

February 16, 2021

**Via GC Key**

Mr. Claude Doucet  
Secretary General  
Canadian Radio-television and  
Telecommunications Commission  
1 Promenade du Portage  
Gatineau, | | Quebec  
J8X 4B1

**Re: Part I Application requesting expedited and temporary relief from Rogers Communications Canada Inc. concerning DOCSIS 3.0 modems**

Dear Mr. Doucet:

**I. INTRODUCTION**

1. The Competitive Network Operators of Canada (“**CNOOC**”) submits this application (“**Application**”) pursuant to sections 24, 27, 47 and 57, subsection 61(1) and paragraph 32(g) of the *Telecommunications Act*,<sup>1</sup> and Part I of the *Canadian Radio-television and Telecommunications Commission Rules of Practice and Procedure*,<sup>2</sup> and in reliance upon Telecom Order CRTC 2020-355.<sup>3</sup>
2. In this Application, CNOOC seeks an expedited Commission determination that competitors using Rogers Communications Canada Inc.’s (“**Rogers**”) Third Party Internet Access (“**TPIA**”) service be permitted to continue to activate DOCSIS 3.0 modems, when ordering speed tiers up to a maximum of 300 Mbps downlink, for a period of two years after the Commission’s determinations in this proceeding. This is in response to a requirement from Rogers to upgrade to DOCSIS 3.1 modems.
3. CNOOC’s concern is with the timing of this move.
4. CNOOC members, in line with the broader industry, are gradually upgrading to DOCSIS 3.1 modems. Crucially, however, DOCSIS 3.1 modems are in very short supply (with delays of up to one year) and the certification processes are expected to take many months. Furthermore,

<sup>1</sup> S.C. 1993, c. 38, as amended.

<sup>2</sup> SOR/2010-277, as am. to 6 August 2015.

<sup>3</sup> *Canadian Network Operators Consortium Inc. – Application for relief regarding conduct relating to Technicolor cable modems by Bragg Communications Incorporated, carrying on business as Eastlink*, 21 October 2020.

DOCSIS 3.0 modems are mid-lifecycle, and suitable for all but the highest speeds tiers (up to a maximum of 300 Mbps downlink). Requiring secondary ISPs to upgrade in a constrained supply environment is therefore unjustified.

5. The predominant concern is with Rogers, although CNOC understands that other TPIA providers have begun, or will soon begin, to take similar steps. CNOC members are concerned that new modem standards may be introduced and implemented will result in secondary ISPs being subject to unreasonable disadvantage.
6. CNOC is submitting this application on affected members' behalf, and also as the matter concerns the broader issue of ensuring wholesale access providers are not able to arbitrarily set standards for TPIA customers and in so doing impair their ability to compete for, and serve, end users.
7. Certain information contained in this application is filed in confidence with the Commission pursuant to section 39 of the *Telecommunications Act*, and the directions provided by the Commission in Broadcasting and Telecom Information Bulletin CRTC 2010-961.<sup>4</sup> Specifically, CNOC is attaching evidence from a third party modem supplier from which we have only obtained permission to file in confidence, and evidence that contains commercially sensitive material concerning DOCSIS 3.1 modem supply conditions for which CNOC has only, through a member, been able to obtain permission to share confidentially. As such, CNOC submits that this information qualifies as "information the disclosure of which could reasonably be expected [...] to affect contractual or other negotiations of any person" within paragraph 4(c) of BTIB 2010-961.

## II. FACTS

8. Rogers currently offers TPIA at the following speed tiers:
  - a. 1Mbps Upstream ("U") / 5 Mbps Downstream ("D");
  - b. 5MbpsU / 30 MbpsD;
  - c. 10MbpsU / 60Mbps;
  - d. 10MbpsU / 75MbpsD;
  - e. 15MbpsU / 150MbpsD;

<sup>4</sup> *Procedures for filing confidential information and requesting its disclosure in Commission proceedings*, Broadcasting and Telecom Information Bulletin CRTC 2010-961, 23 December 2010, as amended in Broadcasting and Telecom Information Bulletin 2010-961-1, 26 October 2012.

- f. 20MbpsU / 250MbpsD;
- g. 20MbpsU / 300MbpsD (Ontario only);
- h. 20MbpsU / 500MbpsD; and
- i. 30MbpsU / 1024MbpsD.

