Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	
Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless System	ET Docket No. 00-258
The Establishment of Policies and Services Rules for the Mobile-Satellite Service in the 2 GHz Band	IB Docket No. 99-81
Amendment of the U.S. Table of Frequency Allocations to Designate the 2500-2520/2670-2690 MHz Frequency Bands for the Mobile-Satellite Service	RM-9911
Petition for Rule Making of the Wireless Information Networks Forum Concerning the Unlicensed Personal Communication Service	RM-9498
Petition for Rule Making of UTStarcom, Inc., Concerning the Unlicensed Personal Communications Service	RM-10024

ICO GLOBAL COMMUNICATIONS COMMENTS ON THIRD NOTICE OF PROPOSED RULEMAKING

ICO Global Communications (Holdings) Limited hereby comments on the Third Notice of Proposed Rulemaking,[1] which seeks comment on potential uses for a variety of different

[1] Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless System, *Third Report and Order, Third Notice of Proposed Rulemaking and Second Memorandum Opinion and Order*, FCC 03-16 (rel. Feb. 10, 2003), 68 Fed. Reg. 11986 (Mar. 13, 2003) (the "*Third NPRM*" or "*Third Report and Order,*" depending on context).

bands that are still under consideration to be designated for "Advanced Wireless Services" ("AWS"). Specifically, the Commission seeks comment on what to do with the 1910-1930 MHz, 1990-2000 MHz, 2020-2025 MHz, and 2155-2180 MHz bands. Unfortunately, the Commission's consideration of this question is compromised by the fact that the spectrum at 1990-2000 MHz, 2020-2025 MHz, and 2165-2180 MHz may not be available after the Commission reconsiders its decision to reallocate this spectrum away from the Mobile-Satellite Service.

In a separate document filed today, ICO is asking the Commission to reconsider that reallocation decision on various grounds. In brief, reconsideration is warranted because the Commission failed to explain why the 2 GHz MSS allocation should be reduced so soon after licensing, or how the many public interest benefits unique to the mobile-satellite service can be provided in light of this action. Reconsideration also is warranted because the particular frequencies selected by the Commission for reallocation will severely disrupt the globally harmonized MSS allocation at 2 GHz without any corresponding benefit for fixed and mobile users, and will undercut the Commission's ability to secure globally harmonized allocations in the future. Those considerations support the conclusion that the Commission should not reduce the amount of spectrum allocated to MSS at all – or at least should not reallocate the globally harmonized uplink spectrum at 1990-2000 MHz. In addition, the reallocation of MSS spectrum necessarily depended upon the International Bureau's conclusion (adopted the same day, coincidentally) that certain MSS licensees had failed to satisfy construction milestones. However, the relevant precedent compels the conclusion that two of those licensees satisfied the milestones by entering into binding contracts to purchase channel capacity on ICO satellites. If

those two milestone orders were brought into conformity with existing precedent, much of the spectrum under consideration in the *Third NPRM* would cease to be available.

Nonetheless, if the International Bureau's erroneous milestone decisions should be affirmed, ICO – with eight satellites fully constructed (including one already in orbit) and another four satellites in the final stages of construction – will find itself in a spectrum environment that is radically different from the one in which it was authorized to operate less than two years ago. ICO therefore finds it necessary to comment on the *Third NPRM,* if only briefly and somewhat hypothetically, as a prospective member of a very new spectrum neighborhood. In general, ICO urges the Commission to make sure that any service inserted into the bands adjacent to MSS be able to co-exist with MSS on terms and conditions no less favorable to the MSS than those adopted in the recent *MSS Flexibility Order*.[2] Where possible, the Commission should use this band planning exercise to reduce design constraints on the various systems and minimize interference concerns all around. Below, ICO addresses each of the bands that would be adjacent to the MSS uplink and downlink spectrum under the Commission's reallocation plan.

1990-2000 MHz. This spectrum, which is part of the globally harmonized MSS uplink band, is immediately adjacent to the existing broadband PCS base station transmit band at 1930-1990 MHz. Consideration of this band is to some extent influenced by consideration of the 1910-1920 MHz band, which is adjacent to the paired broadband PCS frequencies at 1850-1910 MHz and which the Commission has also proposed to reallocate. These considerations lead the

[2] Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Bands, *Report and Order and Notice of Proposed Rulemaking,* FCC 03-15 (released Feb. 10, 2003) (the "*MSS Flexibility Order*").

Commission to seek comment on whether the 1990-2000 MHz band should be used for broadband PCS, AWS, or something else.

