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Michael Helm  
Director General  
Telecommunications Policy Branch  
Industry Canada  
Room 1642-B  
300 Slater Street  
Ottawa, Ontario  
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Dear Mr. Helm:

**Subject: Reply Comments to the Consultation on an Application to Use Mobile Satellite Spectrum to Provide Complementary Terrestrial Mobile Service to Improve Satellite Coverage – Canada Gazette Notice DGTP-009-01**

TELUS Mobility (TELUS) is pleased to submit the following reply comments in response to comments filed by various parties pursuant to the above captioned Gazette Notice (the Consultation) arising from an application by Mobile Satellite Ventures (Canada) Inc., a majority owned subsidiary of TMI Communications (TMI).

TELUS has reviewed and analyzed the comments submitted and has seen nothing that would cause us to alter our advice to Industry Canada (the Department) contained in the comments we submitted on December 28, 2001. Indeed, the comments by other parties cause us to reinforce the recommendations that were made in our initial submission to this consultative process.

### **The need to consider other MSS Operators**

Of the nine parties submitting comments, only one independent party showed any level of support for the application that is the subject of this Consultation. That party, ICO Global Communications (Canada) Inc. and ICO Global Limited (collectively ICO) appears to support the present application, not on its own merits so much as to enable ICO to “piggy back” on any potential successful (by TMI) result stemming from the present application. In its initial comments, TELUS warned the Department of just such an eventuality when it stated;

“TELUS submits that before the application outlined in the Consultation can go forward the following needs to be clearly and unequivocally demonstrated;

- Canada needs and can support a fifth terrestrial network;
- The present application is the only way and the best way to obtain rural subscribers service;

- Canada's incumbent terrestrial mobile carriers will not be adversely impacted by an unfair bestowal of cost advantage to a competitor.
- A policy that ensures equitable treatment to other MSS operators has been established;
- Processes are in place to mitigate the development of any false expectations among Canadian consumers regarding the terrestrial, ancillary use are in place. <sup>1</sup>

Indeed, on the first page of its response<sup>2</sup> ICO states "ICO does not intend to operate in the L-band, but ICO supports the thrust of the consultation paper. Because the policies served in this proceeding are equally applicable to the 2 GHz band, ICO seeks the same terrestrial flexibility for its 2 GHz system that TMI has sought here. Indeed, extending the Department's L-band proposal to the 2 GHz MSS band is necessary to ensure that ICO's MSS competitors in the L-band do not obtain a competitive advantage over ICO and other 2 GHz MSS interests."

TELUS has recommended and continues to recommend that the Department, among other issues, develop a policy that ensures equitable treatment of other MSS operators. This clearly can not be accomplished in the present Consultation. This Consultation is not focussed on the broader issues of using MSS spectrum for terrestrial networks in all bands. Rather the present Consultation is focussed on "the second part of TMI's application<sup>3</sup>". In order to proceed from the specific to the general the Department requires a public consultation that focuses on the broader issues and one that also allows consideration of all of the band specific requirements or constraints. Even while advocating being allowed to "piggy back" from this TMI – L-band specific application, ICO also appeared to recognize the requirement for this, stating "The Department should examine all L-band, 2 GHz, and 1.6/2.4 GHz MSS operators in one proceeding."<sup>4</sup> TELUS agrees, this is too important an issue to rely on piece meal policy development. The present application has generated many L-band specific comments. A policy that deals with the status of MSS spectrum and its potential use for terrestrial purposes, on all MSS bands needs to be consulted on and developed before the Department proceeds with the present application.

### **Why do the terrestrial component this way?**

No party favouring the TMI application (Bell Mobility, TMI, ICO) addressed the key policy issues of this Consultation (the first three TELUS recommendations outlined above). There was no discussion, no demonstration that Canada needs and can support a fifth (or more) terrestrial network. The respondents also failed to provide any discussion or demonstration that the present application is the only way and the best way to obtain rural subscriber service. There was certainly no discussion nor demonstration that Canada's incumbent terrestrial mobile carriers will not be adversely impacted by an unfair bestowal of cost advantage to a competitor. TELUS

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<sup>1</sup> TELUS response to Canada Gazette, Part 1, October 2001, Consultation on an Application to Use Mobile Satellite Spectrum to Provide Complementary Terrestrial Mobile Service to Improve Satellite Coverage, DGTP-009-01.

