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July 17, 2009

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**Re: Canada Gazette, Part I, March 14, 2009, Gazette Notice No. DGRB-005-09,  
Consultation on the Transition to Broadband Radio Service (BRS) in the  
Band 2500-2690 MHz**

Rogers Communications Inc. (Rogers), on behalf of Rogers, Bell Canada and Inukshuk Wireless Partnership, appreciates the opportunity to provide reply comments on the above-noted consultation.

The documents are being sent in Adobe Acrobat Professional Version 8.0.  
Operating System: Microsoft Windows XP.

Yours very truly,

Barry Chapman  
Vice President -  
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Attach.

# **Reply Comments of**

**Bell Canada,  
Inukshuk Wireless Partnership &  
Rogers Communications Inc.**

Canada Gazette Notice No. DGRB-005-09

Consultation on Transition to Broadband Radio Service (BRS)  
in the Band 2500-2690 MHz

Published in the Canada Gazette, Part I  
March 14, 2009

July 17, 2009

## **Executive Summary**

1. Bell Canada, Inukshuk Wireless Partnership, and Rogers Communications Inc. (collectively “Inukshuk”) are pleased to provide the following reply to the comments of other interested parties in response to the consultation paper titled **Consultation on Transition to Broadband Radio Service (BRS) in the Band 2500-2690 MHz – DGRB-005-09** (“the Consultation Paper”).
  
2. Inukshuk notes that the following other parties have filed comments in response to the Consultation Paper:
  - a. ABC Communications
  - b. Bragg Communications Inc. (“Bragg”)
  - c. Cablevision TRP-SDM Inc.
  - d. Craig Wireless Systems Ltd. (“Craig”)
  - e. Ericsson Canada (“Ericsson”)
  - f. Intel Corp.
  - g. Look Communications Inc. (“Look”)
  - h. Martin Catudal
  - i. Manitoba School Divisions (“Manitoba Schools”)
  - j. MTS Allstream Inc. (“MTS”)
  - k. Prairie Spirit School Division (“Prairies Schools”)
  - l. Radio Advisory Board of Canada (“RABC”)
  - m. SaskTel
  - n. SSI Micro Ltd. (“SSI”)
  - o. TELUS Communications Company (“TELUS”)
  - p. Wireless Communications Association International (“WCAI”)
  - q. WiMAX Forum
  
3. As outlined in its comments, Inukshuk has taken significant risks and made substantial investments in developing the Band so that the benefits of fixed

wireless broadband services can be extended across Canada. Inukshuk's fixed wireless broadband network is the largest of its kind in Canada and we have invested several hundred million dollars to provide fixed wireless broadband service (up to 3 Mbps) in 45 cities and over 200 rural markets.

4. Inukshuk exceeded the implementation of spectrum usage condition of its MCS licences, despite the substantial risk and ongoing uncertainty surrounding the final policy, technology and band plan. We are committed to making further substantial investments in the Band in order to leverage all of the advantages of an internationally compatible band plan for advanced new broadband mobile services.
5. The extent to which Canada's transition to BRS will be a success depends in large part on the Department's final decision regarding the band plan and on the ability of incumbent licensees such as Inukshuk to be licensed with the wideband blocks of contiguous BRS spectrum frequencies they require to fully unlock the benefits of a globally harmonized band for broadband mobile services.
6. Following is Inukshuk's reply to the comments that were filed regarding the issues outlined in the Consultation Paper.
7. Inukshuk stated its position on all of the important issues under consideration in its comments dated June 15, 2009. This reply is therefore limited to comments made by other parties. Inukshuk generally denies any assertions or arguments put forward in the comments of other parties which are inconsistent with the positions set out by Inukshuk. Failure by Inukshuk to address any assertions or arguments put forward by other parties should not be construed by the Department as acceptance or agreement on the part of Inukshuk.

## **Detailed Reply Comments**

### **Transition to BRS**

8. In its comments, Inukshuk supported the Department's proposal to adopt March 31, 2011 as the firm transition date for BRS licensing, while at the same time providing incumbents with adequate flexibility to transition their technology to the new band plan.
  
