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for maximum flexibility in spectrum assignment while ensuring access by later-entering MSS operators that have met developmental milestones.

The Commission's NPRM provides a framework within which these goals can be substantially achieved. Notably, the NPRM proposes to apply the Big LEO service rules to 2 GHz MSS operators where appropriate³ and includes a licensing option under which systems that are close to offering commercial services can do so, promptly and flexibly, within the relevant segments of the available 2 GHz MSS bands. The Commission also suggests a set of milestone implementation requirements that will prevent MSS operators that are not close to satellite launch from warehousing spectrum that other systems could use to serve consumers.⁴

ICO welcomes the Commission's invitation to commenters to develop creative approaches to 2 GHz spectrum licensing.⁵ ICO's views on this subject have evolved in the course of considering the implications of various licensing approaches, and in these comments ICO proposes rules, based on the framework set out in the NPRM, that will bring prompt, flexible competition at minimum cost to consumers while safeguarding the interest of all qualified applicants in obtaining access to the 2 GHz MSS band. Specifically, ICO supports a negotiated entry option for service link processing that permits early entrants to operate flexibly in the relevant segments of the 2 GHz MSS band, with first engaging in lengthy coordination with other systems that are not close to operational status. As ICO

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Mobile-Satellite Service, ET Docket No. 95-18 (Nov. 25, 1998) (“*Memorandum Opinion and Order*”).

³ *NPRM* at ¶ 71.

⁴ *Id.* at ¶¶ 83-90.

⁵ A creative approach in this proceeding is necessitated by the presence of nine applicants at widely varying states of readiness, the FCC's apparent willingness not to impose financial qualifications and the Commission's decision to require MSS operators to pay the cost of relocating terrestrial incumbents.

will explain more fully, this approach not only permits flexible operation with minimum delay, it is the approach most likely to minimize disruption of terrestrial 2 GHz incumbents. ICO also proposes to refine the negotiated entry option by adding a domestic coordination process and dispute resolution mechanism under which qualified later entrants are guaranteed access to 2 GHz spectrum.

ICO also supports the Commission's proposed implementation milestones for 2 GHz MSS operators, which strongly reinforce the benefits of ICO's proposed domestic intersystem coordination and dispute resolution process. Under ICO's proposed approach, later-entrant systems may begin to coordinate with operational systems when those later entrants have filed a request for ITU frequency coordination, demonstrated that they have entered into an unconditional launch contract and are within one year of launching their first system satellites. Under the Commission's proposed milestone rules, systems that do not achieve these construction and launch milestones within a defined period of time will lose their authorizations to operate at 2 GHz. In combination, the Commission's proposed implementation milestones and ICO's proposed coordination rules will ensure that the cost and effort of intersystem coordination, as well as disruption to incumbent terrestrial systems, will be incurred only when necessary to accommodate MSS operators that are close to operational status. To ensure that market forces determine the assignment of spectrum, ICO also recommends that coordinated spectrum that is not used by any MSS entrants because of failure to meet implementation milestones should become available for coordination with other qualified systems already in the band.

In the following comments, ICO discusses its service link licensing proposals in detail and also responds, in turn, to the Commission's requests for comment on service rules, mobile earth station licensing and international coordination.

I. THE COMMISSION SHOULD ADOPT A VARIANT OF ITS NEGOTIATED ENTRY OPTION FOR SERVICE LINK LICENSING

A. ICO Agrees That Every Effort Should Be Made To Avoid Mutual Exclusivity

ICO agrees with the Commission's proposal to make every effort to accommodate all qualified systems within the available 2 GHz MSS spectrum.⁶ A needless finding of mutual exclusivity would violate the Commission's obligations under the Act and create a predicate for assignment of 2 GHz spectrum through competitive bidding.⁷ As ICO explains at greater length below, competitive bidding is inappropriate and would have dramatic anticompetitive consequences for global MSS systems. Accordingly, the Commission should avoid mutual exclusivity by authorizing MSS applicants conditionally and granting access to spectrum only to viable and qualified applicants.

B. The Commission's Proposals Concerning Technical Qualifications Are Generally Sound

ICO agrees with the Commission that both GSO and NGSO systems may be authorized to use 2 GHz MSS spectrum, but generally in different parts of the band.⁸ ICO also agrees that NGSO satellites should be capable of serving locations as far north as 70 degrees North latitude and as far south as 55 degrees South latitude for at least 75 percent of every 24-hour period, and that GSO systems should provide coverage to all 50 states, Puerto Rico, and the U.S. Virgin Islands where technically feasible.⁹ ICO similarly agrees with the Commission's conclusion that GSO systems should be assigned

⁶ *NPRM* at ¶ 1.

⁷ 47 U.S.C. § 309(j)(6)(E).

⁸ *NPRM* at ¶ 17.

⁹ *Id.* at ¶¶ 18-19.

spectrum allocated on a regional basis.¹⁰ However, the Commission should not assign more than 10 MHz of regionally-allocated spectrum to GSO systems in each direction.

