Canadian Radio-television and Telecommunications Commission
Conseil de la radiodiffusion et des télécommunications canadiennes

Telecom Decision CRTC 2014-77

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Ottawa, 20 February 2014

Shaw Communications Inc. – Application concerning the administration of TELUS Communications Company's tariff for support structure service

File number: 8622-S9-201311100

In this decision, the Commission determines that the Support Structure Service item of TCC's General Tariff should be modified to read that a licensee is not required to apply for a permit to place strand equipment on its own cable on strand leased from TCC. The Commission also determines that other incumbent local exchange carriers that provide support structure services are to show cause why the same determination should not be reflected in their tariffs.

Introduction

1. The Commission received an application from Shaw Communications Inc. (Shaw), dated 10 July 2013, concerning the administration of Item 404 – Support Structure Service (Item 404) of TELUS Communications Company's (TCC) General Tariff. TCC's support structure service is a tariffed wholesale service that makes support structures[1] available to third parties for use as an input to provide competitive retail services.

2. Shaw requested, among other things, that the Commission initiate an expedited hearing process pursuant to Broadcasting and Telecom Information Bulletin 2009-38 in order to resolve a dispute between the two companies. Specifically, Shaw indicated that the dispute arose when it received a notification from TCC that, pursuant to Item 404, it was required to file an application for, and obtain, a permit[2] to attach its WiFi[3] equipment to its own cable, which is installed on strand[4] leased from TCC.

3. By letter dated 30 July 2013, the Commission denied Shaw's request for an expedited hearing process because it considered that the request did not meet all the criteria set out in Broadcasting and Telecom Information Bulletin 2009-38 for such a process. In particular, the Commission considered that the matters raised by Shaw's

[1] "Support structures" are supporting structures (e.g. poles, strand, and conduit) that an incumbent local exchange carrier (ILEC) either owns or has the right to provide access to. For the purposes of this decision, these structures are referred to as "ILEC support structures."
[2] A permit is the written approval of an application to use ILEC support structures.
[3] WiFi is a technology that allows an electronic device to exchange data or connect to the Internet wirelessly using radio waves.
[4] Strands are steel wires that support cables between two poles.

application were of potential relevance to the industry as a whole, given the similarly worded support structure service tariff items of the various incumbent local exchange carriers (ILECs) and the fact that numerous carriers attach equipment to ILEC support structures. The Commission also considered that it would be beneficial to have input on the matters raised in Shaw's application from a broader range of stakeholders. As such, the Commission determined that it would consider Shaw's application in accordance with the rules set out in Part 1 of the *Canadian Radio-television and Telecommunications Commission Rules of Practice and Procedure*. All ILECs were made parties to this proceeding.

The application

4. Shaw stated that, following its September 2011 announcement of its new WiFi Internet access service, Shaw Go WiFi, TCC informed Shaw that it would have to apply for a permit under Item 404 before it could insert WiFi equipment into its own cables located on TCC's strand. Shaw added that it then received notices from TCC, dated 24 May and 17 June 2013, alleging the unauthorized attachment[5] of Shaw WiFi strand equipment[6] on TCC support structures. Shaw further stated that although TCC's notices were issued specifically with respect to WiFi equipment, in issuing such notices, TCC has taken the position that its tariff requires permits for all strand equipment, which is a broader application of TCC's support structure regime than the company has previously employed.

5. Shaw submitted that, for the purposes of TCC's tariff, strand equipment, including WiFi strand equipment, is not subject to a rental rate and does not affect the consumption of capacity of support structures; therefore, it does not require prior approval and permitting.

6. Shaw argued that TCC's position is inconsistent with decades of established practice. Shaw submitted that cable companies have routinely inserted strand equipment, such as amplifiers, taps, line extenders, and splitters, into their cables placed on ILEC strands for the purpose of providing cable television, Internet access, and a range of other services. Shaw stated that neither TCC nor any other ILEC that provides support structure services to Shaw has ever required a permit application and prior approval for the insertion of strand equipment into a cable on the ILEC's strand.

