**Canadian Network Operators Consortium Inc.**

**Consortium des Operateurs de Réseaux Canadiens Inc.**

March 25, 2013

FILED VIA GCKEY

John Traversy
Secretary General
Canadian Radio-television and
Telecommunications Commission
Gatineau, Quebec
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Dear Mr. Traversy,

**Subject: Review of outstanding wholesale high-speed issues related to interface rates, optional upstream speed rates, and modem certification requirements, Telecom Notice of Consultation CRTC 2013-80, 21 February 2013 (CRTC File No. 8661-C12-201303487)**

## Introduction

1. Canadian Network Operators Consortium Inc. ("CNOC") wishes to be considered an intervener in the proceeding initiated by Telecom Notice of Consultation CRTC 2013-80 ("TNC 2013-80").

2. In accordance with paragraph 20 of TNC 2013-80, this constitutes the first intervention of CNOC in that proceeding.

3. The Commission has invited parties to file comments, including supporting rationale and all evidence on which they rely, on the following: (a) whether the pricing approach for optional upstream speeds should be consistent with the pricing approach approved for similar other ancillary wholesale high-speed access ("HSA") services in Telecom Regulatory Policy 2011-703, namely Phase II costs plus a 30 percent markup; and (b) whether rates for the optional upstream services approved as a result of this process should be retroactive to the date that such rates were approved on an interim basis.

4. The Commission has also invited parties to file comments, including supporting rationale and all evidence on which they rely, on whether specific modem certification guidelines are required for the large telephone companies and whether those guidelines should be consistent with those set out for cable carriers.

5. CNOC is pleased to provide its comments on these issues.

**Optional upstream speed pricing should be based on Phase II costs plus a 30% markup**

6. The issue of optional upstream speed pricing is unique to Bell Aliant Regional Communications, Limited Partnership ("Bell Aliant") and Bell Canada (collectively "Bell companies"). Based on the record of this proceeding, no other incumbent offers optional upload speeds, either at the retail or wholesale level.

7. In Telecom Regulatory Policy CRTC 2011-703, the Commission implemented a capacity-based billing model, and in a series of recent decisions it has further streamlined the model and corrected various costing errors related to the Bell Companies.[1] The rates that the Commission ultimately approved for ancillary wholesale HSA services pursuant to these decisions were based on Phase II costs plus a 30 percent markup. In CNOC's view, optional upload speeds should not be treated any differently.

8. Pursuant to this methodology, the price that should be charged for a wholesale 7 Mbps optional upload speed is zero or very nearly zero (i.e., no more than $0.02 per access per month under any circumstances). This is evident based on a comparison of some of the Bell companies' other existing cost-based service rates.

9. For example, the Bell Companies' Residence Gateway Access Service ("GAS") FTTN 16 service provides a downstream speed of up to 16 Mbps and an upstream speed of up to 1 Mbps, and it is priced at $25.60 per access per month. On the other hand, their Residence GAS FTTN 25 service provides a downstream speed of up to 25 Mbps and an upstream speed of up to 10 Mbps, and it is priced at $25.62 per month. In other words, a difference between these two GAS FTTN services of 9 Mbps in download speed and 9 Mbps in upload speed only results in a total price difference between them of $0.02 per access per month! The cost of an optional 7 Mbps upstream speed only should be much less than that or, in other words, virtually zero.

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[1] *Disposition of review and vary applications with respect to wholesale high-speed access services: Introductory statement*, Telecom Regulatory Policy CRTC 2013-70, 21 February 2013; *Canadian Network Operators Consortium Inc. – Application requesting relief to address implementation of the capacity model approved in Telecom Regulatory Policy 2011-703*, Telecom Decision CRTC 2013-72, 21 February 2013; Canadian Network Operators Consortium Inc. – Application to review and vary Telecom Regulatory Policies 2011-703 and 2011-704, Telecom Decision CRTC 2013-73, 21 February 2013 ("TRP 2013073").

10. This result is not surprising since the cost of any increased capacity driven by a higher upload speed will be recovered through the amount of capacity purchased by wholesale customers at the applicable capacity-based billing ("CBB") rate. In other words, if the use of a 7 Mbps (instead of a lower) optional upload speed by certain end users of a wholesale customer drives up the peak capacity demand of that wholesale customer on the Bell Companies network, the wholesale customer will have to ensure that it purchases enough capacity to accommodate the extra demand. Hence, the Bell companies will be fully compensated through the CBB rate for the capacity-based traffic sensitive costs associated with the use of an optional 7 Mbps upload speed by their wholesale customers. The increased upload speed will not drive much, if any, new costs on the access side, since those costs are essentially non-traffic sensitive.