<sup>2</sup> ICO response to DGTP-009-01

<sup>3</sup> DGTP-009-01, October 2001, Consultation on an Application to Use Mobile Satellite Spectrum to Provide Complementary Terrestrial Mobile Service to Improve Satellite Coverage, Industry Canada.

<sup>4</sup> ICO op. cit., page 11.

submits that there must be such discussion and more importantly a demonstration that there is truly no other way to provide TMI with the “flexibility” it says it needs. In its comments TMI quotes the FCC Notice of Proposed Rule Making to the effect “We recognize that this concept raise new issues, by in part cutting across the different licensing regimes established for satellite and terrestrial services. This fact, however, does not foreclose consideration of potentially innovative ideas that may result in improved quality and availability of services to the public.”<sup>5</sup> A service supplied by a combination of MSS and an existing terrestrial mobile network is at least equally innovative and TELUS submits would deliver better quality and availability to the public than the present application.

In a related matter TMI, in its comments takes many pages, wrapping itself in its application’s consistency with “all of the “core policy objectives” set out in the *Spectrum Policy Framework for Canada* established by the Department in 1992 following a comprehensive review and reassessment of current spectrum policies.”<sup>6</sup> What TMI fails to add is that everything they say with respect to their application in pages 11 through 14 can equally be said with respect to the TELUS recommended approach of a terrestrial/MSS cooperative arrangement.

With respect to this cooperative arrangement TELUS was not the only party to suggest that an arrangement with a terrestrial mobile network operator for the terrestrial portion of TMI’s projected service is the solution most in the public interest. Rogers Wireless Inc. (Rogers)<sup>7</sup> and W2N Inc. (W2N)<sup>8</sup> also call for this solution. TELUS also notes that the only other MSS service provider (besides ICO) providing comments to this Consultation supports this view. Telenor Broadband Services AS (Telenor) goes even further, taking “the view that existing and planned cellular systems by design provides in-door penetration in a much more efficient manner than MSS” and “Similar to in-door penetration, providing good urban coverage in shadowed environment (due to high buildings) is another role that cellular systems typically satisfy in a very efficient manner, due to the generous link margins available. MSS systems should rather aim at complementing the cellular system coverage, rather than duplicating and thereby attempting to compete head-to-head. Hence, to provide coverage in urban areas should not be regarded as a key objective for MSS systems.”<sup>9</sup> Another party, Inmarsat Ventures plc (Inmarsat) in their response stated “If the new MSV MSS system will not be able to operate in urban areas, there is a practical solution that exists – without the problems created by using the L-band for terrestrial purposes – and that is dual band phones. MSV could either enter into a contractual arrangement with a CMRS provider or merge with a terrestrial provider to create a more robust service, and to provide in-building service and coverage of areas where MSS signals may be blocked by building or terrain. Dual-band phones already exist today and are being used by companies such as Globalstar, Aces and Thuraya to allow satellite bands to be used when the phone is beyond the reach of the terrestrial network and terrestrial bands to be used when the phone is within reach. These dual-band phones are no more expensive or bulky than MSV’s dual-mode phone (with terrestrial and satellite modes operating in the same frequency) would be, and provide a high level of functionality. Motient, one of the MSV joint partners, has experience in this area from its communication service already provided through a satellite and terrestrial

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<sup>5</sup> TMI response to DGTP-009-01

<sup>6</sup> *ibid*, pages 10-11

<sup>7</sup> Rogers response to DGTP-009-01, page 2

<sup>8</sup> W2N response to DGTP-009-01, page 2

<sup>9</sup> Telenor response to DGTP-009-01, page 8

dual-band network. As Motient's experience has shown, such an arrangement can be successful."<sup>10</sup> Inmarsat further suggests that the single L-band solution proposed by TMI may well result in higher, not lower priced handsets<sup>11</sup>, which would have the effect of making TMI's proposed solution uneconomical and noncompetitive. As TELUS and these other parties have outlined it doesn't have to be done this way i.e. using L-band spectrum for the terrestrial portion. It can and should be done in concert with an existing terrestrial mobile operator for the terrestrial portion.

