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Mr. Michael Helm
Director General, Telecommunications Policy Branch
Industry Canada
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Re: *Consultation on an Application to Use Mobile Satellite Spectrum to Provide Complementary Terrestrial Mobile Service to Improve Satellite Coverage*, Canada Gazette Part I, Oct. 27, 2001, Notice No. DGTP-009-01 (the "Consultation").

Dear Mr. Helm:

The initial comments in this proceeding make clear that integrated ATC-MSS networks would promote greater spectrum flexibility and greater spectrum efficiency, would speed the deployment of advanced services in rural and remote areas, and would spur technological innovation. Just as importantly, the comments reveal no feasible alternative to the integrated ATC proposal. Dual-band roaming is clearly an inferior solution in terms of both service quality and spectrum efficiency. No commenter has demonstrated that an independent terrestrial mobile service can use MSS frequencies without harmful interference to existing MSS licensees.

The comments do show opposition to the ATC proposal, to be sure. But the opposition comes primarily from incumbent terrestrial mobile operators whose dual-band roaming proposals are inefficient and impractical, whose arguments are internally contradictory, and whose only solid position seems to be that they would rather have MSS spectrum for themselves.

In short, the ATC proposal furthers a host of public policies, from rural service to public safety to spectrum flexibility to technological innovation – and more. It does so without requiring the Department to take spectrum away from any other service. All the Department needs to do is amend its rules to unlock the full potential of the spectrum it has already assigned or plans to assign to MSS licensees. ICO Global Communications (Canada) Inc. and ICO Global Limited[1] (collectively "ICO") urge the Department to resist the self-interested opposition to TMI's application, and give not just TMI but all MSS licensees the authority to integrate ATCs into their networks as soon as possible.

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1 ICO Global Limited is a Kirkland, WA company that controls all assets of the former ICO Global Communications Inc.

## I. Issue (a): It is in the Public Interest to Encourage Flexible Use of MSS Spectrum to Provide Terrestrial Services on an Ancillary or Complementary Basis.

The substance of the comments makes clear that ATCs will greatly improve MSS coverage and service quality, bringing higher quality and more reliable advanced services to the largest possible segment of the Canadian public.[2] ATCs will help realize the promise of MSS by promoting rural service and the deployment of new applications based on seamless connectivity.[3] Only MSS, for example, promises to bring advanced telecommunications to vast rural stretches around North America and around the globe that are not served by any terrestrial wireless provider and likely never will be.[4]

Authorizing ATCs will also promote spectrum flexibility and spectrum efficiency. As the Department knows, flexible-use policies are likely to spur new technological developments and investment.[5] Dr. Gregory L. Rosston, formerly one of the Federal Communications Commission's top economists, underscores the efficiencies that flow from the ATC proposal in an appendix initially prepared for the FCC's ATC rulemaking and provided here for the Department's consideration.[6] In this case, no party disputes Bell Mobility's assertion that MSS networks with integrated ATCs will use spectrum more intensively and more efficiently than is possible with MSS-only networks.[7] Integrated ATC-MSS networks will allow a greater number of customers to be served within the spectrum already allocated to MSS networks.[8]

Additionally, ATCs are critical to the prospects of MSS. Bell Mobility bluntly states that ATC, and the larger market it promises, are "necessary to providing the financial viability which will ensure the longer-term availability of [MSS] for remote users."[9] MSV emphasizes that much of the market that MSS must attract in order to survive and grow – customers who demand coverage in both rural and urban areas – will be much more likely to sign up for integrated ATC-MSS service than they are to sign up for MSS alone.[10] In summary, without ATC authority, MSS will not attract customers who demand urban service as well as rural service; without those customers, MSS may not be able to generate enough revenue to support deployment and maintenance of entire systems.

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2 *See* Bell Mobility Comments at 3.

3 *See* MSV Comments at 7.

4 *See* MSV Comments at 2-3.

5 *See* MSV Comments at 8.

6 *See* Appendix A.

7 *See* Bell Mobility Comments at 3-4.

8 *See* Bell Mobility Comments at 3; MSV Comments at 8.

9 Bell Mobility Comments at 5.

10 *See* MSV Comments at 2-3, 4.