7. Shaw submitted that it is clear that TCC has singled out WiFi strand equipment based on a perceived competitive threat posed by Shaw's innovative deployment of WiFi technology. Shaw argued that TCC's proposal to apply its support structure regime more broadly would (i) harm Shaw's customers' ability to access the

[5] Under Item 404, "An unauthorized attachment charge [of $100] shall apply where a Licensee has installed a Facility ... on or in Support Structures, for which a Permit has not previously been issued." Licensees are the cable television undertakings or Canadian carriers that attach their facilities, such as wires, onto ILEC support structures to provide services to consumers.

[6] For the purposes of this decision, "strand equipment" refers to communications-related equipment inserted into cabling located on ILEC strand.

low-cost and highly effective alternative to wireless broadband service that Shaw Go WiFi provides; (ii) be harmful to consumers in Shaw's operating territory; and (iii) be contrary to the public interest objective of promoting facilities-based competition.

8. Shaw argued that because the WiFi equipment in question is designed to be inserted into overhead cabling, just like older-generation forms of strand equipment, there is no basis to single it out and treat it differently from other strand equipment. Shaw submitted that no ILEC, including TCC, has required permits for strand equipment, with no apparent negative consequences from a safety or technical perspective.

9. Shaw requested that the Commission (i) make a determination that TCC's established administrative procedures and practices in relation to the insertion of amplifiers or other associated equipment into cables on TCC strand are consistent with the provisions of Item 404; and (ii) issue an order requiring TCC to withdraw the notices of alleged unauthorized attachment with respect to Shaw's WiFi equipment inserted into cable located on TCC strand.

10. The Commission received interventions and/or responses to interrogatories on Shaw's application from Amtelecom Limited Partnership (Amtelecom) and People's Tel Limited Partnership (People's Tel), carrying on business as EastLink; Bell Aliant Regional Communications, Limited Partnership and Bell Canada (collectively, the Bell companies); Bragg Communications Inc., carrying on business as EastLink; the Canadian Independent Telephone Company Joint Task Force, on behalf of various members of the Association des Compagnies de téléphone du Québec inc. (ACTQ)[7] and the Independent Telecommunications Providers Association (ITPA);[8] Cogeco Cable Inc., Rogers Communications Partnership, and Quebecor Media Inc., on behalf of its affiliate Videotron G.P. (collectively, the Cable carriers); the Canadian Cable Systems Alliance Inc. (CCSA);[9] the City of Edmonton; MTS Inc. (MTS), on behalf of itself and Allstream Inc.; Saskatchewan Telecommunications (SaskTel); TCC; and Wayne Leong. The public record of this proceeding, which closed on 4 October 2013, is available on the Commission's website at www.crtc.gc.ca under "Public Proceedings" or by using the file number provided above.

Issues

11. The Commission has identified the following issues to be addressed in this decision:

    I. Does Item 404 require a permit for the insertion of strand equipment, including WiFi devices, into cabling attached to TCC strand?

[7] These ACTQ members are CoopTel, La Cie de Téléphone de Courcelles Inc., La Compagnie de Téléphone de Lambton Inc., La Compagnie de Téléphone de St-Victor, La Compagnie de Téléphone Upton Inc., Le Téléphone de St-Éphrem inc., Sogetel inc., Téléphone Guèvremont inc., and Téléphone Milot inc.
[8] These ITPA members are Bruce Telecom, CityWest Telephone Corporation, and Ontera.
[9] The CCSA represents 115 small and independent distributors operating in all Canadian jurisdictions except New Brunswick and Prince Edward Island.

II. If yes, is a permit requirement for strand equipment inserted into cabling attached to TCC strand warranted?

I. Does Item 404 require a permit for the insertion of strand equipment, including WiFi devices, into cabling attached to TCC strand?

12. TCC's tariff item 404.3(1) states (in part) as follows:

> The Licensee must submit Applications to the Company for each use of, or connections to, Support Structures for additions to, rearrangements, transfers, replacements or removals of the Licensee's Facilities located on or in the Company's Support Structures, for which a rental is provided in this Tariff Item and/or which affects the consumption of capacity of the Support Structure.