9. Section 9.2 of Rogers TPIA tariff<sup>5</sup> states:

9.2. The TPIA Service is provided only in connection with cable modems that are connected to and compatible with Rogers' access and distribution network and systems. Rogers will maintain a list of cable modem models that are connected to and compatible with Rogers' access and distribution network and systems by location. Rogers may change this list at any time with written prior notice when Rogers makes the decision to proceed with the change that results in a cable modem model no longer being connected to and compatible with Rogers' access and distribution network and systems. In all cases, a minimum of 6 months written notice is required.

10. Beginning in June of 2020, CNOC members that are Rogers TPIA customers began receiving from Rogers email correspondence titled "BULLETIN - UPCOMING CHANGES TO MINIMUM MODEM CERTIFICATION STANDARDS". A copy of such a notice is found at Appendix "A" hereto.

11. The "Rogers Modem Standards Notice" conveyed to TPIA customers that effective 4 January 2021:

- a. "the new minimum modem standard will be a DOCSIS 3.0 modem with 8 upstream channels when ordering speed tiers up to a maximum of 300 Mbps downlink", and that "DOCSIS 3.0 Modems with less than 8 upstream channels will no longer be available when activating a modem", and
- b. "Effective June 1, 2021 we will stop activating on all DOCSIS 3.0 modems"; and
- c. "Existing end customers provisioned with DOCSIS 3.0 modems with less than 8 upstream channels will receive continued support" if they were active on January 4, 2021, among other conditions.

12. As of June 1, the number of modems that can be used to provide service via Rogers TPIA will be reduced from 15 to 4 based on modems currently available as of January 2021. As a practical matter, there will actually only be 2 modems available for use as the 4 includes a non-WIFI and WIFI variant of the Technicolor and Hitron modems.

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<sup>5</sup> Rogers Access Services Tariff, CRTC 21530, s. 9.

13. On January 8, 2021, Rogers sent to TPIA customers a subsequent TPIA program bulletin confirming Rogers' changes to minimum modem standards.
14. CNOC understands that the primary advantage of upgrading from DOCSIS 3.0 modems to 3.1 modems is spectral efficiency, *i.e.*, that the newer modems will allow the transmission of higher volumes of data more efficiently, which will result in less network congestion. CNOC members, in line with the broader industry, are gradually upgrading to DOCSIS 3.1 modems, and we support this transition. There are a number of concerns however with the timing of Rogers' move.
15. DOCSIS 3.0 modems are mid-lifecycle, and suitable for all but the highest speeds tiers: up to a maximum of 300 Mbps downlink.
16. A number of CNOC members have in their inventory a significant inventory of DOCSIS 3.0 modems.

*DOCSIS 3.1 modem supply concerns*

17. The availability of the 4 (2, practically speaking) DOCSIS 3.1 modems is severely limited. One CNOC member's supplier of Technicolor modems (which is the Canadian supplier for Technicolor) has advised that there is and will continue to be severely restricted supply of the Technicolor 3.1 modems due to Technicolor facing a widely reported<sup>6</sup> shortage of necessary Broadcom chips required for production.
18. Attached as Appendix "B" hereto is a document by #####, a major modem supplier, titled "##### Supply Chain Customer Updates", dated January 2021. This document highlights how "[s]emiconductor capacity and supply is falling behind demand", which illustrates CNOC's concern that without relief from the Commission, CNOC members using Rogers TPIA service will not be able to acquire adequate supply of DOCSIS 3.1 modems for numerous months, and thus will be unable to serve their existing customers, or acquire new ones, for an equally long time.

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<sup>6</sup> See *e.g.*, [Broadcom says chip orders require six months' lead time](#), BNN Bloomberg, April 16, 2020, online: [Broadcom says chip orders require six months' lead time - BNN Bloomberg](#). See also Boom Times Continue for Chipmakers in Spite of Industry Chaos, Real Money, December 12, 2020, online: [Boom Times Continue for Chipmakers in Spite of Industry Chaos - RealMoney \(thestreet.com\)](#): "On Broadcom's Thursday earnings call, CEO Hock Tan said that he sees strong demand from cloud and telco clients continuing "as far as you can see" in 2021, and that (with Broadcom's lead times now above 6 months, and its orders non-cancellable) his firm's 2021 visibility looks "remarkably better than we usually have at this point" in the year."