9. Several parties support the same positions in their comments. For example, the RABC supports a firm transition date of March 31, 2011, but also urges the Department to provide incumbents with flexibility when migrating from their current systems to new BRS systems.

RABC requests that the Department provide flexibility on the implementation and transition schedule to allow for operational concerns that may arise with the incumbents. In some cases, plans for a proper transition by the incumbents to a new band plan, without disruption to existing services and/or interference to other incumbents, could be complex, and may require an extended period of time to complete.<sup>1</sup>

10. Similarly, SaskTel highlights the need to avoid disrupting existing services while migrating to new BRS systems and also notes that this process could require an extended period of time.

However, SaskTel is very concerned about the length of time required for incumbent licensees to transition to BRS and the new proposed band plan. SaskTel requests that the Department provide flexibility on the implementation and transition schedule to allow for operational concerns of the incumbents. In some cases, executing a proper transition to a new band plan, without disrupting existing services and/or interfering with other incumbents, may be a complex undertaking and require an extended period of time.<sup>2</sup>

11. Inukshuk agrees with SaskTel that "it is important that unnecessary and/or premature displacement and transition be avoided as much as possible" so

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<sup>1</sup> Radio Advisory Board of Canada Comments, page 4.

<sup>2</sup> SaskTel Comments, page 4.

that incumbents will be able to leverage their current substantial investments until new BRS systems are introduced in Band 2500-2690 MHz (“the Band”).<sup>3</sup>

12. The Department should ignore TELUS disingenuous pleading for a “no head start” rule that it claims is necessary on the basis of “the fundamental principle of process fairness and equity”.<sup>4</sup> According to TELUS, it would not be fair if incumbents that have invested hundreds of millions of dollars in developing the Band were permitted to evolve their systems during the next three years. The Department should remember that TELUS has seen fit to pass on every opportunity it had to acquire spectrum in the Band and, unlike Inukshuk, TELUS has made no effort to invest in, or develop, the Band in Canada.

13. TELUS’ position in this regard also contradicts its claim that “the Department got it right in its 2006 Policy Decision (the Policy) for this band”.<sup>5</sup> Inukshuk notes that the Department’s 2006 policy provides for the conversion of MCS and MDS licences and for the implementation of new mobile services in the band at any time.<sup>6</sup>

### **Treatment of Licensees in Manitoba**

14. Inukshuk believes that the Manitoba school boards and licence-exempt broadcasting systems should not be eligible for conversion to BRS. In our comments, we recommended that these licensees be grandfathered on a no-protection, no-interference basis and subject to displacement as required to allow for the introduction of BRS.

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<sup>3</sup> Ibid, p. 5.

<sup>4</sup> TELUS Comments, p. 3.

<sup>5</sup> Ibid.

<sup>6</sup> *Policy Provisions for the Band 2500-2690 MHz to Facilitate Future Mobile Service* (DGTP-002-06), March 2006, Section C.3.2.

15. TELUS also calls for the Manitoba school boards to be transitioned out of the band and notes significantly that this will ensure that spectrum will be made available for BRS in the Province of Manitoba.<sup>7</sup>

16. In its comments, Look points out that the school boards have other alternatives to satisfy their needs and that:

it would not be appropriate to permit the conversion of non-commercial educational authorizations to commercial mobile licences in a globally harmonized mobile band.<sup>8</sup>

17. MTS Allstream's position that the MCS licensee in Manitoba should be transitioned out of the Band is transparently self-serving and anti-competitive given that the MCS licensee is one of the few competitors that operate in MTS Allstream's traditional operating territory.<sup>9</sup> It also ignores the fact that this licensee has made substantial investments in implementing an MCS service in Manitoba and therefore merits the opportunity to convert to BRS licensing such that Canadians living in, and visiting, Manitoba will have access to new and advanced BRS services and applications.

### **Eligibility for Conversion of MDS to BRS Licences**

18. In its comments, Inukshuk provided justification for allowing all MDS licences and certificates to be convertible to BRS licences.