13. Shaw stated that there is no rental rate for the insertion of strand equipment into a cable attached to TCC strand. As such, the company submitted that, to trigger the requirement for a permit, the placement of strand equipment must affect the consumption of capacity of the support structure.

14. Shaw argued that the meaning of the phrase "affects the consumption of capacity of the Support Structure" must be considered within the context of Item 404 as a whole. In Shaw's view, it is important to understand the terms under which capacity is measured for the purposes of Item 404. Referencing tariff item 404.4(2)(b),[10] which sets out the monthly rate for strand use, Shaw argued that Item 404 clearly indicates that (i) the only type of facility that is relevant for strand-rating purposes is cabling; (ii) the insertion of strand equipment into a cable on a strand does not convert that strand into multiple strands for rating purposes; and (iii) the measure of capacity for strand is based on 30-metre spans of strand. Shaw submitted that these rate provisions demonstrate that capacity on a strand is consistently measured and expressed in terms of the spans between poles.

15. Shaw submitted that it follows from the foregoing that the insertion of strand equipment, including WiFi strand equipment, into a cable on a strand does not affect consumption of capacity on the strand, as expressed in Item 404 in terms of 30-metre spans. Shaw argued that (i) the insertion of equipment into cabling does not result in the occupation of additional strand; (ii) the equipment in question would be inserted into cabling located on TCC strand for which a permit has already been obtained; and (iii) the insertion of such equipment does not, in and of itself, prevent other support structure users from placing their own cable or cable-inserted equipment on the strand.

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[10] Tariff item 404.4(2)(b) provides as follows: "The charge applies to each Strand span or portion thereof owned by the Company or on which it is entitled to allow the placement of the Licensee's Facilities, for each Licensee's cable having a maximum outer diameter of 30.5 millimetres attached to such Strand. The insertion of an element such as a splice or an amplifier, into a cable on a strand does not convert that strand into multiple strands." The Monthly Strand Rental Unit Rate (per 30 metres) is shown as $0.43.

16. The Cable carriers agreed with and supported the position taken by Shaw regarding the appropriate interpretation of Item 404. The CCSA submitted that this type of equipment is small and is attached in a manner that does not affect the capacity available for use by any of the ILECs or any other third party.

17. TCC submitted that Shaw has interpreted Item 404, specifically the word "capacity" in tariff item 404.3(1), incorrectly and narrowly. TCC argued that Shaw's interpretation ignores broader engineering and safety considerations, as well as TCC's ability to effectively manage its support structures. TCC submitted that the word "capacity" has a broader meaning than Shaw has ascribed to it, and its meaning should be viewed in a comprehensive context that includes weight loading on the strand or pole, as well as wind resistance and ice loading.

18. TCC stated that cable facilities typically placed on poles and strand include taps, amplifiers, nodes, power supply, and, more recently, WiFi devices. TCC stated that each of these facilities, individually and in association with one another, places physical stress on the strand or pole when weight, ice loads, and wind effects are factored in. TCC submitted that all attachments affect the capacity of support structures, both spatially and structurally, and it is critical for the manager of such structures to employ a review and permit application process to properly manage their capacity.

19. Finally, TCC submitted that the language in Item 404 provides a clear and concise permit application mechanism which encompasses all attachments that affect capacity. Accordingly, TCC argued that Shaw is required to apply for permits for all attachments, including WiFi strand equipment.

20. The Bell companies stated that, under Item 901[11] – Support Structure Service of their National Services Tariffs, licensees must submit applications for any attachments to strands or poles. Only adjustments that do not affect the consumption of capacity and for which no rental is provided in the tariff, such as maintenance work on an existing piece of equipment, are exempt from the requirement for an application.

Commission's analysis and determinations

21. The Commission considers that the resolution of whether or not the terms of Item 404 require that a permit be applied for and obtained for the insertion of strand equipment into cabling attached to TCC strand depends on whether such equipment "affects the consumption of capacity of the Support Structure," as set out in tariff item 404.3.

[11] Tariff item 901.4(a) reads (in part) as follows: "The Licensee must submit Applications for each use of, or connections to, Support Structures for additions to, rearrangements, transfers, replacements or removals of the Licensee's Facilities located on or in the Company's Support Structures, for which a rental is provided in this Tariff item and/or which affects the consumption of capacity of the Support Structure."