11. It is clear that the approach employed by the Commission to price the Bell companies' HSA services would work perfectly well and would be fair to both the Bell companies and their wholesale customers when applied to price the Bell companies' optional upload speed service. Rates for this service derived using Phase II costs plus a 30% markup would be just and reasonable. There is no reason for the Commission to deviate from that pricing model in the case of this service, particularly when incumbents have previously been united in proposing that HSA rates be cost-based,[2] and that is precisely what the Commission has done so far.

12. CNOC also urges the Commission to resist any plea from the Bell Companies to charge $3.75 or any other amount per access per month for the wholesale optional 7 Mbps upload speed simply because it is consistent with the Bell companies' corresponding retail offering.[3]

13. The $3.75 rate is the same rate that the Bell Companies proposed in the filings that ultimately led to TRP 2011-703. According to the Bell Companies, the purpose of that rate was to "match the allowances and charges already established for the Companies' corresponding retail services offered in Ontario and Quebec" (emphasis added).[4] In other words, the $3.75 charge is clearly a usage based billing ("UBB") charge since it

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2 See, *e.g.*, TRP 2011-703, at para. 78 and *Wholesale residential high-speed access services – Capacity-based billing model service charge rates and related matters*, Telecom Decision CRTC 2012-636, 21 November 2012.

3 Bell companies letter dated 31 January 2012 associated with Bell Aliant Tariff Notice 400 and Bell Canada Tariff Notice 7345.

4 See paragraph 8 of the "Bell Canada Report on the Economic Evaluation for The Introduction of Gateway Access Service and High Speed Access Service-Fibre to the Node" dated 29 November 2010 and paragraph 9 of the Bell companies' 21 April 2011 "Report on the Economic Evaluation for the Introduction of Gateway Access Service-Fibre to the Node (Residential Access)", as well as The Companies(CRTC)14Feb12-1 TNs 400/7345.

is in no way related to costs incurred by the Bell Companies to provide that capability; however, the Commission has since TRP 2011-703 clearly rejected any UBB model for pricing HSA services. Allowing a UBB charge now would be entirely inconsistent with the Commission's approach to pricing HSA services since TRP 2011-703 was issued and would result, not only in a rate that is orders of magnitude larger than it should be, but would also provide for recovery of those costs both through this highly inflated rate and through the CBB charges paid to the Bell companies by wholesale customers for any additional capacity required to accommodate the incremental capacity associated with a 7 Mbps upload speed. In sum, such a UBB-based rate for an optional upload speed would not be just and reasonable.

14. In addition, a rate designed to match wholesale and retail rates for a wholesale optional 7 Mbps upload speed would implicitly impose "value for service" pricing principles applied in the retail market to the wholesale market as well. Such "value for service" pricing has no place in the pricing of wholesale services as recently demonstrated by the Commission when it lowered the markups in the Bell companies' wholesale business HSA rates to the markup levels included in their wholesale residential HSA rates.[5]

15. For all of these reasons, CNOC supports the principle that the Commission's pricing approach for optional upstream speeds should be consistent with the pricing approach approved for similar other ancillary HSA services in TRP 2011-703, namely Phase II costs plus a 30 percent markup.

**The rates approved by the Commission for wholesale business and residential 7 Mbps optional upload services should be adjusted retroactively to the original approval dates of those rates**

16. The $3.75 per access per month for the wholesale residential 7 Mbps optional upload speed was approved by the Commission on an interim basis in *Interim rates for wholesale residential and business high-speed access services*, Telecom Order CRTC 2011-377, 15 June 2011 ("TO 2011-377").[6] This occurred despite that fact that the Commission stated in TO 2011-377 that "it would not be appropriate to approve any usage model on an interim basis"[7]. The $3.75 rate was never explicitly considered in TRP 2011-703.[8]

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5 See paragraphs 28 through 34 of TRP 2013-73.
6 See TNC 2013-80, para. 9, footnote 8.
7 At para. 15.
8 *Supra*, note 6.

17. Since the $3.75 rate is UBB-based and not based on Phase II costs plus a 30% markup, it appears that the Commission inadvertently allowed this rate to continue being charged in TRP 2011-703, even though it is UBB-based, and as such, is fundamentally inconsistent with the CBB regime adopted by the Commission in that regulatory policy. As a result, the Commission committed an error in law in allowing that rate to persist after TRP 2011-703 was issued. Accordingly, CNOC urges the Commission to review and correct this error by adjusting this interim rate so that it will be based on Phase II costs and a 30% markup retroactive to 15 November 2011, which is the date that TRP 2011-703 was issued.