26. Craig echoes Inukshuk's position regarding the eligibility of MDS licences where it states:

As long as an MDS operator has received a CRTC decision authorizing it to provide service in a given area and has submitted an application to the Department for the requisite broadcasting certificate, this should entitle the MDS operator to convert to BRS in the area in question.<sup>10</sup>

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<sup>7</sup> Ibid, p. 4.

<sup>8</sup> Look Comments, p. 7.

<sup>9</sup> MTS Allstream Comments, p. 6.

<sup>10</sup> Craig Comments, p. 4.

27. Inukshuk fully supports Look's comments regarding the eligibility of MDS systems for conversion to BRS. Inukshuk agrees with Look that the Department must consider regional MDS authorizations as a whole when determining eligibility and that Look is entitled to convert its entire CRTC licence region to BRS.

Look believes that the conversion of regional MDS authorizations to BRS must be addressed as a whole when determining eligibility and the most appropriate service area for the new BRS licence. In Look's case, since it provides coverage to about 65% of the population in its CRTC authorized service region, it should be considered as eligible to convert to BRS across the same region.<sup>11</sup>

28. Inukshuk also agrees that, on the basis of implementation requirements that are applicable to other commercial mobile spectrum bands, such as PCS and AWS, the extent to which Look has implemented its MDS services is more than adequate to warrant the conversion of its licences to BRS across the same geographic region.

The extent of Look's coverage is significant and it exceeds, for example, the minimum coverage requirement that the Department has imposed as a condition of licence for auctioned PCS spectrum licences and as a roll-out target for AWS spectrum licences. We note that auctioned PCS spectrum licences contain an implementation of spectrum usage condition which requires licensees to establish coverage to 50% of the population within the licensed service area. Auctioned AWS spectrum licences contain a similar condition, although the coverage requirements are referred to as "targets", and the percentage of the population to be covered varies depending on the service area, ranging between 10% and 50%. In any event, the auctioned PCS and AWS coverage requirements provide an indication of what minimum levels of coverage the Department considers to be adequate, and Look has surpassed these levels of coverage across its CRTC-authorized service area.<sup>12</sup>

29. Inukshuk shares Look's view that its approach is a reasonable and balanced basis on which to convert MDS licences to BRS.

Look believes that this approach reasonably balances the original authorization granted by the CRTC and the minimum implementation of spectrum usage that

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<sup>11</sup> Look Comments, p. 9.

<sup>12</sup> Ibid.

the Department has defined for other commercial mobile spectrum licences. Further, the proposed coverage threshold will ensure that BRS licenses are not awarded to license holders without any operating transmitters within the CRTC broadcast license service region, but it will also not unfairly punish MDS operators, such as Look, who faced significant technological challenges due to the limitations of the line-of-sight technology which was available at the time of their network roll-out.<sup>13</sup>

28. Inukshuk notes that TELUS takes a very narrow and self-serving view regarding eligibility for conversion of MDS licences to BRS. For example, TELUS states that:

only spectrum that has been granted both a CRTC BDU licence and a broadcast certificate can be considered eligible for conversion to BRS. Spectrum outside the footprint of a broadcast certificate should all be classified as unassigned and be subject to auction.<sup>14</sup>

29. TELUS also makes the following bold and overly simplistic assessment of the relative importance of CRTC licences and Industry Canada broadcasting certificates:

A general CRTC licence does not bestow any right to spectrum. Only a broadcast certificate authorizes a right to use spectrum. Wireless BDUs cannot lay claim to spectrum for which a certificate from Industry Canada has never been granted.<sup>15</sup>

30. TELUS ignores a number of important factors in making these hollow assertions. For example, TELUS completely disregards the fact that the Department's policy for the licensing of MDS identifies specific spectrum that has been set aside exclusively for MDS service providers that are licensed by the Canadian Radio-television and Telecommunications Commission ("CRTC") under the *Broadcasting Act* using a competitive licensing process.<sup>16</sup> The policy also provides that broadcasting certificates will be

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<sup>13</sup> Ibid, p. 10.

<sup>14</sup> TELUS Comments, p. 5.