A Commission decision concerning the feasibility of providing AMS(R)S service at 2 GHz is premature. As the Commission points out, domestic and international 2 GHz MSS allocations do not provide for intra-network priority and preemptive access for AMS(R)S service.¹¹ Accordingly, any AMS(R)S service provided on a global basis may require international coordination of these questions -- a process that is unlikely to reach a successful conclusion until an International Telecommunication Union ("ITU") regulatory framework is in place. The Commission therefore should defer a decision on AMS(R)S service at 2 GHz until the ITU has an opportunity to address the questions of priority and preemptive access that the service raises -- possibly at World Radio Conference ("WRC") 2002.

C. Financial Qualifications May Not Be Necessary So Long As The Commission Adopts And Enforces Adequate Milestone Requirements

ICO continues to believe that financial requirements serve the important purpose of ensuring that valuable spectrum is assigned to systems that are able to use it to benefit consumers. ICO is not opposed, however, to the Commission's tentative conclusion that milestone requirements, if properly defined and enforced, may be sufficient to prevent warehousing of 2 GHz MSS spectrum by underfinanced and unqualified systems.¹²

ICO also agrees that in the event the Commission concludes that not all proposed 2 GHz systems can be accommodated within the available spectrum, the financial qualifications previously adopted for Big LEO and domestic fixed-satellite systems should

¹⁰ *Id.* at ¶ 28.

¹¹ *Id.* at ¶ 21.

¹² *Id.* at ¶ 24.

be imposed upon 2 GHz MSS operators.¹³ The Commission should not, however, adopt the proposed alternative requirement that 2 GHz MSS operators demonstrate financing adequate only to construct partial systems, in reliance upon the projected ability of revenues from those incomplete systems to fund the balance of the systems' construction. As the Commission suggests, an operator that cannot complete its construction except by using revenues from a partially-completed system presents an unacceptable risk that it never will provide an adequate service to customers.¹⁴

D. A Negotiated Entry Option Will Best Serve the Interests Of MSS Operators And Incumbent Users of Spectrum

The Commission's decision to require 2 GHz MSS operators to pay the cost of relocating terrestrial 2 GHz incumbents limits the range of efficient service link licensing options available to the Commission in this proceeding.¹⁵ Specifically, in order to prevent premature disruption of incumbent terrestrial licensees and minimize relocation costs, 2 GHz MSS operators and terrestrial incumbents should have maximum flexibility in the scope and timing of relocation of BAS and FS operators. The Commission's proposed flexible and traditional band plan options, each of which would assign 2 GHz MSS systems specific bands within the available 2 GHz spectrum, will drastically reduce the flexibility of participants in relocation negotiations. The impact of these approaches will be especially severe for early 2 GHz MSS entrants, and may in fact pose a barrier to early entry into the 2 GHz MSS market.

In order to avoid these difficulties, the Commission should adopt a variant of its proposed, negotiated entry option for service link licensing. Under the approach proposed

¹³ *Id.* at ¶ 25.

¹⁴ *Id.* at n.73 and ¶ 54.

¹⁵ *Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for Use by the Mobile Satellite Service*, 12 FCC Rcd 7388 (1997)("2 GHz Allocation Order").

by the Commission, qualified 2 GHz MSS systems would receive conditional authorizations to provide service in the 2 GHz band, and the first MSS systems that commence service will operate flexibly in the relevant segment of the band subject to coordination and negotiation with later MSS arrivals.¹⁶ ICO urges the Commission to combine the negotiated entry approach with a phased process for both spectrum use and relocation of 2 GHz terrestrial incumbents. The Commission's rules should: (1) define a coordination process and dispute resolution mechanism under which later entrants are granted access to 2 GHz spectrum; (2) guarantee all eligible systems access to a minimum amount of 2 GHz spectrum if a coordination agreement is not reached promptly; and (3) ensure that a mechanism is found under which relocation costs, if imposed upon MSS operators, will not chill the intersystem coordination rights of entrants.

The first two goals are best served by a process in which any conditionally authorized system that has applied for ITU frequency coordination and is within one year of launch of its first satellite(s) under an unconditional launch contract is entitled to negotiate with operational MSS systems for use of spectrum currently utilized by those MSS systems, and with incumbent terrestrial users of 2 GHz spectrum for relocation. To the extent that the operational MSS systems have cleared spectrum in excess of their requirements for the next 12 month period, the new entrant may use all or part of this unused spectrum, depending on the new entrant's spectrum requirements. If the new entrant's projected spectrum requirements cannot be coordinated within the unoccupied but cleared spectrum, the new entrant may undertake the necessary relocation of incumbent systems in other parts of the 2 GHz MSS bands. Under this process, terrestrial incumbents are not required to relocate -- and the costs of relocation will not be incurred -- until required by an MSS

¹⁶ *NPRM* at ¶¶ 40-43.

system that has met the conditions for access to spectrum as defined in its conditional authorization.¹⁷

The third objective is best served by a mechanism that encourages 2 GHz MSS operators to develop and employ technology that maximizes sharing of spectrum with terrestrial incumbents. In this connection, ICO reiterates its request, made at greater length in ICO's pending Petition for Further Limited Reconsideration in Docket 95-18, that all new BAS licenses and BAS and FS renewals issued after the release of the March 1997 *First Report and Order* and *Further Notice of Proposed Rulemaking* be conditioned to require the relevant BAS and FS licensees to operate on a secondary basis and pay their own relocation expenses.¹⁸ By granting and renewing these licenses on a secondary basis without reimbursement rights, the Commission may very well eliminate the need for later arrivals to pay relocation costs at all.¹⁹

The following describes, in more detail, ICO's proposed coordination process, dispute resolution mechanism, default plan and relocation cost sharing mechanism.