### **Like Use should mean Like Fees**

TMI, in its comments is nothing if not ambitious in suggesting a regulatory regime that Canada's terrestrial mobile carriers would find extremely appealing. This regime would be "in the form of a blanket authority to construct and operate ancillary terrestrial facilities ... there would be no need for individual or site-specific licensing and coordination of the ancillary terrestrial facilities."<sup>12</sup> They further state, in the same section, "The spectrum used to provide the ancillary terrestrial service should not attract license fees similar to those for conventional terrestrial mobile services."<sup>13</sup> Coordination concerns aside, what is their justification for this statement? It would appear that this "is not "new" spectrum ... rather ... the operator is "re-using" ... to extend service coverage to otherwise "unservable" urban and indoor environments."<sup>14</sup> As TELUS has shown previously, the best way to render the "unservable" environments servable is to serve them via an existing terrestrial mobile network. TELUS notes that frequency re-use is heavily used for all of Canada's significant terrestrial mobile networks today and existing terrestrial mobile license fees have been established with this in mind. Therefore the simple fact that they are not using "new" spectrum does not render them immune to terrestrial mobile license fees. Neither should it render TMI immune from these same fees if they were allowed to use the L-band for terrestrial mobile services. As TELUS said in its comments, "It is incumbent upon the Department to ensure that the same uses of spectrum attract the same license fees and that the spectrum be accorded the same regulatory treatment."<sup>15</sup>

ICO in their comments has introduced a rather novel approach to the issue of paying the same license fees when using spectrum to provide the same services. They argue, in effect, that paying "Separate license fees for ATC would be counterproductive and unnecessary"<sup>16</sup> because this MSS operator to be, has to buy a satellite. They then suggest that with this satellite they will offer services in areas that terrestrial networks don't reach – or, put another way, areas that MSS was designed to reach. This "justification" is somewhat like PCS operators suggesting that they shouldn't have to pay these fee levels because they have to buy a PCS network, (for more dollars than buying a satellite) and that further they offer mobile services where wire-line telephone companies don't reach. If the Department agrees with this "logic", please let us know as soon as possible so that we can consider the economic feasibility of launching a satellite on our terrestrial spectrum to obtain a fee decrease.

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<sup>10</sup> Inmarsat response to DGTP-009-01, pages 31-32

<sup>11</sup> Inmarsat Technical Annex, page 44

<sup>12</sup> TMI, op. cit., pages 20-21

<sup>13</sup> Ibid

<sup>14</sup> Ibid

<sup>15</sup> TELUS, op cit, page 8

<sup>16</sup> ICO, op cit, page 10

## Other Issues

In its comments TMI spends some time in demonstrating that the “Department has also permitted service providers operating in other frequency bands greater flexibility in the use of their assigned spectrum through relaxed service requirements in a number of other situations.”<sup>17</sup> They provide four examples of such flexibility. One of the examples they cite is the decision to confirm the incumbents’ continuation in the 2500-2690 MHz band. TELUS submits that this is hardly an example of flexibility as this decision “will permit them to continue their operations in accordance with their current business plans under their existing terms and conditions of license.”<sup>18</sup> The other three examples cited do indeed confer additional flexibility of use for specific spectrum bands but it is important to note that all of these changes came before a competitive licensing process. In this regard, it is useful to repeat what TELUS had advised in its comments. “As outlined above, in an over-all sense, TELUS is generally supportive of the concept of flexibility of use of spectrum. The Department has granted spectrum users flexibility in the services to be offered in the auctioned spectrum in both the 24/38 GHz and 2 GHz PCS spectrum auctions. There are two important differences in the present application. In the first instance, all potential users were aware of such flexible use prior to the auction. Secondly, the process to determine the license holders of this more flexible use spectrum was an open, transparent and competitive process. This current application is none of these things. The Department, as the steward of Canada’s spectrum resource, has a responsibility to ensure that the processes by which these resources are distributed to licensees are fair, open and transparent. Allowing TMI to operate a terrestrial mobile network using the L-band spectrum without conducting a competitive licensing process would not meet these responsibilities. Rather it would give the appearance of unjustly bestowing a windfall benefit on a particular commercial entity. For clarity, if the Department decides, against the advice of TELUS and others, to allow the use of “L” band spectrum for primary MSS service and associated secondary terrestrial use, it should do two things. The first is to conduct an open competitive process for the entire application, not just the terrestrial portion. The second is to ensure that the terrestrial portion and use begins and remains secondary and ancillary, not complementary.”<sup>19</sup>