19. We also attach as Appendix “C”, in confidence, an email chain between one major modem manufacturer ##### and #####, an equipment supplier to at least one CNOC member, wherein the manufacturer indicates that their lead time is “8-10 months”.
20. At least one CNOC member has also been advised by another modem manufacturer that they have been unable to get to the certification stage for a DOCSIS 3.1 modem as a result of non-standard technical restrictions imposed by Rogers. More specifically, the requirements imposed by Rogers to certify a DOCSIS 3.1 modem include requirements that are not part of the CableLabs DOCSIS 3.1 specifications, which represents the industry standard specifications used by all major modem manufactures and cable carriers. The modifications to the firmware required to meet Rogers’ non-standard requirements would be unsupported by that modem manufacturer’s chipset provider. As a result, the modem manufacturer in question has been unable to get a DOCSIS 3.1 modem certified for Rogers because of non-standard requirements imposed by Rogers that are not part of the industry standard CableLabs DOCSIS 3.1 specifications.
21. Given that some CNOC members have in their inventory a significant stock of DOCSIS 3.0 modems, they should be permitted the opportunity to earn a return on their inventory. This is especially so given certain customer segments can be adequately served using those modems, and the cost of a DOCSIS 3.1 modem is generally \$60-80 more per unit than the cost of a DOCSIS 3.0 modem.
22. Without the time-limited relief requested in this application, and in the absence of a viable supply of DOCSIS 3.1 modems, those members will be financially penalized and left with no alternatives to serve their existing customers or new customers.
23. CNOC understands from materials provided by one CNOC member, and from its own interactions with Rogers on December 9 and December 11 of 2020, that Rogers will make no exceptions for this. On February 3, 2020, CNOC provided Rogers with a courtesy advance notice that an application for time-limited relief would be forthcoming.

#### **IV. TELECOM DECISION 2020-355: PRIMARY ISPS MUST PROVIDE CLEAR AND SUPPORTABLE REASONS FOR MODEM STANDARDS**

24. TPIA providers must provide clear and supportable reasons for modem standards.
25. In January 2020 CNOC brought forward to the Commission an application challenging Eastlink’s decision to remove Technicolor modems from its list of approved TPIA modems. Eastlink had done this on the basis that a number of that type of modem in question had exhibited radiofrequency defects.

26. CNOOC, whose affected members faced a great cost of replacing these modems, argued to the Commission that CNOOC members were being deprived of their preferred choice of cable modem. CNOOC argued that (i) Eastlink’s conduct was arbitrary and unjustified, and subjected its TPIA customers to an undue and unreasonable disadvantage, in violation of subsection 27(2) of the *Telecommunications Act*, to the point where this type of behaviour threatened to undermine competition; and (ii) Eastlink had an obligation under language in its tariff to provide clear and supportable reasons for removing the modem from its approved list, and that removing the modem was an extreme solution to what was a minor equipment issue that could have been addressed in a more surgical manner. Eastlink argued that it should have the right to ban equipment from its network that is not 100 per cent reliable, and besides, TPIA customers could use a number of different modems from the approved list.

27. In Telecom Decision 2020-355,<sup>7</sup> the Commission agreed with CNOOC’s argument about the tariff requirement, and that “a TPIA provider seeking to remove a model from its approved list should also provide clear and supportable reasons”, and agreed that the modems were, for the most part, non-defective. The Commission directed Eastlink to rescind its removal of the modems in question from its approved list. The CRTC disagreed with CNOOC’s *Telecommunications Act* argument, on the basis that CNOOC did not provide sufficient evidence of competitive impact. Crucially, the Commission concluded that a broad view of the tariff in question should be taken, and that network incompatibility was the threshold for a TPIA provider removing a modem from its approved list:

The tariff should be interpreted broadly in accordance with the Commission’s framework for cable modem certification, as prescribed in Telecom Decision 2004-37 and described above. ***The Commission is of the view that the more accurate interpretation is that Eastlink would need to make a change to its network that renders the Technicolor modem incompatible with or no longer able to connect to its network in order to remove it from the approved list. [emphasis added]***<sup>8</sup>

28. CNOOC therefore submits in addition to CNOOC’s arguments concerning the need for a time-limited relief in the context of a constrained DOCSIS 3.1 supply environment, and the remaining lifecycle of DOCSIS 3.0 modems, that Rogers has failed to meet the Commission’s requirements to provide clear and supportable reasons for the timing of this transition.