22. The Commission notes that the term "capacity" is not defined in Item 404, but that the term "spare capacity"[12] is; that definition relates the concept of the capacity of a support structure to its design limitations.

23. In the Commission's view, the design limitations of a support structure include considerations pertaining to the capacity of a pole or strand – in this instance, the capacity to sustain any forces placed upon it. Such forces would include the weight of objects placed upon it, ice and thermal loadings, and wind resistance.

24. The Commission considers that Shaw's interpretation of the term "capacity" for the purposes of Item 404 does not accord with the meaning of "capacity" contained in the definition of "spare capacity" set out in Item 404. The Commission does not consider that there are valid reasons for ascribing a different meaning to that term when it is used in relation to strand. Thus, the Commission finds that, under tariff item 404.3, communications-related equipment inserted into cabling on a strand (i.e. strand equipment) affects the consumption of capacity of TCC's support structures. Therefore, based on the current wording of Item 404, the Commission finds that the tariff requires a permit for strand equipment.

II. If yes, is a permit requirement for strand equipment inserted into cabling attached to TCC strand warranted?

Historical practice

25. Shaw asserted that no ILEC that provides it with support structure service has ever required it to apply for a permit for strand equipment inserted into its cabling attached to ILEC strand, and it has never received an unauthorized attachment notice from an ILEC regarding strand equipment, until now. Shaw submitted that, although there are thousands of pieces of strand equipment on TCC's support structures and TCC has engaged in several support structure audits over the years, the only notices of unauthorized attachment that TCC has issued relate to WiFi strand equipment.

26. Shaw argued that WiFi strand equipment should be treated in the same manner as other strand equipment. In Shaw's view, there is no justification for a sudden departure from the ILECs' established practice of not requiring permit applications for strand equipment due to new or previously underestimated or unrecognized structural loading considerations.

27. The Cable carriers and the CCSA submitted that requiring a permit application for all equipment installations is not consistent with historical practice. The Cable carriers stated that carriers have installed hundreds of thousands of repeaters, amplifiers, and similar equipment, and no application has been required for these

[12] The definition of "spare capacity" set out in Item 404 is as follows: "the difference between unused capacity of the Support Structure, where unused capacity is the difference between the capacity of the Support Structure based upon its design limitations and the capacity used by the Company to meet its current service requirements and any capacity previously allocated to a Licensee, and the capacity required by the Company to meet its anticipated future service requirements."

installations, nor have any concerns been raised in this regard. They submitted that it is not plausible that the ILECs uniformly neglected to pursue applications in such cases or were unaware of the equipment that was installed.

28. MTS stated that it requires permits for new or additional facilities such as cables or large equipment (e.g. pole-mounted power supplies). However, MTS added that other equipment installed along with the cable, such as amplifiers, repeaters, and WiFi equipment, does not need to be itemized on the permit application, nor are separate applications required for later additions of such equipment.

29. MTS submitted that the record of this proceeding suggested that it has been standard industry practice for strand equipment attachments to be made without permit applications. MTS argued that there is a capacity issue with respect to amplifiers, repeaters, and other strand equipment, yet no party has suggested that the WiFi equipment in question affects the consumption of capacity more than traditional strand equipment. MTS submitted that the capacity issue has arisen only in the context of WiFi equipment, which suggests that TCC's recent actions have less to do with capacity and more to do with the nature of the equipment.

30. EastLink stated that the tariffs of Amtelecom and People's Tel have not been interpreted as requiring a permit for adding amplifiers, repeaters, or other equipment to these companies' support structures or to third-party strand attached to the structures, once the initial attachment permit has been issued. EastLink submitted that, in its experience, this was the same practice used by all ILECs.

31. TCC submitted that its practice, consistent with its approved tariff, requires licensees to apply for each use of, or connection to, support structures for additions to and rearrangements, transfers, replacements, or removals of cable, equipment, and other facilities on support structures that it owns or controls. TCC stated that the proliferation of Shaw's non-cable attachments placed on TCC's support structures without permits became more evident as a result of completed support structure audits, which created a sense of urgency to bring Shaw into tariff compliance.