1. All Qualified Entrants Should Be Guaranteed Access To A Minimum Amount Of Spectrum

ICO recognizes the legitimate interest of qualified later MSS entrants in obtaining access to 2 GHz spectrum on a timely basis, regardless of the pace at which domestic

¹⁷ As ICO discusses below, those conditions should include compliance with the implementation milestones proposed by the Commission.

¹⁸ Petition for Further Limited Reconsideration of ICO Services Limited, *Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for Use by the Mobile-Satellite Service*, ET Docket No. 95-18, at 3 (Jan. 19, 1999); see also Emergency Petition for Further Limited Reconsideration of BT North America, Inc., Telecommunicaciones de Mexico, TRW Inc., Hughes Space and Communications International and ICO Services Limited, *Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for Use by the Mobile-Satellite Service*, Docket No. ET 95-18, at 6-8 (Dec. 23, 1998).

¹⁹ This request is made without prejudice to ICO's continuing position that the costs of transitioning terrestrial wireless incumbents out of global MSS spectrum should be borne by those incumbents under traditional spectrum management practices, and that those costs should not be imposed on global MSS system entrants.

intersystem coordination and dispute resolution proceed. One method of achieving this goal is to guarantee the newly entering licensee access to an amount of spectrum equal to its projected requirement for its initial 12 months of operation or a minimum of 2.5 MHz of spectrum in each direction of the 2 GHz MSS bands - whichever is smaller.²⁰ In the event that the new entrant system is unable to gain access to this guaranteed amount of spectrum, the existing operational MSS systems would be required to reduce their utilization of the band as needed to ensure the new entrant's access to the required spectrum.

2. The Commission Should Adopt A Detailed Dispute Resolution Mechanism

ICO urges the Commission to adopt a coordination dispute resolution mechanism modeled on the revised procedures set forth in the *Report and Order* and *Second Report and Order* in the *Formal Complaint Procedures* docket initiated after the enactment of the Telecommunications Act of 1996.²¹ Both of those orders reflect the Commission's goal of reducing impediments to robust competition by ensuring the prompt resolution of certain categories of complaints against telecommunications carriers. The *Second Report and Order* is especially relevant to the mechanism proposed here, because one of the stated goals of the accelerated schedule adopted there is to prevent any injury to competition arising from the delayed resolution of disputes involving alleged conduct that impedes new entry into telecommunications markets.²² Use of a similar dispute resolution mechanism in coordinating spectrum use among 2 GHz MSS licensees, under which a new entrant could enlist the Commission's aid 120 days after commencing good-faith negotiations with an

²⁰ Depending on the technology employed, it may be possible for two or more systems to share spectrum.

²¹ *Implementation of the Telecommunications Act of 1996; Amendment of Rules Governing Procedures to Be Followed When Formal Complaints are Filed Against Common Carriers*, 12 FCC Rcd 22497 (1997) ("Report and Order"), 13 FCC Rcd 17018 (July 14, 1998) ("Second Report and Order").

²² *Second Report and Order* at 17021.

early entrant 2 GHz MSS system, should alleviate any concerns that later-entering MSS systems will be delayed by initial MSS entrants.

E. Other Licensing Options Are Inefficient And Exacerbate The Cost And Disruption of Relocation

1. A Priori Band Plans Are Costly And Inefficient

Of the four processing options proposed in the NPRM, two take *a priori* approaches to spectrum assignment that are inefficient and should not be adopted. Specifically, Option 1 (the flexible band arrangement) and Option 3 (the traditional band arrangement) each propose assignment of specific spectrum bands to particular 2 GHz MSS systems.²³

These two proposals exhibit the disadvantages of all *a priori* spectrum assignment plans. Notably, these plans will delay competition by requiring an industry consensus that cannot be achieved in the near term.²⁴ As ICO has stated repeatedly, it expects to launch commercial MSS service in third quarter 2000 and the launch of its first satellite is now imminent. No other 2 GHz MSS provider, however, has any prospect of offering commercial service in the near term; accordingly, most 2 GHz MSS systems have little or no incentive to reach consensus expeditiously on a 2 GHz band plan. Moreover, based upon the nascent state of a number of 2 GHz MSS systems described by the various 2 GHz applicants it is far from certain that these applicants have sufficiently advanced system design to negotiate a band plan even if they were willing to do so.

Even if an industry consensus on traditional or flexible band plans could be achieved within a reasonable time, these plans would force MSS systems into premature inter-system coordination, thereby imposing needless cost and disruption and forcing the operators of as-yet-unbuilt satellite systems to design those systems to conform to an FCC band plan rather than market demands. As a result, the Commission and the industry eventually would be

²³ NPRM at ¶¶ 44-45.