Dual-band roaming—the alternative proposed by a few terrestrial mobile parties—is neither a substitute for ATCs nor a spectrum-efficient approach. The terrestrial commenters essentially argue that ATCs are unnecessary because it is possible for MSS licensees to obtain access to terrestrial networks today by negotiating for access to CMRS networks.[11] In asserting that ATCs and dual-band roaming are equivalent, these commenters show themselves to be less astute than consumers, who clearly know the difference. The comments neglect to mention, for example, that dual-band arrangements require customers to accept two phone numbers, two separate bills, manual switching between satellite and terrestrial operational modes, and larger handsets that include the redundant circuitry needed for operation in two different bands of spectrum. Further, the array of advanced services that are available on one's home network are typically not available when roaming onto another network, especially when the two networks have not been designed with similar technologies and feature sets[12]. There is no assurance that agreements with terrestrial wireless operators can be reached on reasonable terms. And the very thing that makes dual-band service attractive to MSS customers – the ability to communicate on existing terrestrial systems – also gives terrestrial operators both the incentive and the ability to be less than ideally cooperative in providing reliable dual-band service to MSS customers.

Dual-band roaming is a weak substitute for ATC authority, and it might not be sufficient even if it were the best option that technology allowed. Fortunately, however, the superior ATC solution is within the Department's power. Under these circumstances, settling for second-best simply will not work. It would be entirely inconsistent with the Department's spectrum-flexibility policies. And it would fly in the face of spectrum-efficiency policies, because significant chunks of MSS spectrum would continue to lie fallow, with MSS signals unable to provide the complete and reliable coverage that the integrated ATC-MSS proposal could realize.

Altogether, allowing ATCs in the 2 GHz band promises to increase rural service, enhance spectrum flexibility, promote spectrum efficiency, spur technological innovation, and bolster an important telecommunications service at a critical point in its development. The Department should take this opportunity to enable MSS to reach its potential.

## II. Issue (b): Only MSS Carriers Should Be Permitted to Use MSS Spectrum

It is not surprising that some terrestrial mobile operators would seek to use this Consultation to appropriate MSS spectrum for their own uses. It is interesting, nevertheless, to note the extent to which these parties can't seem to decide whether MSS is a dangerous competitor poised for commercial dominance or a dying enterprise that can survive only with the benevolent intervention of terrestrial mobile operators. In the end, after the arguments of these terrestrial mobile operators cancel each other out, only their powerful self-interest remains.

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[11] *See, e.g.*, Rogers Wireless Comments at 7. Telenor Broadband similarly asserts that Globalstar, among others, has shown the "technical feasibility" of dual-band roaming arrangements. Telenor Comments at 7. Suffice it to say that Globalstar's pro-ATC comments before the FCC describe in detail the serious and intractable shortcomings of MSS-CMRS roaming. Comments of Globalstar L.P. at 14-15, FCC IB Docket No. 01-185, FCC ET Docket No. 95-18, filed Oct. 22, 2001.

[12] For example, customers of Canadian PCS network who roam onto theirs or other companies' analog cellular network lose all of the advantages of the PCS technology.

A few of these comments foster the idea that ATCs will give MSS operators an unfair competitive advantage. In reality, the ATC proposal will not give MSS operators an unfair advantage versus terrestrial mobile incumbents, and the terrestrial commenters themselves do not appear to truly believe that even ATC-enhanced MSS will credibly compete with existing terrestrial systems, much less have a meaningful advantage over them. For example, while terrestrial incumbents allege on the one hand that ATCs will give MSS operators an unfair advantage,[13] they then allege on the other hand that MSS networks are doomed commercially and that urban customers will be unwilling to pay the prices necessary to support the satellite infrastructure.[14] Indeed, TELUS Mobility vacillates between dire warnings that ATC represents a "competitive cost advantage"[15] from which MSS would "unfairly benefit[],"[16] and equally dire warnings that ATC will be so inferior that it "would damage the public's perception of Canada's existing cellular and PCS service offerings due to the negative impressions that could be created."[17] Why worry about the alleged advantages of a service that is certain to be so inferior that it will harm the reputations of terrestrial mobile operators by its very existence?

The terrestrial mobile commenters also seem to think that the economic viability of MSS in the marketplace is not worthy of the Department's concern.[18] They have no hesitation, however, in asking the Department to "level the playing field" by imposing unwarranted constraints on ATCs if the proposal is adopted.[19]

There are, of course, certain objective facts on which these arguments are based. Satellite systems capable of providing advanced, "on-net" services to anyone, anytime, anywhere are expensive – enormously expensive. But that does not mean they cost *too* much, or that they are doomed to commercial failure, because the public-interest benefits of this global connectivity are also enormous, and they justify the expense. Global MSS systems will be extremely attractive to a large number of people who are currently underserved, and for that reason will enjoy commercial success. But that does not mean that an MSS network with ATCs would enjoy some overwhelming and unfair competitive advantage, because there are just as certainly a huge number of people for whom urban-only coverage in just a single "home" market is perfectly adequate. In short, global MSS constellations cost a lot, but they are worth the cost. And because they are the *only* technology that can deliver these public interest benefits, the adoption of flexible-use policies that will make them commercially viable is a *public* necessity. The arguments of the incumbent mobile providers to the contrary are self-interested and self-contradictory, and as such they should be rejected.