32. The Bell companies stated that, in accordance with their tariffs, licensees must submit permit applications for any attachments to strands or poles.

33. SaskTel stated that it requires an application for attachments to its support structures each time any equipment, regardless of the type, is added to the strand.

34. Bruce Telecom and La Compagnie de Téléphone de Lambton Inc. both indicated that they have never received an application for a permit to attach equipment such as WiFi devices, amplifiers, and repeaters. Sogetel inc. and Téléphone Milot inc. stated that they use the same practices and procedures as Bell Canada and TCC for access to support structures, and they have never received a permit application regarding strand equipment. Most of the other members of ACTQ described their application processes and indicated that they use the same practice for all equipment. CoopTel

stated that it has no particular provisions for different types of equipment, but any application for use of its support structures would be dealt with pursuant to its tariff.

Management of support structures

a) Spare capacity

35. Shaw and the Cable carriers argued that there is no evidence on the record to indicate that either TCC or any other ILEC has been unable to manage the use of spare capacity on its support structures in the absence of applications for permits regarding strand equipment. In this regard, Shaw submitted that there is no evidence that any ILEC or third-party licensee has been prevented from placing cabling or equipment on ILEC strand, for the purposes of providing telecommunications or broadcasting services, as a result of the insertion of any licensee's strand equipment into cabling on ILEC strand.

36. TCC stated that it requires permit applications relating to equipment located on its strand in order to properly manage the capacity of its support structures, including capacity for other licensees.

37. In this regard, TCC argued that the requirement for permit applications serves to promote equity and fairness among licensees. TCC stated that, because support structure services are assigned to the "Public Good" category of wholesale services,[13] it has an obligation to provide these services to Canadian carriers and cable television undertakings. TCC submitted that to manage its regulatory and tariff obligations, it must have the ability, through a permit application process, to review any proposed attachments that may affect capacity in a manner that relates to physical attributes, consumption usage, and potential safety issues.

38. TCC stated that, under Item 404, "Each Application shall be considered on a first come first served basis and without undue preference based on the date of receipt by the Company."[14] TCC further stated that its tariff provides that it has priority access to its support structures for both its current and anticipated use, and without permit applications for all attachments, this priority right is compromised.

39. TCC submitted that if licensees are permitted to install facilities without being subject to a permit requirement, other licensees wishing to access strand or poles may find no capacity available even if they followed the permit application process. TCC further submitted that in the absence of permit applications, Shaw's placement of unreported attachments has made it impossible for TCC to effectively manage capacity, since it does not have full knowledge of all activities on its support structures.

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[13] See Telecom Decision 2008-17.
[14] See TCC's tariff item 404.3(1).

40. The Bell companies similarly argued that failure to report the installation of attachments bypasses the support structure owner's priority access (i.e. a certain capacity that may be reserved for future use by the support structure owner).

b) Construction standards

41. TCC stated that, to minimize the risk of failure, damage, or potential safety issues, it and other managers of support structures have developed construction and engineering standards that apply to all facilities on strand or poles. The company submitted that its construction standards detail safety and technical requirements and industry standards that licensees must meet when performing work on their facilities located on, or in proximity to, TCC's support structures. These requirements include consideration of the stress on a structure relating to, among other things, weight, ice loads, and wind effects.

42. TCC stated that it has recently uncovered construction standard violations committed by Shaw, including, but not limited to, excessive loading on strands and improperly placed facilities. TCC submitted that for this reason alone, it requires an application and review process to alleviate safety and technical concerns, thereby allowing for the proper management of support structures.

43. TCC stated that it has a responsibility to ensure that licensees are complying with its construction standards. The company argued that if it is unaware of facilities attached to its support structures, it is unable to take timely and reasonable measures to ensure compliance with its construction standards.

44. TCC submitted that as technologies and business opportunities expand, there will be a corresponding increase in the number and types of facilities placed on its support structures by existing and new licensees. The company further submitted that new technologies present new design considerations and limitations, and that wireless devices placed on poles and strand require close assessment in terms of safety issues. TCC submitted that a permit application requirement for all facilities would enable it to address any non-conformance issues at the point of application and/or post-application, thereby allowing for the proper management of its support structures.