²⁴ To ICO's knowledge, all formal band plans so far adopted by the Commission have required extensive, lengthy negotiation among affected parties.

forced to deal with band plan and system modification requests as licensees altered their designs to conform to emerging market realities. These difficulties, combined with the inevitable under-assignment or over-assignment of the available spectrum to particular systems and loss of flexibility in the transitional relocation of terrestrial incumbents,²⁵ require rejection of the Commission's two *a priori* processing alternatives.

Under ICO's proposed variant of the Commission's negotiated entry option, the problems posed by *a priori* band plans do not arise. Under ICO's plan, no industry consensus will be required before 2 GHz MSS systems that are prepared to offer service can commence operation. Similarly, instead of prematurely coordinating their systems based upon preliminary technical designs, later entrants will commence inter-system coordination only when they have met substantial implementation milestones in the construction of well-defined systems. Finally, under ICO's plan, relocation of 2 GHz incumbents will not occur prematurely and later entrants will be able to modify their system designs without causing disruption to other 2 GHz MSS systems.²⁶

2. Auctions Of 2 GHz MSS Spectrum Are Entirely Inappropriate

As all of the commenters in the *2 GHz Allocation NPRM* pointed out, use of competitive bidding to assign 2 GHz spectrum for use by global MSS systems would violate the Communications Act and have disastrously anti-competitive consequences.²⁷

Most fundamentally, the Commission's authority to award licenses through competitive bidding is limited to cases in which mutually exclusive applications have been

²⁵ See p. 7, *supra*.

²⁶ Although ICO's plan would minimize the disruption caused by system modifications, the Commission, nonetheless, should not permit later entrant systems to make major modifications without satisfying the FCC's review and approval requirements.

²⁷ See *2 GHz Allocation Order*, 12 FCC Rcd at 7410-11; see also *Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for Use by the Mobile-Satellite Service*, Notice of Proposed Rulemaking, 10 FCC Rcd 3230, 3233 (1995).

accepted for filing.²⁸ In this proceeding, the Commission already has stated that it will make every effort to fulfill its statutory obligation to avoid a finding of mutual exclusivity,²⁹ and that obligation certainly will be met if the Commission permits flexible operation by eligible systems that have met reasonable implementation milestones. Accordingly, a decision to assign 2 GHz MSS spectrum by competitive bidding cannot be squared with the plain requirements of the Communications Act.

Beyond the legal question that competitive bidding presents, use of auctions to allocate 2 GHz MSS spectrum -- on either a national or transnational basis -- would have a drastic effect on the prospects for new competition in the MSS marketplace. Notably, unilateral adoption of an auction scheme by the Commission would have two anti-competitive consequences. First, as a recently-released FCC regulatory guidebook points out, auctions can chill development of global systems by creating a precedent for "sequential auctions in countries where . . . operator[s] would like to provide service," raising exponentially the potential cost of entering the global MSS market and causing "uncertainty to the satellite operator as to the final costs of the system."³⁰ Second, as the Commission points out, regional operators reasonably would bid more for U.S. spectrum than global systems that must take into account the potential cost of licensing in many other

²⁸ 47 U.S.C. § 309(j)(1)-(2).

²⁹ *NPRM* at ¶¶ 1 and 6; 47 U.S.C. § 309(j)(6)(E).

³⁰ Federal Communications Commission, *Connecting the Globe: A Regulator's Guide to Building a Global Information Community*, § 8 <<http://www.fcc.gov/connectglobe/sec8.html>> ("*FCC Regulator's Guide*"). The problem of global effects from domestic regulatory choices is not confined to competitive bidding. As ICO has pointed out on a number of occasions, requiring 2 GHz MSS operators to pay the cost of relocating terrestrial incumbents also may prompt foreign administrations to take similar action, thereby raising costs, causing uncertainty and creating a global barrier to entry.

countries.³¹ Competitive bidding in the U.S., therefore, would erect a substantial barrier to new entry into the global MSS marketplace.³²

Nor would the Commission's alternative suggestion, of an international 2 GHz MSS auction under ITU auspices, serve the public interest.³³ Even on the highly improbable assumption that such an international auction could be devised and implemented within a reasonable time, such a process still would impose a significant and needless cost burden on global MSS systems.³⁴

Finally, any auction in the 2 GHz band would result in the inefficient assignment of MSS spectrum as unbuilt -- and possibly under-financed -- satellite systems were forced to bid prematurely on spectrum they may never use to serve customers. Similarly, an auction could cause premature dislocation of terrestrial incumbents and unnecessary relocation expenditures by MSS operators.

For all of these reasons, if developments in the course of this processing round suggest a possible finding of mutual exclusivity, the Commission should respond in accordance with its responsibility under the Act to avoid mutual exclusivity through "engineering solutions, negotiation, threshold qualifications, service regulations and other means . . ."³⁵ Specifically, the Commission should impose strict milestone

³¹ *NPRM* at ¶ 9.

³² The anti-competitive impact of auctions would be exacerbated by the fact that the Big LEO systems with which 2 GHz entrants will compete were not burdened with the cost of purchasing spectrum.

³³ *NPRM* at ¶ 10.

³⁴ As the recent FCC regulatory guidebook points out, "a coordinated multinational auction would likely involve a substantial investment of time and resources by multiple administrations, raising issues of national sovereignty and access that could delay service." *FCC Regulator's Guide* § 8.