18. In the case of the wholesale business 7 Mbps optional upload speed, the rate was set at $0 in *Bell Aliant Regional Communications, Limited Partnership and Bell Canada – Introduction of a wholesale business fibre-to-the node high-speed access service and an optional upstream speed*, Telecom Order CRTC 2012-220, 13 April 2012.

19. CNOC would not object to having this rate adjusted retroactively as of 13 April 2012 so long as it is based on Phase II costs and a 30% markup. As noted by CNOC, based on the Bell companies' tariffed rates for other HSA services, the rate for a wholesale 7 Mbps optional upload speed (which should be the same for both residence and business use pursuant to TD 2013-73) should be between $0 and $0.02 per access per month.

**Modem certification issues need to be addressed for VDSL modems used in conjunction with the Bell companies' network**

20. DSL technology is standardized and so it should not generally be necessary for wholesale customers of ILECs to have their modems certified for use on ILEC networks. In fact, the issue of modem compatibility has only explicitly arisen in the context of VDSL technology; however even in that case, ILECs should simply provide sufficient information regarding the technical specifications of the VDSL technology that they employ in their networks so that their wholesale customers can select matching modems. This is what TELUS does and the process works quite well. The situation relating to the Bell companies at least in Ontario and Quebec is quite different.

21. Following TO 2011-377, when the Bell companies started providing speeds that require the use of VDSL technology, they required wholesale customers to use only one specific model of modem (the Alcatel CellPipe),

which was only available on a rental basis from the Bell Companies. The Bell Companies then withdrew the Alcatel CellPipe and started to offer the Sagemcom 2864 VDSL modems for all new GAS orders effective November 23, 2012. On that date Sagemcom modems also replaced 2Wire ADSL2+ modems, which were discontinued. Sagemcom modems were initially called "Wireless". They are now available to wholesale customers for rent at $8 per month or for purchase at $110, including shipping. As of February 11, 2013, this model of modem was renamed "Connection Hub". To date, the Bell companies have not allowed any additional modem types to be used in conjunction with VDSL technology on their networks, and the Sagemcom 2864 is only available exclusively through the Bell companies.

22. The Sagemcom modems are configured with firmware employed by the Bell companies for their retail customers, and they also sport the Bell logo even when they are provided to wholesale customers for their end-users' use! The Bell companies have advised that wholesale firmware would be available in the first quarter of 2013, but to date no such firmware has been made available. The retail firmware contained in the modem is very limited in its features. The Bell companies keep updating this firmware by "pushing" new versions automatically to the installed modem base without wholesale customer or end-user consent or knowledge.

23. Wholesale customers can buy the modems separately in bulk (with a minimum of ten modems per order), or individually in conjunction with each individual order for a GAS access. The Bell companies track the serial numbers of all purchased modems and do not allow a new end-user order to be placed without the inclusion of a modem serial number. A serial number cannot be re-used while it is associated with a particular GAS access. Since the ability to purchase modems just started a few months ago, it is not yet clear if the disconnection of an end-user will release the serial number to the pool of available and re-useable serial numbers such that it can be re-used by the end-user if it moves location or transfers its Internet access service to another service provider. If this capability is not automatically provided to wholesale customers, the lack of the capability would constitute a barrier to end-user transfers and a breach of the end-user transfer rules established by the Commission in *The customer transfer process and related competitive* issues, Telecom Regulatory Policy CRTC 2011-191, 18 March 2011.

24. In any case, there does not appear to be a valid technical reason for the Bell Companies to require the registration of modem serial numbers. Cable networks are shared and so there is a need to ensure that devices on those networks are tracked for technical and security reasons. Accordingly, modem registration been the practice

in those networks from the outset. However, that has never been the case for DSL technology which employs dedicated point-to-point accesses. The unnecessary complexity and competitive constraints introduced by the Bell Companies' modem registration requirements should be eliminated and CNOC urges the Commission to require the Bell companies to eliminate the requirement.

25. Another competitive barrier that should be eliminated is the forced branding of any modems provided to wholesale customers under the Bell logo. This practice should be banned as it prejudices competitors and competition.

26. The Bell companies use two types of DSLAM line cards, each using its own chipset. For the purpose of protecting the confidentiality of the associated manufacturer information, in the balance of these submissions, the DSLAMs, line cards and associated chipsets of the two manufacturers are called Type A and Type B respectively. Type A DSLAMs seem to be fully VDSL compliant, while Type B DSLAMs have some VDSL (and even ADSL2+) compatibility problems and the associated customer firmware employed by the Bell companies contains bugs. Thus, for example, modems connected to Type B DSLAMs often cannot attain the fully advertised upload speed, despite good line statistics.