<sup>15</sup> Ibid.

<sup>16</sup> DGRB-005-09, p. 2.

issued by the Department under the *Radiocommunication Act* to parties that have been licensed by the CRTC for MDS.<sup>17</sup>

31. In other words, the Department's MDS policy provides that parties licensed by the CRTC in a given area are exclusively entitled to operate in the band 2596-2686 MHz ("the MDS Band") within the same licensed area. The provision of a broadcasting certificate by the Department is a foregone conclusion as long as the MDS operator has a CRTC licence covering the area in question. No party may obtain a broadcasting certificate without first being licensed by the CRTC for MDS. The determinative issue therefore is whether the party has been licensed by the CRTC for MDS.

32. Contrary to TELUS' assertion therefore, the general authority to operate in the MDS Band is established in the MDS policy and by the CRTC licence. An Industry Canada broadcasting certificate merely ensures that an MDS licensee will operate its MDS transmitter in accordance with certain specific technical parameters.

33. Consequently, TELUS' claim that "Spectrum outside the footprint of a broadcast certificate" should be reclaimed by the Department is unjustified since it is the CRTC licence, not the broadcasting certificate, which defines the area over which the MDS licensee has the exclusive right to operate in the MDS Band. It is for this reason that the Department should consider all CRTC-licensed MDS as eligible to convert to BRS over the same geographic area, subject to the minimum MDS coverage requirement proposed in Inukshuk's comments.

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<sup>17</sup> *Spectrum Utilization Policy for the Fixed and Broadcasting Services in the Band 2500-2686 MHz* (SP 2500 MHz), November 1991, pp. 3-4.

## **Licence Areas for Conversion to BRS**

34. Inukshuk supports the use of Tier 2 licence areas for conversion of MDS authorizations since this would be more consistent with the wide area and mobile nature of BRS services than the use of Tier 3 and Tier 4 licence areas.

35. Several parties agree with Inukshuk's position in this regard. Craig notes that MCS licences have been issued using Tier 2 areas and that the same areas should be used for converting MDS licences since MDS licensees will be direct competitors of MCS licensees and they will be disadvantaged if they are licensed using smaller service areas.<sup>18</sup>

36. Inukshuk agrees with Craig that small service areas, such as Tier 4 service areas, are entirely inappropriate for mobile services such as BRS:

In the vast majority of instances, the Tier 4 serving area boundaries do not reflect the true coverage of existing MDS systems and would be entirely inappropriate for a mobile service, in any event, because customers of mobile services have a minimum expectation that they can receive service from their chosen service provider beyond the boundaries of the municipality in which they live.<sup>19</sup>

37. MTS also supports the use of Tier 2 service areas for licensing mobile services and notes that the use of smaller areas would be detrimental to Canadian consumers.

MTS Allstream recommends that Tier 2 licence areas corresponding to the smallest geographic footprint that should be used to allocate this spectrum band to maximize the benefits and the potential deployment of mobile broadband services to Canadian consumers. MTS Allstream considers that the increased potential fragmentation resulting from Tier 3 and Tier 4 licence areas is detrimental to Canadian consumers being able to benefit from seamless mobile broadband services across the country using the BRS frequency band.<sup>20</sup>

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<sup>18</sup> Craig Comments, p. 5.

<sup>19</sup> Ibid, p. 6.

<sup>20</sup> MTS Allstream Comments, p. 8.

38. TELUS admits that the use of larger service areas is more appropriate for licensing large scale, high mobility systems such as BRS, and yet insists that Tier 4 service areas should be used for converting MDS to BRS licences.<sup>21</sup> It should be evident to the Department that TELUS' is transparently attempting to disadvantage MDS licensees by limiting them to smaller service areas.

39. The Wimax Forum's assertion that Tier 3 service areas should be used for the entire band 2500-2690 MHz<sup>22</sup> is without merit. It ignores the important fact that MCS licensees are currently licensed using Tier 2 service areas and that the same service areas will be used when these MCS licences are converted to BRS.

