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Mr. Claude Doucet  
Secretary-General  
Canadian Radio-television and  
Telecommunications Commission  
1 Promenade du Portage  
Ottawa, ON K1A 0N2

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CRTC File No: 8620-R63-201705675

Dear Mr. Doucet:

**Re: Rogers Communications Canada Inc. – supplementary comments in TNW Wireless Inc.’s Part 1 Application – Wholesale Roaming Agreements required under Telecom Regulatory Policy CRTC 2015-177**

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1. Rogers Communications Canada Inc. (“Rogers”) is filing the following supplementary comments on the responses filed by TNW Wireless Inc. (“TNW”) to the requests for information (RFIs) dated July 13, 2018. Rogers requests that the Commission consider the following supplementary comments alongside its previous interventions in this proceeding.
2. Rogers maintains its previous view that the Commission should deny the final relief requested by TNW.
3. Failure by Rogers to respond to any particular position or argument in TNW’s responses should not be interpreted as agreement with such position or argument.

**Introduction**

4. In July 2017, TNW filed a Part 1 Application with the Commission seeking interim and final relief. In its application, TNW asserted that Bell Canada (“Bell”) and TELUS Communications Inc. (“TELUS”) denied its requests for wholesale mandated roaming service in contravention of the Commission’s wholesale roaming regime. Among other things, TNW asked the Commission to compel Bell and Telus to provide it with wholesale roaming service and to determine that the use of iPCS while on Wi-Fi using Wi-Node cannot be deemed roaming.<sup>1</sup>
5. In August 2017, Rogers and other parties filed interventions in response to TNW’s Part 1 Application, explaining why TNW’s application should be dismissed by the Commission.

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<sup>1</sup> TNW Part 1 Application, para. ES-19.

6. In October 2017, the Commission issued a decision denying the interim relief requested by TNW and suspending its consideration of the final relief sought by TNW until it had concluded its *Reconsideration of Telecom Decision 2017-56 regarding final terms and conditions for wholesale mobile wireless roaming service*.<sup>2</sup>
7. In March 2018, the Commission issued its decision for TNC 2017-259<sup>3</sup> and provided TNW with the opportunity to supplement its application in light of the Commission's decision.
8. In April 2018, TNW filed its supplemental information in which it maintained that its proposed iPCS service is compliant with the current regulatory framework for mandatory roaming and that the Commission should grant the final relief sought by TNW.
9. In May 2018, Rogers and other parties filed interventions in response to TNW's supplemental information, explaining why TNW's application should be dismissed by the Commission.
10. On July 13, 2018, the Commission issued a letter and requests for information to TNW.
11. On August 27, 2018, TNW filed its responses to the July 13 requests for information, withholding a portion of its responses from other parties on the basis that they contained confidential information.
12. On August 30, 2018, the Commission issued a letter to TNW, directing it to provide an abridged version of the confidential responses with an explanation of how the information is confidential and why the information should not be publicly disclosed.
13. On September 4, 2018, TNW filed an abridged version of its confidential responses along with TNW's explanation of how the information is confidential and why it should not be publicly disclosed.
14. Having reviewed TNW's abridged and unabridged responses to the requests for information, Rogers' view is that no additional information has been provided by TNW which supports its requested final relief and Rogers maintains its view that TNW's requested relief should be denied.

#### **Responses to RFIs do not support TNW's requested final relief**

15. While TNW continues to assert that TD 2018-97 supports its requested forms of final relief, this decision unequivocally reaffirms the Commission's prior conclusion that public Wi-Fi networks are not part of a wireless service provider's home network.<sup>4</sup> Because they will roam permanently and not incidentally, TNW iPCS customers who reside outside of TNW's home territory in Northern Canada are not eligible for roaming service under the mandated roaming

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<sup>2</sup> Telecom Notice of Consultation CRTC 2017-259 (TNC 2017-259), July 2017.

<sup>3</sup> Telecom Decision CRTC 2018-97, *Reconsideration of Telecom Decision 2017-56 regarding final terms and conditions for wholesale mobile wireless roaming service* ("TD 2018-97"), March 2018.

<sup>4</sup> TD 2018-97, para. 59.

regime. The use of mandatory roaming in the manner proposed by TNW would amount to resale of the national service providers' mobile wireless networks.