45. The Bell companies stated that failure to report the installation of attachments could jeopardize the structural integrity of support structures through overloading, poor anchoring, or other problems. They added that worker safety may be compromised if the support structure owner is not made aware of attachments, in particular powered attachments. In such cases, workers might not use proper protocols or receive proper training.

46. Shaw stated that the structural loading considerations that TCC raised are already fully addressed in TCC's construction and other standards, which provide specific guidance on the design limitations of strand and other aerial support structures. Shaw submitted that the purpose of the permit requirement is to manage capacity, not to

police compliance with construction standards. Finally, Shaw noted that Item 404 sets out an efficient and proportionate process to deal with isolated instances of alleged construction standards violations.

47. MTS stated that licensees are subject to numerous obligations under support structure service tariffs and licence agreements, which incorporate by reference construction standards, safety requirements, and other regulatory obligations. MTS stated that, if licensees are in breach of those obligations, ILECs have mechanisms available to them to deal with instances of non-compliance. MTS argued that creating an application and permit process that simply duplicates these obligations is neither practical nor commercially feasible. MTS submitted that to the extent an ILEC has valid construction-related or other safety concerns about the attachment of equipment that are not addressed in its existing standards, it may be appropriate for the ILEC to amend its standards to account for modern technologies.

c) Administrative process and competitive implications

48. Shaw stated that it currently has several thousand pieces of strand equipment on ILEC strand in its network, and there are probably hundreds of thousands of pieces of strand equipment on ILEC strand across Canada. Shaw submitted that it would be extremely burdensome for ILECs and competitors alike, given the sheer volume and extent of this strand equipment, if ILECs were to require permit applications for all strand equipment attachments.

49. Shaw submitted that a requirement to seek pre-approval and obtain a permit for the placement of strand equipment would have significant anti-competitive effects. First, Shaw argued that the cost of one-time permit processing and search charges[15] can be significant, and these costs and the time and resources involved in processing the resulting permit applications greatly outweigh any perceived benefit of imposing such a regime.

50. Second, Shaw expressed concerns regarding TCC's demonstrated inability to consistently meet the tariff requirements relating to response times for permit applications. Shaw submitted that if all strand equipment moves, additions, and changes per month, plus those related to the insertion of WiFi strand equipment, were subject to a permit requirement, the inevitable consequence would be to delay and impede the deployment of innovative technologies and the provision of competitive services such as Shaw Go WiFi, which is contrary to the public interest.

51. Finally, Shaw submitted that the foregoing concerns would give rise to disputes concerning the basis for rejection of strand equipment permit applications, which would in turn require Commission oversight and intervention.

[15] TCC's tariff item 404.3(4) states: "In all cases, the Licensee shall pay a search charge whether the Application is accepted, withdrawn by the Licensee, or rejected by the Company due to unavailability of Spare Capacity."

52. The Cable carriers submitted that a permit application requirement for every piece of additional strand equipment installed on a given strand would increase the administrative burden on all parties and, in particular, would impose substantial new costs on third-party attachers, since each application would require documentation and would be subject to search and inspection charges.

53. The CCSA stated that the permit application process is detailed, costly, and time-consuming, noting that the ability of its member companies to deliver choice in advanced broadcasting and Internet services to Canadians in their operating territories would be seriously impeded if each additional piece of equipment were subject to a permit application process.

54. The Cable carriers and the CCSA shared the view that requiring permit applications for every piece of strand equipment would not be in the public interest because such a requirement would delay their ability to make timely network upgrades.

55. MTS submitted that tariffs for support structure services should not be used as a means of frustrating the development of innovative and competitive services. MTS argued that licensees are already subject to various obligations under such tariffs and the associated licence agreements, which provide ILECs with remedial avenues in instances where a licensee has not complied with the relevant obligations. In its view, requiring a support structure user to submit to a lengthy permit process for the attachment of strand equipment unduly interferes with the rights of access to support structures.