### **Licence Conditions for Voluntarily Converted BRS Licences.**

#### **Licence Term**

40. In its comments, Inukshuk demonstrated that BRS licences should have a 15-year term and a high expectation of renewal since this will provide licensees with greater certainty for corporate planning and funding purposes and it would be consistent with the approach taken by spectrum regulators in other jurisdictions.

41. Like Inukshuk, SaskTel advocates the use of licence terms longer than 10 years, noting that "spectrum regulators in other jurisdictions are issuing and renewing spectrum licences for 15 and 20 year terms".<sup>23</sup> SaskTel rightly states that:

The longer term will allow the established operators greater certainty and more flexibility in long term planning for technology evolution and continued network expansion. SaskTel notes that even with a longer licence term the Minister would

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<sup>21</sup> TELUS Comments, p. 6.

<sup>22</sup> Wimax Forum Comments, p. 4.

<sup>23</sup> Ibid, p. 6.

still retain the power to revoke or modify a licence for just cause such as contravention of licence conditions.<sup>24</sup>

42. TELUS<sup>25</sup> and MTS Allstream<sup>26</sup> supported the use of longer terms for the same reasons.

### **Spectrum Cap**

43. Inukshuk cautioned the Department that, if Canada is to fully benefit from the globally harmonized spectrum in the Band, incumbent licensees such as Inukshuk will need access to adequate BRS spectrum so that they will be able to support bandwidth-intensive applications for an increasing number of Canadians, while maintaining the reliability of their network. Inukshuk therefore urged the Department to not impose a spectrum cap in the Band.

44. Without providing any justification for its claim, and ignoring the substantial mobile spectrum holdings that it has in the Province of Manitoba, MTS asserts the following:

If all telecommunications carriers, including Bell, Rogers and TELUS, participate in an upcoming auction for the returned BRS spectrum, the Department could consider introducing a spectrum cap.<sup>27</sup>

45. Evidently, MTS believes that all mobile spectrum licensees, other than MTS, should be disadvantaged by being subjected to a mobile spectrum cap. MTS' position is transparently self-serving and unfair and should be disregarded by the Department.

46. MTS' position also ignores the view of several parties that the bandwidth-intensive broadband mobile data services that will be provided using BRS spectrum requires that BRS licensees must have access to wide blocks of

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<sup>24</sup> Ibid.

<sup>25</sup> TELUS Comments, p. 7.

<sup>26</sup> MTS Allstream Comments, p. 9.

<sup>27</sup> Ibid.

spectrum. For example, in addition to Inukshuk, Ericsson,<sup>28</sup> RABC<sup>29</sup> and WCAI<sup>30</sup> emphasized that, if Canadians will be able to benefit from the higher data speeds and lower latency promised by 4G services, BRS licensees must have access to large contiguous blocks of BRS spectrum. Inukshuk submits that a spectrum cap for BRS would conflict with this imperative.

47. MTS also complains that parties that are not currently licensed in the Band will only be able to access less than 50% of the total spectrum being awarded in the Band compared with carriers in European countries.<sup>31</sup> MTS completely ignores the fact that, unlike MTS, licensees such as Inukshuk have made substantial investments and taken significant risks in developing the Band in Canada and have earned the right to hold BRS licences. Apparently, MTS believes that incumbents should be penalized for their investments in the Band and that those that have remained on the sidelines, such as MTS, should be rewarded for their inaction.

### **Research and Development**

48. Inukshuk does not support the proposed introduction of a condition of licence regarding research and development (“R&D”), which no other country imposes as a condition of licence. Most of the parties are opposed to this condition of licence.

### **The Band Plan for BRS**

49. Inukshuk notes that the majority of parties are in support of an internationally harmonized band plan for BRS.

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<sup>28</sup> Ericsson Comments, p. 5.

<sup>29</sup> RABC Comments, p. 7.

<sup>30</sup> WCAI Comments, pp. 2-5.

<sup>31</sup> Ibid, p. 6.