16. None of TNW's responses to the July 13, 2018 requests for information change this view and only confirm that TNW's intent is to circumvent the current regulatory framework for mandatory roaming. The current regulatory framework clearly establishes that roaming does not include resale. The use of mandatory roaming for permanent roaming or resale would undermine the incentives for TNW and potentially other competitors to invest in their own facilities as they would rely on low cost regulated access to the national wireless carriers' networks instead of building out their own.
17. In TD 2018-97, the Commission decided to maintain its existing exclusion of Wi-Fi connectivity from the definition of "home network." The Commission gave several important reasons for not expanding the definition of home network to include Wi-Fi connectivity, including the fact that including Wi-Fi access would introduce regulatory uncertainty,<sup>5</sup> it would have an uncertain impact on affordability,<sup>6</sup> and there is a risk that it would have a negative impact on network investment.<sup>7</sup>
18. As Rogers explained in its May 3, 2018 and August 4, 2017 interventions, the only notable difference between TNW's iPCS service and other Wi-Fi first service providers, is the artificial use of TNW's licensed spectrum on its small mobile wireless network in Northern Canada, while its customers are wirelessly connected using W-Fi access thousands of kilometers away. As Rogers explained in its prior interventions to this proceeding, there is no technical need for the iPCS service to utilize any part of TNW's radio access network (RAN) and its licensed spectrum while a customer is using a Wi-Fi hotspot in another part of the country.
19. Rogers generally notes that some of TNW's responses to the requests for information are unclear and confusing, particularly with respect to the reasons why its proposed iPCS service connects back to TNW's RAN and licensed spectrum when its customers are already served using public Wi-Fi access elsewhere.
20. As was the case with TNW's Part 1 Application and supplemental information, none of its responses to the requests for information adequately explain why the connection back to TNW's RAN and licensed spectrum is necessary.
21. For example, in its preamble to its responses to Questions 12 to 15, TNW explains that devices must have some connectivity back to their home core network in order to receive phone calls or receive text messages and that the lack of a remote connection back to the home core network will result in phone calls going straight to voicemail.<sup>8</sup>

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<sup>5</sup> TD 2018-97, para. 57.

<sup>6</sup> TD 2018-97, para. 66.

<sup>7</sup> TD 2018-97, paras. 69 and 75.

<sup>8</sup> TNW Responses to Requests for Information of July 13, 2018, para. 4.

22. Rogers does not dispute that connectivity back to the home core network is beneficial for the reasons outlined by TNW. Connectivity back to the home core network is one of the key capabilities which enable modern wireless services and is nothing new. However, TNW's preamble completely sidesteps the key question regarding why TNW's iPCS makes use of TNW's RAN and licensed spectrum to achieve this connectivity. As Rogers has already noted, the use of TNW's RAN and licensed spectrum for this purpose is completely unnecessary.
23. Similarly, in its response to the Commission's request that TNW explain the rationale for connecting to its core network using base transceiver stations (BTS) and licensed spectrum, TNW provides the following opaque and inadequate response:

**Question 14:**

**a. Explain the rationale for connecting to your core network via BTS and licensed spectrum rather than via direct IP connectivity to your core.**

This question again relates to the systems "keep alive" protocol which provides iPCS with an open source, cross platform option versus the direct IP option which requires users to use proprietary and more costly systems. The BTS and licensed spectrum connections are inexpensive with no license fees and universal (independent of phone device). It operates transparently over smartphones and core networks while respecting GSM standards. Furthermore the system does not and will not require updating and upgrading over time even as telecommunications systems will soon evolve to 5G standards.<sup>9</sup>

24. TNW's answer fails to explain why it has deliberately designed its service to remotely use its RAN and licensed spectrum while, to Rogers' knowledge, no other mobile wireless network vendor, mobile wireless service provider, or Wi-Fi first service provider in the world has designed their networks and services to operate in this unnatural manner. Instead, they remotely connect back to the core network using some form of backhaul or interconnection, without the need to also connect to the RAN and licensed spectrum.
25. In contrast to its unclear response to Question 14 a), TNW previously boasted in its Part 1 Application that "*iPCS is the result of innovators looking at a specific telecommunications problem within an established regulatory framework and developing a technology to deal with it*".<sup>10</sup> In other words, iPCS technology has been developed so that TNW can circumvent the fact that the regulatory framework precludes Wi-Fi access from forming part of a wireless carrier's home network, and a wireless carrier must first serve its customers using its home network RAN in order to be eligible for mandatory roaming. Since, by its own admission, TNW has developed iPCS in an attempt to overcome a "*problem*" created by the established regulatory framework, it is concerning that it makes no mention of this rationale in its response to Question 14 a).

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<sup>9</sup> TNW Responses to Requests for Information of July 13, 2018, para. 18.

<sup>10</sup> TNW Part 1 Application, para. 53.

26. TNW's response to Question 14 a) also inaccurately states that "*licensed spectrum connections are inexpensive with no licence fees*". Contrary to TNW's claim, all Canadian licensees holding 850 MHz Cellular spectrum must pay spectrum licence fees to Innovation, Science and Economic Development (ISED) each year.<sup>11</sup> In addition, since it is not necessary for TNW to use its licensed spectrum to connect its customers already using public Wi-Fi access thousands of miles away, TNW's proposed use of licensed spectrum in this manner would be an inefficient use of the scarce spectrum resource and would be contrary to ISED's policy objective of promoting more efficient use of spectrum.<sup>12</sup>
27. In addition, TNW's response to Question 14 b) is at best inadequate and at worst evasive where it states the following:

***b. Provide details on the benefits of this approach. For example, are there services that can only be provided using the company's approach?***

There is no other way to provide the services offered without a specialized and expensive core network. We reiterate that it is also the only way to provide services on **virtually all** iOS and Android based smartphones.<sup>13</sup>