³⁵ 47 U.S.C. § 309(j)(6)(E).

requirements - and financial requirements, if necessary - rather than cripple this emerging industry through needless auctions that will have globally negative consequences.

II. THE COMMISSION SHOULD ADOPT SERVICE RULES THAT PROMOTE NEW ENTRY AND EFFICIENT USE OF SPECTRUM

ICO agrees that the relevant Big LEO rules generally should be applied to MSS service provided at 2 GHz. The technical and operational similarities between the existing 2 GHz applicants' systems and Big LEO systems, and the experience gained by the Commission and the industry in developing and implementing the Big LEO rules, make the latter an appropriate model for MSS services at 2 GHz. In fact, the application of substantially different rules to systems that will operate in competition with each other may produce anti-competitive results as well as needless confusion. Accordingly, ICO agrees that relevant Big LEO rules, including: (1) the allowance of a single system license;³⁶ (2) the requirement that applicants provide a complete technical description of their systems;³⁷ (3) a requirement of continuous U.S. service;³⁸ (4) automatic licensing of replacement satellites;³⁹ and (5) coverage of in-orbit spares by the space segment license,⁴⁰ should be applied to MSS operators at 2 GHz.

Not all Big LEO rules, however, are appropriate for 2 GHz MSS operators. Notably, as discussed at greater length below, anti-trafficking requirements⁴¹ and prohibitions against special concessions⁴² may be unnecessary in the present environment.

³⁶ 47 C.F.R. § 25.143(a).

³⁷ *Id.* at § 25.143(b).

³⁸ *Id.* at § 25.143(b)(2)(iii).

³⁹ *Id.* at § 25.143(c).

⁴⁰ *Id.* at § 25.143(d).

⁴¹ *Id.* at § 25.143(g).

⁴² *Id.* at § 15.143(h).

Similarly, the Commission already has proposed that certain Big LEO requirements, including the financial qualification rules⁴³ and the requirement that all systems be NGSO systems,⁴⁴ will not be extended to MSS operators at 2 GHz. Accordingly, these Big LEO rules should not be incorporated into the service rules for 2 GHz MSS operators.

A. Regulatory Classification

As the NPRM correctly points out, there is no reason to require the space segment of 2 GHz MSS to be offered indifferently to all users on a common-carrier basis.⁴⁵ Under the *NARUC I* analysis on which the Commission relies, there is no basis for compelling 2 GHz MSS space segment services to be offered to the public indifferently, and nothing in the nature of the service suggests that it will, in fact, be offered to the public indifferently.⁴⁶ Accordingly, the Commission should not burden 2 GHz MSS operators with needless regulatory costs that will increase the cost of service for customers and place 2 GHz operators at a competitive disadvantage *vis-à-vis* Big LEO competitors.

Also, burdening 2 GHz MSS operators -- including ICO -- with common carrier obligations not applied to Big LEO systems would violate the Commission's announced intention not to impose obligations on foreign-authorized satellite systems that are not

⁴³ *Id.* at § 25.143(b)(3).

⁴⁴ *Id.* at § 25.143(b)(2)(i).

⁴⁵ *NPRM* at ¶ 75.

⁴⁶ *Id.* at ¶ 74. ICO, in particular, will not sell space segment services directly to the public. Instead, all services to end users will be sold and supported by ICO's service partners in the United States and other countries in which ICO's service is offered. Accordingly, quite apart from the question of its appropriate classification under *NARUC I*, ICO is not a "telecommunications carrier" as defined in the Communications Act and therefore may not be treated as a common carrier. 47 U.S.C. 153(49)-(51)(defining a telecommunications carrier as "any provider of telecommunications services . . ." and defining telecommunications service as "the offering of telecommunications for a fee directly to the public . . .").

imposed on domestic systems.⁴⁷ Accordingly, even if a rationale could be found for regulating U.S. 2 GHz MSS space segment operators as common carriers, that rationale could not properly be extended to justify common carrier regulation of ICO in the absence of similar requirements for U.S. Big LEO systems.

B. License Terms

ICO generally agrees with the Commission's proposals concerning system licenses and license terms, including the proposal that the FCC should grant blanket launch and operation authorizations for systems of technically identical NGSO satellites using 2 GHz spectrum.⁴⁸ ICO also agrees that GSO satellites generally will require individual licenses, and that replacement satellites launched during the initial license term -- for both NGSO and GSO systems -- must be technically identical to those satellites authorized in the original grant, with any non-conforming satellites requiring approval as license modifications.⁴⁹

ICO does not agree, however, that 2 GHz MSS licenses should have a term of 10 years. License terms should be set at 12 years from commencement of satellite operations, to reflect more accurately the useful life of 2 GHz MSS satellites. Such an adjustment is especially important if 2 GHz MSS operators are to attract investment in light of the Commission's proposal not to grant those operators a license renewal expectancy.⁵⁰

⁴⁷ See *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*, 12 FCC Rcd 24094, 24100 (Nov. 26, 1997) ("*DISCO II Order*"). The Commission's *DISCO II Order* implements the market-opening commitments made by the United States Government as a member of the World Trade Organization ("WTO").

⁴⁸ *NPRM* at ¶ 79.