TMI in its comments now characterizes any terrestrial use of the L-band as ancillary, not complementary. If the Department, against the majority of advice received in the comments arising from the Consultation was to approve the Application, it must ensure that such terrestrial use remain truly ancillary. In this regard TELUS agrees with the comments of Rogers when it states “RWI believes that, at a minimum it should restrict TMI’s ability to migrate away from the provision of satellite services by imposing license conditions aimed at ensuring that the terrestrial component remains truly secondary, such as:

- Requiring all subscribers to pay for the use of the satellite service before being allowed to use the terrestrial service;

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<sup>17</sup> TMI, op. cit., pages 9-10

<sup>18</sup> Industry Canada Press Release, November 16, 2001, Minister of Industry Announces Canadian Decision Regarding the 2500 MHz Frequency Band.

<sup>19</sup> TELUS, op. cit., page 6

- Requiring the use of integrated “dual mode” handsets that use the satellite system primarily and revert to the terrestrial system only if the satellite system is unavailable; and
- Establishing a threshold on how much of TMI’s allocated spectrum can be used for terrestrial use. At most, not more than 10% of the band should be available for such use.”<sup>20</sup>

TELUS also agrees with other parties that all such terrestrial service by TMI should cease at the same time that they cease to operate a satellite and provide satellite services.

### **Safety Concerns**

Inmarsat, in its comments raises concerns that vital safety concerns will be threatened if terrestrial services are offered in the L-band. They back up these assertions with a 45 page technical annex (the only party submitting comments to do so).

Telenor supports the concerns raised by Inmarsat in their comments.

The comments submitted by Transport Canada Civil Aviation ANS & Airspace branch (Transport Canada) strongly parallel these safety concerns. In their comments they state “Footnotes in the ITU Radio Regulations (S5.353A, S5.356 & S5.357A) provide priority and preemptive access for these two services. The footnote provisions need to be retained throughout any evolutionary development or enhancement of MSS services in the bands 1545 – 1559 MHz and 1626.5 – 1660.5 MHz. Account must be taken to address any proposed operation of terrestrial mobile services that is not covered or authorized by the aforementioned ITU footnote provisions. Such use is inconsistent with the current and planned use of these bands. Terrestrial mobile service would not be compatible with aviation safety communications.”<sup>21</sup> Given that the Application is for use of a portion of the L-band, given in the Consultation paper as 1525-1559/1626.5-1660.5 MHz<sup>22</sup> addressing these identified safety concerns leaves little or no spectrum in the L-band for terrestrial services.

The safety concerns raised by these parties arise due to the unacceptable levels of interference generated by the proposed L-band terrestrial use. As pointed out by Inmarsat, even TMI recognizes that the interference issues raise new concerns as outlined in Inmarsat’s comments, “Recognizing that the MSV terrestrial component could cause interference, TMI and MSV have offered to self manage the interference. The proposal, however, is flawed for three main reasons: (i) it assumes an interference threshold that is not applicable to terrestrial-based interference, and is not acceptable in any event; (ii) MSV will not be able to accurately measure at its spacecraft the terrestrial-based interference received at Inmarsat’s satellites; and (iii) it is not reasonable to allow Inmarsat’s competitor, MSV, to decide when and whether its system is interfering with Inmarsat’s network.”<sup>23</sup> TELUS urges the Department to review carefully all of the interference

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<sup>20</sup> Rogers, op. cit., page 12

<sup>21</sup> Transport Canada response to DGTP-009-01, pages 1-2

<sup>22</sup> Consultation, op. cit., page 1

<sup>23</sup> Inmarsat, op. cit., page 24

and safety concerns raised in the Consultation and ensure that they are addressed before proceeding further with the Application.

### **Conclusion**

TELUS thanks the Department for the opportunity to submit its reply comments as part of the consultation process. After a careful examination of the comments submitted in the first phase of the Consultation, TELUS believes that there are many good reasons for the Department not to grant the application for terrestrial use of the L-band spectrum. As outlined in our initial comments TELUS believes that the public interest would best be served if:

- Any terrestrial network portion of the proposed service uses an existing terrestrial mobile network;
- Any terrestrial network portion (if the application were granted) is kept truly ancillary, not complementary and the terrestrial use is kept securely secondary for the duration of the service;
- The terrestrial use in any band is subject to the similar fees, terms and conditions of license as are current terrestrial mobile systems.

Yours truly,

(Original signed)

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