GHz bands to be used by ICO; there, regional and global systems share the same spectrum. (The only purpose apparent for this dichotomy of treatment is to make things difficult for the Big LEOS and easy for ICO.)

5. If there are to be European Regional reservations they should *not* be in bands already designated by the ITU for global systems; as noted above, these should be reoriented to the 1.5/1.6 GHz bands.

ERC/PT 22 (S-PCS)
2nd meeting
Antalya, 8-10 July 1996

Annex 4 to
Doc. CEPT/ERC/PT22(96)32

Subject DRAFT ERC DECISION
Origin ERC/PT 22

DRAFT ERC DECISION ON THE HARMONISED USE OF SPECTRUM FOR SATELLITE PERSONAL COMMUNICATIONS SYSTEMS (S-PCS) OPERATING WITHIN THE BANDS 1610 - 1626.5 MHz, 2483.5 - 2500 MHz, 1980 - 2010 MHz AND 2170 - 2200 MHz

Considering

(a) that WARC-92 allocated the bands 1610-1626.5 MHz (E→Sp), 2483.5-2500 MHz (Sp→E), 1980-2010 MHz (E→Sp) and 2170 - 2200 MHz (Sp→E) to the mobile-satellite service (MSS) on a primary basis, and the band 1613.8 - 1626.5 MHz (Sp→E) on a secondary basis.

(b) that the use of the frequencies mentioned in *Considering* (a) above is subject to co-ordination under Resolution 46 (WRC-95);

(c) that transmissions from mobile Earth stations in the band 1610 - 1626.5 MHz are subject to the power limits given in RR 731E;

(d) that the use of the band 1610 - 1626.5 MHz is also subject to the provisions of RR 731 (S5.363);

(e) that RR 733E provides protection to the radioastronomy service in the band 1610.6 - 1613.8 MHz, from both in-band and out-of-band emissions from the stations of the mobile-satellite service and the radiodetermination-satellite service;

(f) that WRC-95 adopted further provisions relating to the bands mentioned in *Considering* (a) above;

(g) that the use of the bands 1980 - 2010 MHz and 2170 - 2200 MHz by S-PCS will be subject to successful frequency co-ordination with the fixed service and, where necessary, the migration of the fixed-service stations from the bands concerned;

(h) that a number of S-PCS providing both global and regional coverage are to be brought into operation in the bands mentioned in *Considering* (a) above;

8. that CEPT Member Administrations shall communicate the national measures implementing this Decision to the ERC Chairman and the ERO when the Decision is nationally implemented.

(i) that the use of the mobile earth station by a given S-PCS system requires specific frequency assignments and is subject to licensing on a national basis;

(j) that S-PCS using CDMA and TDMA cannot share the same frequency band;

(k) that CEPT believes that S-PCS, both global systems and regional systems, to be brought into operation in the bands mentioned in considering (a) should be provided with a level playing field and the frequency designation should be subject to certain milestones on the deployment of the systems;

(l) that the migration of the fixed service systems from the bands 1980 - 2010 MHz and 2170 - 2200 MHz will be the subject of a separate ERC Decision;

(m) that the free circulation and licensing of the mobile Earth stations will be the subject of a separate ERC;

(n) that the harmonisation of the licensing of network operators and service providers for S-PCS services would be considered by CEPT ECTRA;

decides

1. that the bands 1610 - 1626.5 MHz and 2483.5 - 2500 MHz shall be designated to S-PCS to be brought into operation before 1 January [2000][2001] and that the bands 1980 - 2010 MHz and 2170 - 2200 MHz shall be designated to S-PCS to be brought into operation before 1 January 2001 as shown in Annex 1 to this Decision;

2. that the systems to be operated within these bands shall meet the milestone criteria given in Annex 2;

3. that in the event the milestones are not met the CEPT ERC shall revise as necessary the designations shown in Annex 1;