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13 *See* Rogers Wireless Comments at 14; TELUS Mobility Comments at 5-6, 8; W2N Comments at 8.

14 *See* Rogers Wireless Comments at 5, 7; TELUS Mobility Comments at 2.

15 TELUS Mobility Comments at 8.

16 *Id.* at 9.

17 *Id.* at 5.

18 *See* Rogers Wireless Comments at 7.

19 *See id.* at 14.

While terrestrial mobile operators may be confused about the implications of integrated MSS-ATC networks, they are convinced that *independent* terrestrial operations in MSS spectrum should be allowed posthaste. They do not grasp that such service is completely unworkable. It is presented by certain terrestrial interests without a shred of evidence that it can be accomplished without harmful interference to any or all MSS licensees. ICO and MSV have shown that operation of any independent terrestrial mobile service in MSS frequencies would be so difficult as to be practically impossible.[20] If the terrestrial parties wish to advance their independent terrestrial service as a serious proposal, they will need to substantiate their breezy comments with competent technical analyses, and they must at least attempt to refute MSV's well-founded conclusion that independent terrestrial operations will create irreconcilable interference difficulties.[21]

ICO is confident that the terrestrial opponents of integrated MSS-ATC have not shown the feasibility of an independent terrestrial mobile service in MSS spectrum because they cannot. As the FCC recently noted in denying satellite service in ITFS/MMDS spectrum,[22] band-sharing between an independent terrestrial system and an MSS operator will not work, and none of those favoring independent terrestrial mobile operations are able to explain even in general terms how the interference, facilities-integration, and spectrum-sharing issues could be worked out between MSS operators and independent terrestrial operators, whose interests will necessarily be in direct conflict. Furthermore, independent terrestrial networks are not even possible without wholesale reallocation of spectrum—reallocation that would unacceptably weaken the economics of MSS operators and irreparably harm their ability to serve rural and other underserved areas.

Finally, the record shows irrefutably that all of the benefits of the ATC proposal are achievable only if ATCs are integrated into MSS networks.[23] Only integrated ATCs will promote spectrum efficiency, rural service, the deployment of advanced applications, and seamless service everywhere from mountain peaks to urban canyons. And only integrated ATCs will be able to coordinate efficiently – via common network control centers – with existing MSS systems.[24]

## III. Issues (c) and (d): Integrated Terrestrial Mobile Service Will Not Raise Interference Difficulties, Nor Will They Restrict or Interfere with the Spectrum Priority Access and Operation of GMDSS and AMS(R)S

ICO submits a technical assessment of interference in Appendix 2 which refutes most of the arguments made by Inmarsat in regards to interference.

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20 *See* ICO Comments at 8; MSV Comments at 16-18.

21 *See* MSV Comments at 16.

22 *See* In re 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 Systems, FCC ET Docket No. 00-258, *First Report and Order and Memorandum Opinion and Order* (rel. Sept. 24, 2001) at ¶ 3 (denying the Satellite Industry Association's request for an MSS co-allocation in ITFS/MMDS spectrum based on interference concerns).

23 *See* Bell Mobility Comments at 4-5; MSV Comments at 8.

24 *See* MSV Comments at 8.

As ICO[25] and MSV[26] have already explained, integrated ATCs can be implemented without causing harmful interference to users of adjacent spectrum. ICO therefore is confident that ATC will not cause harmful interference to other satellite or terrestrial operators.

## IV. Issues (e) and (f): The Department Should Regulate Service Via ATC As Mobile Satellite Service

ICO agrees with the basic approach advocated by MSV: re-use of previously allotted spectrum to augment existing services is no basis for imposing a new regulatory regime.[27] ATC is an extension of MSS, nothing more. As such, ATC should receive the same co-primary status and interference protection that MSS receives. Secondary status would disadvantage ATC in connection with international coordination in cross-border situations. ATC would also be at the mercy of interference from primary services in adjacent bands, such as PCS. The Department is rightly concerned about creating "unreasonable expectations" for consumers;[28] nothing would create unreasonable expectations quite so perfectly as ATC service that is completely vulnerable to co-frequency and adjacent-frequency interference.