28. While it may be true that there is no other way to provide wireless services without the use of a core network, TNW fails to explain whether it is necessary to use TNW's RAN and licensed spectrum to provide service to customers using Wi-Fi access thousands of miles away. This is the primary issue at hand and TNW's answer falls short of addressing this important matter. TNW has failed to demonstrate that its proposed approach is necessary and Rogers continues to believe that it is simply an attempt to circumvent the requirements of the regulatory framework for mandatory roaming.
29. In addition, in the preamble to its responses to Questions 12 to 15, TNW is at pains to explain that whenever customers outside of its home territory are connected to public Wi-Fi access, they are incapable of attaching to a visited public mobile network. As such, TNW suggests that these customers cannot be considered to be permanently roaming. For example, TNW asserts the following in this regard:

The main difference between the use of Wi-Fi service by an wireless service provide and iPCS is that at all time while an iPCS user is on Wi-Fi, its SIM module has no valid IMSI present therefore the device is detached from the VPMN, unregistered on the VPMN core network, not using the 3GPP radio during that time while smartphone operating system disable that radio. This has the added benefit of increasing battery life.

What the CRTC had to take in consideration in its 2017-56 decision and 2017-259 public notice were scenarios where a smartphone device was using an *over-the-top* VoIP

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<sup>11</sup> ISED, *Spectrum Licence Fee Calculations for Cellular and Incumbent Personal Communications Services (PCS) (CPC-2-1-10)*, Issue 1, February 2005, section 5.2 and *Renewal Process for Cellular and Personal Communications Services (PCS) Spectrum Licences*, March 2011, section 4.

<sup>12</sup> ISED, *Licensing Procedure fro Spectrum Licences for Terrestrial Services (CPC-2-1-23)*, Issue 4, October 2015, section 1.

<sup>13</sup> TNW Responses to Requests for Information of July 13, 2018, para. 18.

application or a form of IMS client while on Wi-Fi and at the same time using licensed radio spectrum, maintaining device attached to a VPMN Radio Access Network and using network resource while effectively the wireless provider users were not connected to their own core network but instead registered to a traditional VoIP server - as such using the terms and definitions of *Extending the HPMN*.

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The questions one obviously would pose are; On which operator RAN an iPCS users without an IMSI would be deemed roaming on when the 3GPP radio is turned off? and; Which wholesale roaming service agreement would be breached, still, if such user would be considered to be “permanently roaming” while not attached directly to any VPMN RAN?<sup>14</sup>

30. TNW’s assertions on this point ignore the fact that the Commission has already decided that public Wi-Fi access is not included in the definition of a “home network” for the purposes of roaming. The fact that TNW’s iPCS customers outside its home territory cannot attach to a visited network while they are connected to Wi-Fi access is irrelevant. Since these customers are not served by a home RAN using licensed mobile spectrum, they are therefore ineligible for mandatory roaming and their roaming on the national carriers’ mobile wireless networks is not incidental roaming, but is permanent roaming, or resale, which are not permitted under the current regulatory framework.
31. Lastly, it is also important to note in this regard that TNW is incapable of serving its customers outside of its home network territory without the use of either public Wi-Fi access, or mandatory roaming. TNW’s unnecessary and artificial use of its home network RAN using iPCS cannot be used to provide service to these customers absent public Wi-Fi or mandatory roaming. This is determinative of the issue of whether TNW’s customers outside its home territory are served by a home network. Clearly they are not. Rather, they rely on either public Wi-Fi access (which the Commission has determined does not constitute a “home network” for the purpose of mandatory roaming), or mobile wireless access using mandatory roaming. Since this use of mandatory roaming would not be incidental, it is therefore not permitted by the current regulatory framework.

### **TNW’s request for final relief should be denied**

32. The Commission has not extended the definition of “home network” to include public Wi-Fi and TNW’s iPCS customers outside its home territory must rely either on Wi-Fi access or mandatory roaming. In addition, since the facts of TNW’s application have not changed in its responses to the requests for information, TNW’s iPCS technology is therefore not compliant with the regulatory framework established by the Commission in TD 2017-56 and TD 2018-97 and TNW is not entitled to mandatory roaming for its iPCS customers who reside outside its home territory.
33. For these reasons, the Commission should deny TNW’s requested final relief.

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<sup>14</sup> TNW Responses to Requests for Information of July 13, 2018, pp. 11-12.

## **Conclusion**

34. Although a period of regulatory uncertainty might have followed from the Commission's reconsideration of TD 2017-56, that uncertainty was put to rest by TD 2018-97 which definitively concluded that public Wi-Fi networks do not act as extensions of a wireless service provider's home network. Notably TD 2018-97 makes no distinction for any possible remote use of licenced spectrum while customers are connected to Wi-Fi.
35. Applied to TNW, this means that its iPCS customers using Wi-Fi access would not use TNW's home network as required by the mandatory roaming framework. Consequently, iPCS customers who live outside of TNW's small network footprint would exclusively depend on TNW's wholesale roaming providers for mobile wireless connectivity. This would be resale and permanent roaming which the Commission and ISED have repeatedly disallowed.
36. All of this is respectively submitted by Rogers.

Regards,



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HS/jt

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