⁴⁹ *Id.*

⁵⁰ *NPRM* at ¶¶ 83-90. As ICO notes at pp. 23-24, *infra*, the Commission should grant a renewal expectancy for licenses awarded in this processing round, and should combine that renewal expectancy with a 12-year license term as a means of encouraging investment in 2 GHz MSS systems and services. See, e.g., *Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service ("WCS")*, 12 FCC Rcd 10785, 10840 (1997)(stating that a "relatively long license term, combined with a renewal

C. Implementation Milestones

ICO strongly agrees with the Commission's proposal to adopt a schedule of implementation milestones for 2 GHz MSS systems. As the Commission correctly points out, in the absence of financial qualification rules, milestones are especially important as a means of preventing spectrum warehousing by systems that do not proceed with reasonable speed to operational status.⁵¹

Milestones also will reinforce the effect of ICO's proposed coordination and dispute resolution rules.⁵² For example, under the Commission's proposed milestones, an NGSO MSS system must begin construction of its first two satellites within one year after authorization; must begin construction of its remaining satellites within three years after authorization; and must launch two satellites within four years of authorization. Under ICO's proposed coordination procedure, the right of the NGSO system to begin intersystem coordination with operating licensees normally will coincide with the second of these milestone dates. Accordingly, a system that fails to meet its first or second milestone date, under the Commission's proposed rule, also will forfeit its right to commence intersystem coordination under the procedure proposed by ICO.

ICO also agrees with the Commission's observation that implementation milestones for U.S. licensees and LOI filers should commence to run at the same time. In this connection, the NPRM describes a hypothetical case in which milestone deadlines begin to run for LOI filers as soon as spectrum is reserved in the Report and Order in this proceeding, but do not begin to run for U.S. licensees until those U.S. systems have

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expectancy, will help to provide a stable regulatory environment that will be attractive to investors and, thereby, encourage development of this new frequency band").

⁵¹ *NPRM* at ¶ 83.

⁵² *See* Attachment A for a combined timeline of the FCC's implementation milestones and ICO's proposed milestones for commencement of inter-system coordination and FCC dispute resolution.

obtained approval of license modification applications intended to conform those applications to the service rules. ICO agrees that this result would be inequitable and agrees that the Commission should avoid this result, if necessary, by issuing a separate Public Notice or Declaratory Ruling for LOI filers.⁵³ In practice, however, it is likely that LOI filers will be required to modify their LOIs -- just as domestic licensees will have to modify their license applications -- to conform those filings to the service rules adopted in this proceeding. Accordingly, the scenario envisioned by the Commission should not arise.

ICO also urges the Commission to require that milestone compliance information provided by 2 GHz MSS systems should be available for public review, just as financial qualification demonstrations are part of the public record under the Big LEO rules.

Finally, ICO urges that unused spectrum, as determined by an MSS licensee's failure to meet milestones, should not be subject to a second processing round. Instead, after all milestone dates established in this processing round have passed, spectrum not taken up by systems that have failed to meet implementation milestones should be available to participants in this processing round that have met those milestones.⁵⁴

D. Reporting Requirements

The ICO satellite network is authorized by the U.K. Accordingly, under the WTO commitments of the United States and the Commission's *DISCO II Order*, the FCC may not subject ICO to duplicative licensing requirements. According to this principle, ICO should not be subject to reporting requirements that duplicate those to which ICO is subject in the U.K.⁵⁵ The FCC of course may apply non-duplicative reporting requirements relating to the

⁵³ *NPRM* at ¶ 88.

⁵⁴ *Id.* at ¶ 29.

⁵⁵ *DISCO II Order* at 24100; *see also* Petition for Clarification and Reconsideration of ICO Global Communications, in *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*, IB Docket No. 96-111, at 2-4 (Jan. 5, 1998).

2 GHz band, such as the proposed rule that systems file affidavits certifying whether milestone requirements are met following the appropriate milestone deadlines.⁵⁶

E. 911 Compliance

ICO agrees that 2 GHz operators should comply with the distress and safety rules applicable to Big LEO systems.⁵⁷ First-generation MSS systems should not, however, be subject to E-911 service requirements. Those requirements were not imposed on Big LEO systems with which 2 GHz operators will compete, and imposing those requirements on 2 GHz operators now (when system design for ICO's service, in particular, already is completed and launch is imminent) would require costly system re-design and place 2 GHz operators at a disadvantage in competing with Big LEO incumbents.

F. Unserved Communities

ICO agrees with the Commission's assertion that satellites are an excellent technology for the delivery of basic and advanced telecommunications services to unserved, rural, insular and economically isolated areas, such as Native American communities and reservations.⁵⁸ MSS service providers are uniquely qualified to bring affordable service to Indian reservations and other remote areas with low telephone service penetration rates. In particular, MSS can bring cost effective service to areas where the density of customers and telecommunications traffic per square mile are low, often resulting in economically prohibitive costs of infrastructure for terrestrial telecommunications service providers.⁵⁹ In such areas, MSS systems can serve as extensions of the terrestrial network, permitting rapid deployment of services at reasonable cost.

⁵⁶ *NPRM* at ¶ 92.

⁵⁷ *Id.* at ¶ 93.