29. In this case, section 9.2 of Rogers’ TPIA tariff constrains it to making changes to its approved modem list only “when Rogers makes the decision to proceed with the change that results in a cable modem model no longer being connected to and compatible with Rogers’ access and distribution network and systems.”

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<sup>7</sup> *Canadian Network Operators Consortium Inc. – Application for relief regarding conduct relating to Technicolor cable modems by Bragg Communications Incorporated, carrying on business as Eastlink*, Telecom Decision CRTC 2020-355, 21 October 2020.

<sup>8</sup> *Ibid.*, para. 25.

30. In this Application, CNOC submits that Rogers has failed to provide *clear* and *supportable* reasons for the removal of DOCSIS 3.0 modems from its approved list, and furthermore, there is no evidence that the DOCSIS 3.0 modems are no longer compatible with Rogers' network.
31. CNOC therefore requests that the Commission require Rogers to rescind its removal of the modems in question from its approved list until two years following the Commission's determinations in this matter. CNOC submits this is an appropriate timeframe to allow secondary ISPs to deploy remaining stocks of 3.0 modems, and procure 3.1 modems in a very tight supply environment that is characterized by delays in procurement and certification.
32. CNOC recognizes that the Commission appears, in certain circumstances, to have allowed a primary ISPs to require modem upgrades. In response to a TN by Shaw that would have imposed certain modem restrictions, CNOC had requested that the Commission direct Shaw to allow TPIA customers to use DOCSIS 3.0 modems in place of DOCSIS 3.1 modems in order to offer the Internet 300 service until such time as the DOCSIS 3.1 modems became certified. Shaw responded that though it may be technically possible to provision a DOCSIS 3.0 modem to access the Internet 300 service, it was requiring TPIA customers to offer the Internet 300 service by only using DOCSIS 3.1 modems in order to ensure the most efficient use of capacity and avoid congestion in its network.
33. In Telecom Order CRTC 2018-442,<sup>9</sup> the Commission accepted Shaw's argument, stating that "though it may be technically possible for the Internet 300 service to be provisioned using DOCSIS 3.0 modems, the Commission considers that it is appropriate for Shaw to require TPIA customers to use DOCSIS 3.1 modems for the Internet 300 service in order to ensure the most efficient use of network capacity."
34. In this case, CNOC is not asking that its members be allowed to use DOCSIS 3.0 modems, in perpetuity, for all speed bands. Rather, CNOC seeks time-limited relief to allow use of DOCSIS 3.0 modems for speed tiers up to 300 Mbps, given the supply constraints and given the remaining useable lifecycle of DOCSIS 3.0 modems.

## **V. RELIEF REQUESTED**

35. CNOC has established that the DOCSIS 3.0 modems are serviceable, and that Rogers has failed to justify removing them at this time from its approved modem list. CNOC recognizes the right of primary ISPs to set standards for their networks, for legitimate network management

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<sup>9</sup> *Shaw Cablesystems G.P. – Introduction of a new third-party Internet access speed band and the Internet 300 access speed tier*, Telecom Order CRTC 2018-442, 29 November 2018.

services, however blocking 3.0 modems from its network, at this time, is premature given the supply environment.

36. Furthermore, DOCSIS 3.0 modems allow competitors to provide lower and medium speeds at lower prices, and therefore allows CNOC members to serve an important market segment. While CNOC indeed seeks access to the highest speeds available on primary ISPs' networks, CNOC members should continue to be able to serve those customers seeking lower speeds and lower costs.

37. For the reasons above, CNOC therefore requests an expedited Commission determination that competitors using Rogers TPIA service be temporarily permitted to continue to use DOCSIS 3.0 modems on speed tiers up to a maximum of 300 Mbps downlink, for a period of two years after the Commission's determinations in this proceeding.

Yours truly,

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Appendix "A" – Rogers' TPIA Program Bulletin, July 2020.

Appendix "B" – FILED IN CONFIDENCE - "##### Supply Chain Customer Updates"

Appendix "C" – FILED IN CONFIDENCE – Correspondence between equipment suppliers concerning lead times

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