The suggestion that broadband PCS might be licensed in the 1990-2000 MHz band reveals one of the contradictions in the Commission's case for reallocation. In the *MSS Flexibility Order*, the Commission adopted stringent out-of-band emission standards to ensure that ATC-enabled MSS networks would be able to operate immediately adjacent to broadband PCS without harmful interference.[3] However, the *Third Report and Order* released on the very same day in this proceeding cited the possibility of adjacent-band interference between MSS and PCS as a reason for reallocating the globally harmonized MSS frequencies at 1990-2000 MHz rather than the non-harmonized MSS frequencies at the top of the uplink band.[4] Is there harmful adjacent-band interference or not?

ICO maintains that ATC-enabled MSS networks can operate immediately adjacent to broadband PCS networks without harmful interference, and that the globally uniform 1990-2000 MHz band should therefore remain allocated for MSS. However, if the Commission were to decide otherwise, it would be outrageous to then use that band in such a way as to make the two services immediately adjacent at 2000 MHz instead of at 1990 MHz. If the rules adopted in the *MSS Flexibility Order* are sufficient to permit broadband PCS and MSS-ATC operations in immediately adjacent bands, then there is no reason to select the 1990-2000 MHz band for reallocation. On the other hand, if the rules adopted in the *MSS Flexibility Order* are not sufficient to permit the two services to co-exist in immediately adjacent bands, then any broadband PCS use of at least the 1995-2000 MHz portion of the reallocated band should be out of the question.

[3] *MSS Flexibility Order* ¶ 119.

[4] *Third Report and Order* ¶ 35.

ICO finds it much more difficult to comment on potential AWS use of the 1990-2000 MHz band because the AWS concept lacks either a regulatory definition or a concrete business proposal from which ICO can draw any conclusions about its likely technical characteristics. Without more concrete technical information, it is difficult for ICO to say anything definitive about that option, except perhaps that if AWS goes into the 1990-2000 MHz band it must certainly be defined in such a way as to be able to co-exist with MSS-ATC at least as easily as broadband PCS could. In fact, unless AWS presents a significantly *easier* adjacent-band interference scenario, then an AWS designation would once again call into question the original basis for the decision to reallocate the 1990-2000 MHz band.

Consequently, ICO is tentatively in favor of the "something else" option, at least for the 1995-2000 MHz portion of the band. Since there seems to be a need for more isochronous unlicensed PCS spectrum, ICO tentatively supports the suggestion in paragraph 52 of the *Third NPRM* that the 1915-1920 MHz band be redesignated for isochronous UPCS use. The Commission might then pair the 1910-1915 MHz band with the 1990-1995 MHz band (for broadband PCS or some other use), and treat the 1995-2000 MHz band either as an unpaired band or as an additional UPCS band paired with the 1915-1920 MHz band.

2020-2025 MHz. This band, like the 1990-2000 MHz band, is a former MSS uplink band that will be immediately adjacent to MSS uplink operations after reallocation. However, ICO's interest in this band is fairly attenuated, because ICO's satellites will not transmit above 2015 MHz. This was a design trade-off that ICO was forced to make after the last time the Commission decided to depart from the global MSS allocation at 2 GHz in order to provide some marginal benefit to terrestrial operators.

2165-2180 MHz. These frequencies, torn from the pre-existing MSS downlink allocation, are proposed for AWS operations in either FDD or TDD mode. ICO is concerned that new and significantly more rigorous coordination obligations may be required in order to allow user terminals to transmit in the band below the 2180 – 2200 MHz MSS-ATC receive band. Unless proper coordination and the required protection for out of band emissions are put in place, interference could occur to MSS-ATC terminals. Analysis of this situation suffers from the same difficulties noted above, namely the lack of visibility into what the technical characteristics of AWS are likely to be. However, it should be noted that whatever interference problems might exist are likely to be more severe in case of MSS terminals operating in satellite mode, as the receiver sensitivities are high compared to that of ATC operating mode.

In conclusion, ICO emphasizes that the highest possible use of the 1990-2000 MHz band and at least 10 MHz of the paired downlink spectrum at 2165-2180 MHz would clearly be the use that is also legally the soundest: ATC-enabled MSS networks. That is the use that will bring advanced digital services to rural Americans and those living in other underserved areas, as well as providing important technological diversity and added robustness to our national infrastructure. However, if the Commission persists in walking away from its commitment to rural Americans and the only industry sector that is likely to serve them, the least it can do is take every possible step to prevent any more of the burden of this action from falling on the shoulders of the MSS licensees from whom so much has already been taken away.

Respectfully submitted,

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April 14, 2003