27. The understanding of CNOC members is that some VDSL modems available commercially in the marketplace work well with Type A DSLAMs, but not very well with Type B DSLAMs. When a wholesale customer places an order for an end-user GAS access, the wholesale customer has no way of knowing whether that access will be connected to a Type A or Type B DSLAM. This information only becomes available after the installation of the service is complete. Accordingly, even if a commercially available modem could be found that is more compatible with Type B DSLAMs, which is not yet the case, and even if wholesale customers could stock two types of modems, one that works well with Type A DSLAMs and one that works well with TYPE B DSLAMs, the wholesale customer would not know which modem type should be provisioned with a particular GAS order and shipped to the end-user.

28. Interestingly, the Sagemcom 2864 VDSL modems appear to be more compatible than other modems with Type B DSLAMs, but, as noted above, they are far from trouble-free. One common problem experienced with these modems is a continuous or intermittent "ping no browse" phenomenon, whereby a modem can communicate with a website, but the website cannot actually be browsed, rendering the

corresponding Internet connection unusable in reality on either a continuous or intermittent basis. Despite this, the Bell Companies typically assess a diagnostic maintenance charge ("DMC") when end-users complain of problems arising from these well-known issues associated with the Bell companies' networks. CNOC requests that the Commission order the Bell Companies to cease levying DMCs in these circumstances, since the services issues clearly do not originate with the Bell companies' wholesale customers or their end-users, which is when the DMC is designed to apply.

29. Any VDSL-compliant modem should work well with all available types of DSLAM line cards. The problem is that Type B DSLAM line cards are technically deficient. The Bell companies appear to be reluctant to fix them, and so they prefer to use custom made VDSL modems to "hide" the problem, although even that is not working all that well. As a result, wholesale customers have been forced to obtain custom modems from Bell on a sole sourced and non-regulated basis.

30. Under these circumstances, it is critical for Bell to work towards rapid compliance with widely accepted VDSL standards. The Bell companies should be required to provide a timeframe, not exceeding a year, by which they will ensure that off-the shelf VDSL modems can be deployed ubiquitously within their networks, as TELUS does.

31. If this first option is not possible for some reason (for example, due to unavailability of a fix for Type B line cards or excessive costs to fix the problem), the Bell companies should be required to work collectively with multiple modem manufacturers and its wholesale customers to encourage the rapid (i.e., within one year) development and deployment of modems that work with both Type A and Type B DSLAMs.

32. If this second option is not practicable for some reason (for example, because modem manufacturers are not willing to make the necessary investment just to satisfy the market encompassed by the Bell companies' operating territories in at least Ontario and Quebec), then, as a last resort, the rental and sale of VDSL modems by the Bell companies to their wholesale customers should be regulated with the rental and purchase prices of the modems to be based on Phase II costs plus a 15% markup. This markup would reflect the essential nature of the sourcing of modems from the Bell companies only.

33. Given that the modem compatibility issues associated with the Bell companies' network appears to stem from the fact that the network is not fully compliant with normally applicable VDSL standards, wholesale customers should not bear any costs incurred by the Bell companies associated with the resolution of these technical issues.

34. Finally, CNOC notes that the kinds of technical issues associated with the Type B DSLAMs and corresponding modems has had an adverse, technical, financial, business and competitive impact on the Bell companies' wholesale customers and their end-users which translates into an undue negative impact on competition. For this reason, CNOC urges the Commission to require all incumbents to disclose any such issues that may arise to their wholesale customers as soon as the problems are known and to work with those customers to mitigate the impacts and eliminate, as quickly as possible, the underlying technical problems as quickly as possible.

35. CNOC members do not yet have a considerable amount of experience with VDSL modems in the operating territory of Bell Aliant in the Atlantic, or in the cases of SaskTel or MTS Inc. Therefore, CNOC urges the Commission to ask these three companies if they have faced any of the types of compatibility issues faced by the Bell companies in Ontario and Quebec, or if they have restricted (or are likely to have to restrict) the supply of modems compatible with their networks in any way based on technical compatibility considerations for VDSL-based (or ADSL 2+-based) services. If the same types of modem compatibility problems exist in these networks, or any sole sourcing issues are present in these Bell Aliant's Atlantic territory or in the territories of SaskTel or MTS Inc., then CNOC urges the Commission to apply the same solutions (in the same order of preference) that CNOC is recommending to resolve the issue in the case of the Bell companies.

Yours very truly,

William Sandiford
Chair of the Board and President

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