On the Department's other regulatory questions, it is not surprising that most of the terrestrial commenters seek to subject ATCs to the entire terrestrial regulatory regime.[29] Shockingly, they also propose an apparently arbitrary rule banning ATCs from 90% of MSS spectrum[30] *and* a requirement that ATC-only handsets be outlawed.[31] None of this is in the public interest.

No basis exists for predicting that ATC-enhanced MSS service will compete directly with standard CMRS networks and therefore should be subject to CMRS-style regulation. The spectrum cap has never included any MSS spectrum, and the FCC has not proposed to include spectrum-cap limitations as part of the US ATC rules.[32] Similarly, no data exist on which to base any reliable economic analysis of a user-fee regime. ICO further agrees with MSV that any such regime would discourage spectrum efficiency, and would be inconsistent with Department precedent.[33] If a fee system is nevertheless implemented, it is absolutely essential that MSS operators be "credited" with the enormous sums they must spend in order to construct, launch, and operate MSS networks, as well as replacing the entire space infrastructure every 10 years or so.

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25 *See* ICO Comments at 9-10.

26 *See* MSV Comments at 18-19

27 *See* MSV Comments at 20.

28 Consultation at 4.

29 *See* Rogers Wireless Comments at 13; TELUS Mobility Comments at 8; W2N Comments at 11.

30 *See* Rogers Wireless Comments at 12; TELUS Mobility Comments at 3, 8.

31 *See* Rogers Wireless Comments at 12; TELUS Mobility Comments at 7.

32 *See* Bell Mobility Comments at 7.

33 *See* MSV Comments at 21.

Ignoring the fact that ICO[34] and MSV[35] have both proposed workable satellite-coverage prerequisites to ensure that ATCs remain ancillary, some terrestrial mobile commenters blithely claim that the ancillarity of ATCs can only be ensured by an ironclad 10% spectrum cap.[36] ICO and MSV, of course, have proposed clear, enforceable satellite-coverage requirements[37] that will ensure that ATC does not swallow MSS. It is disingenuous for the terrestrial operators to dismiss these coverage-requirement proposals, when they themselves are subject to buildout and substantial-service requirements that are, policy-wise, indistinguishable[38]. If those kinds of rules suffice for the incumbent mobile providers, why must MSS providers be subject to a much more draconian regime? And where have the terrestrial mobile operators provided even a cursory explanation of why it is in the public interest to require 90% of MSS spectrum to lie fallow in urban areas?[39]

## V. Issue (g): Terrestrial Flexibility for Other Satellite Spectrum

No commenting party provides any rationale for limiting this proceeding to TMI or to the L-band, nor does any party refute ICO's[40] argument that the Department should avoid piecemeal consideration of ATC applications and the possibility of resulting inconsistent regulatory treatment of MSS licensees. MSV agrees that "all MSS operators, of existing and/or future satellite networks, should have similar flexibility to develop terrestrial mobile services to complement their mobile services."[41] Even TELUS Mobility, while opposing ATC generally, recognizes that equity and fairness dictate that the Department not play favorites among MSS operators seeking ATC authority.[42]

## VI. Conclusion

The ATC proposal furthers a host of public policies, from rural service to public safety to spectrum flexibility to technological innovation – and more. It does so without requiring the

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34 *See* ICO Comments at 11.

35 *See* MSV Comments at 20.

36 *See* Rogers Wireless Comments at 12; TELUS Mobility Comments at 3, 8.

37 *See* ICO Comments at 11-12; MSV comments at 20.

38 Such roll-out requirements are described in the 2001 2GHz-PCS Auction document: Notice No. DGRB-005-00 / DGTP-007-00 – "Policy and Licensing Procedures for the Auction of the Additional PCS Spectrum in the 2 GHz Frequency Range" at ¶ 14.

39 TELUS Mobility goes so far as to argue that ATCs will not provide sufficient revenues to justify their costs under TELUS' proposed 10% spectrum cap. *See* TELUS Mobility Comments at 9. In other words, if the Department adopts the 10% cap, ATCs will never be built.

40 *See* ICO Comments at 11-12.

41 MSV Comments at 22.

42 *See* TELUS Mobility Comments at 9.

Department to take spectrum away from any other service. All the Department needs to do is amend its rules to unlock the full potential of the spectrum it has already assigned or plans to assign to MSS licensees. ICO urges the Department to resist the self-interested opposition to its proposal and give MSS licensees the authority to integrate ATCs into their networks as soon as possible.

Respectfully submitted,

Marc Dupuis on behalf of ICO Global Communications (Canada) Inc.