4. that the Decisions on free circulation and licensing of mobile Earth stations shall identify the individual systems to be operated within the frequency bands mentioned in **Decides 1** above;

5. that CEPT administrations in conducting frequency co-ordination shall take into account the above **Decides**;

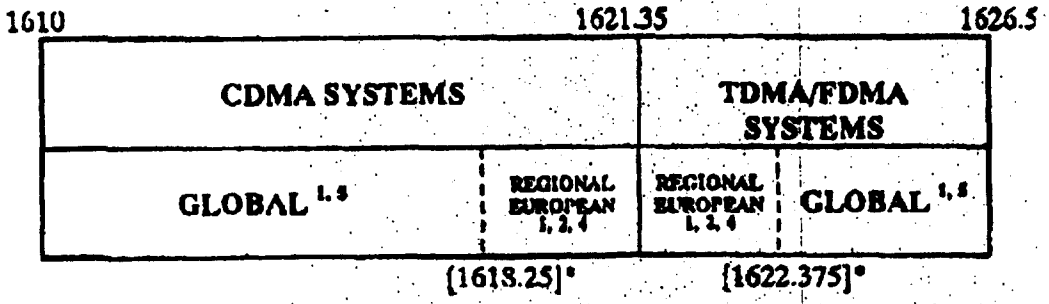
6. that this Decision and other companion Decisions shall be reviewed every two years by the ERC with the assistance of the ERO, with a view to making adjustments to the frequency designations shown in Annex 1, as necessary, whilst taking account of any new proposals for S-PCS to be brought into operation within two years of the date mentioned in **Decides 1**;

7. that this Decision shall enter into force on [day] [month] [year];

Annex 1

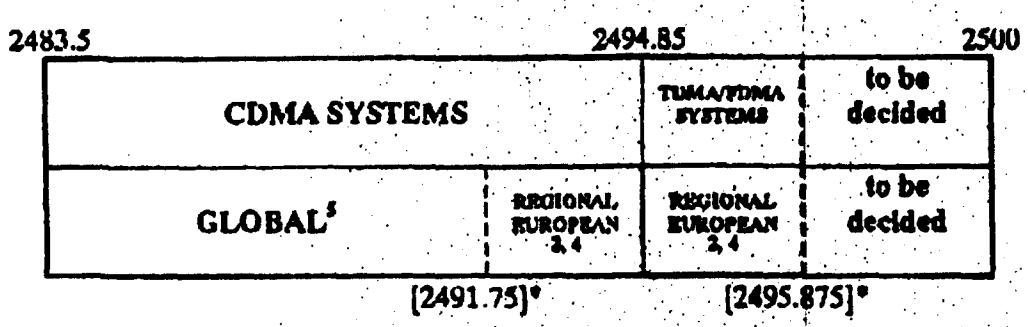
Provisional designation of frequency bands to Global and Regional European S-PCS employing CDMA and TDMA/FDMA technologies and operating within the bands 1610 - 1626.5 MHz, 2483.5 - 2500 MHz, 1980 - 2010 MHz and 2170 - 2200 MHz

1) 1610 - 1626.5 MHz



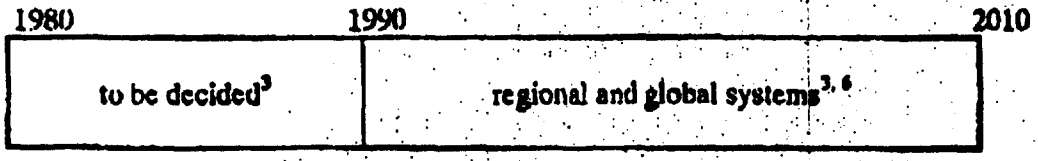
*) See section 4.2.2 of the Summary Record of the 2nd meeting of PT22.

2) 2483.5 - 2500 MHz



*) See section 4.2.2 of the Summary Record of the 2nd meeting of PT22.

3) 1980 - 2010 MHz



4) 2170 - 2200 MHz