⁵⁸ *Id.* at ¶ 95.

⁵⁹ The coverage requirements for MSS space segment, coupled with the proposed common carrier obligations of CMRS providers, will ensure that MSS service is available to all such areas.

To ensure that MSS service is available at affordable rates, however, the Commission must minimize the regulatory costs imposed upon MSS operators and their service providers. The residents of many of the unserved communities, and in particular the unserved Indian communities, have very low incomes. The mere availability of telephone service will not address the low telephone subscribership in unserved areas if the subscribers in those areas cannot pay their monthly telephone bills. Accordingly, the Commission should reconsider any policy or regulatory requirement that may have a significant, unnecessary impact on MSS service cost structures. The Commission's imposition of terrestrial incumbents' relocation costs upon MSS operators, in particular, will have a severe negative impact upon MSS operators' ability to provide lower cost, affordable services for lower income subscribers. For this reason, ICO repeats its objection to the Commission's imposition of relocation costs upon MSS operators, and urges, in the event the Commission retains that requirement, that the Commission also adopt ICO's proposed negotiated, across-the-band authorization approach so that those costs will not be incurred prematurely or needlessly.⁶⁰

ICO also urges the Commission not to make service to unserved communities a criterion for expansion band coordination or extension of implementation milestone dates.⁶¹ Addition of this criterion will encourage system operators to use empty commitments to unserved communities as an excuse for failure to meet construction deadlines. Such a criterion also risks penalizing space segment operators for decisions of CMRS operators over which those space segment operators have no control. As a practical matter, the decisions to serve any given market segment will be made, in ICO's case, by its service

⁶⁰ Imposition of relocation costs will have a much greater per-call cost impact on MSS customers - including residents of unserved communities - than PCS customers, because MSS operators must recover those costs from a significantly smaller number of calls than PCS operators will carry.

⁶¹ *Id.* at ¶ 95.

providers, *i.e.*, ICO will provide the space segment capacity, but its service provider will determine the distribution channels.

G. Anti-Trafficking

ICO agrees with the Commission's concern to prevent unjust enrichment of those who may obtain 2 GHz MSS spectrum only to warehouse it for purely speculative purposes.⁶² Under the present conditions of volatility in global telecommunications markets, however, it is not necessarily appropriate to prohibit all sales of licenses by operators that have not "made concrete progress toward system implementation" - particularly where, as here, most of the systems in question are global in scope.⁶³ Instead, the Commission should adopt ICO's proposed variant of the negotiated entry option, which ensures -- in combination with the proposed implementation milestone requirements -- that 2 GHz spectrum will not be warehoused by systems that are not prepared to use it.

H. Orbital Debris Mitigation

ICO agrees that the Commission should consider adopting rules to minimize the proliferation of orbital debris.⁶⁴ As the NPRM points out, however, "debris mitigation practices are relevant to communications satellite systems operating at frequencies other than 2 GHz."⁶⁵ Accordingly, the Commission should not attempt to resolve these issues as part of this proceeding, but should initiate a separate rulemaking devoted to the control of orbital debris caused by -- and affecting -- all satellite systems.

⁶² *Id.* at ¶ 96.

⁶³ *Id.*

⁶⁴ *Id.* at ¶¶ 97-102.

⁶⁵ *Id.* at ¶ 102.

I. Exclusive Arrangements

ICO agrees that MSS providers, like other satellite services, should be prohibited from entering into arrangements under which a particular MSS operator controls the only permissible facility through which any MSS service may be obtained between the United States and a foreign country.⁶⁶ The market-opening commitments made by the United States in the WTO Basic Telecom Agreement and the requirements imposed by the Commission in the *DISCO II Order* already include this prohibition.⁶⁷ Accordingly, there is no need for the Commission to adopt, in this proceeding, a counterpart to the prohibition of exclusive arrangements in the Big LEO rules.

J. Mobile Earth Stations

ICO generally agrees with the Commission's proposals for licensing of mobile earth stations.⁶⁸ In response to the Commission's inquiry, however, it is not necessary that 2 GHz MSS terminals be capable of operation across all portions of the 2 GHz MSS band.⁶⁹ Mobile earth stations that can be tuned across approximately 70 percent of the relevant band should permit sufficient flexibility in operation to support any of the proposed spectrum assignment options, including ICO's proposed variant of the Commission's negotiated entry approach. The Commission also should require that mobile terminals in the 2 GHz MSS service must use unpaired operation (*i.e.*, should have no fixed transmit/receive duplex spacing). Terminals with paired operation lack the flexibility to facilitate frequency coordination with both MSS systems and terrestrial radio systems.

Finally, there is no need for the Commission to develop new technical requirements, for out-of-band emissions or other specifications, beyond those already proposed or

⁶⁶ *Id.* at ¶ 103.

⁶⁷ *DISCO II Order*, 12 FCC Rcd at 24166.

⁶⁸ *NPRM* at ¶¶ 104-107.