50. For example, Ericsson cites the benefits that will accrue to Canadians if the Department opts for a globally harmonized band plan for BRS. Specifically, Ericsson highlights the economies of scale, feature rich equipment and applications for consumers and operators and global roaming that will be made possible if the Department adopts the internationally harmonized band plan, as per the International Telecommunication Union (ITU), Inter-American Telecommunication Commission (CITEL) and European Conference of Postal and Telecommunications Administrations (CEPT).<sup>32</sup> SaskTel also supports harmonizing with the ITU band plan.<sup>33</sup>

51. Like Ericsson, the RABC underscores the importance of selecting a band plan that will promote economies of scale, global roaming and spectrum efficiency.<sup>34</sup> The RABC,<sup>35</sup> SaskTel<sup>36</sup> and TELUS<sup>37</sup> urge the Department to not strive for a compromise arrangement between the ITU and U.S. band plans since this would place Canada in the worst of all positions.

52. As noted above, several parties have emphasized the importance of providing licensees with access to large contiguous blocks of BRS spectrum so that Canadians will be able to benefit from the new and advanced services and applications that will be enabled through higher data speeds and lower latency. A number of parties, including Ericsson<sup>38</sup> and SaskTel<sup>39</sup> have also noted the importance of, and overwhelming global support for, emerging paired technologies such as Long Term Evolution (LTE). Ericsson has also correctly noted that “there is no significant deployment in the allocated unpaired spectrum” anywhere in the world.<sup>40</sup>

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<sup>32</sup> Ericsson Comments, p. 4, and p. 6.

<sup>33</sup> SaskTel Comments, p. 10.

<sup>34</sup> RABC Comments, p. 7.

<sup>35</sup> Ibid.

<sup>36</sup> SaskTel Comments, pp. 9-10.

<sup>37</sup> TELUS Comments, p. 10.

<sup>38</sup> Ericsson Comments, pp. 2-3.

<sup>39</sup> SaskTel Comments, p. 10.

<sup>40</sup> Ericsson Comments, p. 6.

53. In light of the above, the Department must ensure that incumbent MCS and MDS licensees will be permitted to retain adequately sized blocks of paired BRS spectrum so that they can implement the same state of the art technology and services that will be implemented in other countries around the world. Otherwise, the Department will have squandered a rare opportunity that has been made possible by globally harmonized BRS spectrum.

54. The calls by Intel<sup>41</sup> and WCAI<sup>42</sup> to permit FDD and TDD anywhere in the Band would be inefficient and harmful since, as Ericsson has amply demonstrated, FDD and TDD cannot easily co-exist and valuable spectrum would need to be wasted for guard bands to mitigate interference.<sup>43</sup>

### **Conclusion**

55. Inukshuk supports the Department's proposal to adopt March 31, 2011 as the firm transition date for BRS licensing, while at the same time providing incumbents with adequate flexibility to transition their technology to the new band plan. BRS licences should have a 15-year term since this will provide licensees with greater certainty for corporate planning and funding purposes.

56. All CRTC and Industry Canada authorizations related to commercial MDS should be eligible for conversion to BRS. The Department should use Tier 2 licence areas for conversion of MDS authorizations since this would be more consistent with the wide area and mobile nature of BRS services than, for example, the use of Tier 3 or Tier 4 licence areas.

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<sup>41</sup> Intel Comments, p. 4.

<sup>42</sup> WCAI Comments, p. 2.

<sup>43</sup> Ericsson Comments, p. 6.

57. We believe that the Manitoba school boards and licence-exempt broadcasting systems should not be eligible for conversion to BRS. We believe that it would not be appropriate to permit these systems to convert to spectrum licences using globally harmonized commercial mobile spectrum.
58. We do not support the proposed introduction of a condition of licence regarding R&D, which no other country imposes as a condition of licence.
59. The Department must not impose a spectrum cap in the Band. Licensees such as Inukshuk must not be restricted in their ability to offer new and innovative bandwidth-intensive services and applications.
60. Lastly, spectrum licence fees should be limited to a level that is required to recover the Department's administrative cost of managing the spectrum.
61. Inukshuk appreciates this opportunity to share its views with the Department regarding the transition to BRS.

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