⁶⁹ *Id.* at ¶ 107.

applicable. Notably, mobile earth stations should simply comply with the out of band emission limitations adopted by the ITU-R.⁷⁰

K. International Coordination

The ICO variant of the negotiated entry option will better facilitate international coordination than the other, proposed approaches.⁷¹ Indeed, the ICO proposal is similar to the L-band MSS multilateral coordination approach that the U.S. already has accepted. Within this approach, the spectrum needs of qualified systems are reviewed periodically and adjustments made to frequency assignments based on actual utilization during the previous 12 month period and projections for the next 12 month period. In this way, the available MSS spectrum will be utilized in a flexible and efficient manner. Qualified new entrants are accommodated by inclusion of their initial projected requirements into the periodic reviews.

L. Renewal Expectancy

ICO strongly disagrees with the Commission's view that 2 GHz MSS space segment licenses should not be granted a renewal expectancy.⁷² The rapid development and deployment of new technologies, such as 2 GHz MSS service, depend heavily on the willingness of investors to take the risk of backing those technologies. As the Commission has recognized in the past, a "relatively long license term, combined with a renewal expectancy, will help to provide a stable regulatory environment that will be attractive to investors and . . . encourage development . . ." of new technologies.⁷³

⁷⁰ See ITU-R Rec. M. 1343.

⁷¹ *NPRM* at ¶ 43.

⁷² *Id.* at ¶ 82.

⁷³ *Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service*, 12 FCC Rcd 10785, 10840 (1997); see also *Amendment of Parts 21 and 74 of the Commission's Rules With Regard to Filing Procedures in the Multipoint Distribution Service and in the Instruction Television Fixed Service and Implementation of Section 309(j) of the Communications Act -- Competitive Bidding*, 10 FCC Rcd 13821,

The Commission should be especially attentive to the effect of its rules on investment in 2 GHz MSS services. Prospective 2 GHz MSS operators must design, build and launch their systems, obtain licenses and operating rights in dozens of countries and bear the cost of relocating terrestrial incumbents in the United States. Accordingly, the Commission should encourage investment in 2 GHz MSS systems by adopting a 12-year term for 2 GHz MSS space segment licenses and granting a renewal expectancy for those licenses.

(Footnote continued from previous page)

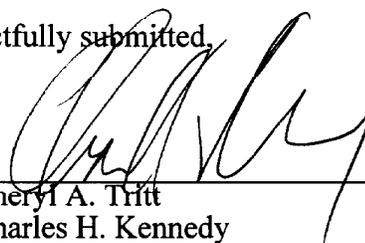
13822 at ¶ 8 (1995); *Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use*, 10 FCC Rcd 4769, 4825 (1995); *Amendment of Parts 2 and 15 of the Commission's Rules to Permit Use of Radio Frequencies Above 40 GHz for New Radio Applications*, 9 FCC Rcd 7078, 7089 (1994); *Amendment of the Commission's Rules to Establish New Personal Communications Services*, 8 FCC Rcd 7700, 7753 (1993); *Harriscope of Chicago, Inc.*, 5 FCC Rcd 6383, 6384 (1990).

CONCLUSION

This proceeding is the Commission's most significant opportunity to shape the future of the emerging MSS industry. In order to bring new choices to consumers with a minimum of delay, the Commission should adopt a spectrum assignment approach and service rules that facilitate rapid entry by qualified systems, minimize disruption and cost to operational MSS systems and terrestrial incumbents, and avoid warehousing of spectrum by systems that are not preparing to serve consumers.

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June 24, 1999

ATTACHMENT A

FCC PROPOSED IMPLEMENTATION MILESTONES COMBINED WITH ICO PROPOSED INTERSYSTEM COORDINATION AND DISPUTE RESOLUTION PROCEDURES

NGSO System

Date N: System conditionally authorized to operate at 2 GHz

N plus one year: System must begin construction of first two satellites (NPRM ¶ 85)

N plus three years: System must begin construction of remaining system satellites (NPRM ¶ 85)

One year before launch of first satellite(s): System may begin domestic intersystem coordination with operating licensee(s) (ICO Proposal)

120 days after commencement of intersystem coordination: System may invoke FCC dispute resolution procedure if necessary (ICO Proposal)

N plus four years: System must complete construction and launch of two satellites (NPRM ¶ 86)

N plus six years: Entire system must be launched and operational (NPRM ¶ 86)

GSO System

Date N: System conditionally authorized to operate at 2 GHz

N plus one year: System must begin construction of first satellite (NPRM ¶ 85)

N plus three years: System must begin construction of remaining satellites (NPRM ¶ 85)

One year before launch of first satellite: System may begin domestic intersystem coordination with operating licensee(s) (ICO Proposal)

120 days after commencement of intersystem coordination: System may invoke FCC dispute resolution procedure if necessary (ICO Proposal)

N plus five years: System must complete construction and launch of at least one satellite into each assigned orbital location (NPRM ¶ 86)

N plus six years: Entire system must be launched and operational (NPRM ¶ 86)

CERTIFICATE OF SERVICE

I, James S. Bucholz, do hereby certify that copies of the foregoing **COMMENTS OF ICO SERVICES LIMITED** were hand delivered, on this 24th day of June, 1999, to the following:

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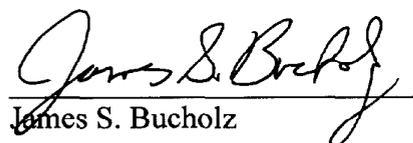
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