56. As indicated above, MTS expressed the view that it may be appropriate for certain ILECs to amend their standards to account for modern technologies. MTS argued that it is not appropriate to give an ILEC the discretionary power to accept or reject attachments, one at a time, based on standards that only it knows.

57. TCC submitted that, should the Commission find that applications for permits are required for all equipment to be attached to its support structures, it is prepared to work with Shaw to establish an efficient process that complies with Item 404.

d) Radio-frequency (RF) emissions and interference

58. TCC submitted that while permit applications for all types of attachments are important for proper management of its support structures, strand-mounted WiFi devices in particular raise concerns with respect to emissions and interference, which is why the attachment of such equipment must be subject to its review.

59. TCC submitted that Shaw WiFi access points interfere with surrounding and/or adjacent RF equipment. TCC stated that the WiFi industry standard, IEEE 802.11,[16] recommends ways to mitigate the impact of such interference but also recognizes

[16] IEEE 802.11 refers to a family of specifications developed by the Institute of Electrical and Electronics Engineers for wireless local area network (LAN) computer communication in the 2.4, 3.6, 5, and 60 gigahertz frequency bands.

that it cannot be eliminated. TCC submitted that this interference not only affects all surrounding WiFi networks but may also interfere with licensed networks based on cellular technology.[17]

60. TCC further submitted that wireless devices placed on poles and strand require close assessment in terms of safety issues, particularly RF emissions.

61. TCC argued that it therefore requires an application and review process to alleviate safety and technical concerns, thereby allowing for the proper management of support structures.

62. SaskTel stated that it would need to further investigate any potential interference caused by WiFi equipment or any other RF equipment placed in the communications space to ensure that there is no risk of interference with its existing copper xDSL facilities.[18]

63. Shaw stated that its WiFi equipment

    - is treated by Industry Canada as a licence-exempt radio apparatus[19] and, as such, operates in the 2.4 gigahertz (GHz) and 5 GHz frequencies, on a no-interference, no-protection basis;

    - is certified by the manufacturer as compliant with Industry Canada's radio apparatus requirements, with Industry Canada's and Health Canada's[20] safety requirements, and with the IEEE 802.11 standard designed to mitigate interference with other 802.11 networks and devices operating in the 2.4 GHz and 5 GHz frequencies; and

    - is compliant with Industry Canada's radio noise limits[21] and operates on higher frequencies than cable and telecommunications systems do.

64. Shaw submitted that there is no evidence on the record that its WiFi strand equipment interferes with surrounding WiFi systems, licensed networks based on cellular technology, or current copper-based facilities, or that it adversely affects human health and safety. Shaw also submitted that both radio interference and the

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[17] These networks include long-term evolution (LTE) systems.
[18] Copper-based facilities, such as xDSL facilities – Digital Subscriber Line (DSL), are a family of technologies that provide Internet access by transmitting digital data over the copper wire of a local telephone network. xDSL refers to different variations of DSL, such as asymmetric digital subscriber line (ADSL), high-bit-rate digital subscriber line (HDSL), and rate-adaptive digital subscriber line (RDSL).
[19] See the Industry Canada document entitled *RSS-210 – Licence-exempt Radio Apparatus (All Frequency Bands): Category I Equipment*.
[20] See the Industry Canada document entitled *RSS-102 – Radio Frequency (RF) Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)*, which includes compliance with Health Canada's *Limits of Human Exposure to Radiofrequency Electromagnetic Energy in the Frequency Range from 3 kHz to 300 GHz – Safety Code 6 (2009)*.
[21] Industry Canada's Class B radio noise limits are set out in *ICES-003 – Information Technology Equipment (ITE) – Limits and methods of measurement*.

human exposure limits of radiocommunication apparatus are subject to, and fully addressed by, existing regulations, standards, and procedures that are overseen by Industry Canada and other regulatory authorities, not by the Commission.

Commission's analysis

65. The Commission considers that the objective underlying the permit application requirement, as set out in Item 404, is to allow TCC to manage capacity, in particular spare capacity, for the placement of TCC's and a licensee's facilities on TCC's support structures.

Historical practice

66. The Commission notes that Shaw and other licensees have been placing communications facilities on TCC's and other ILECs' support structures for many years. The record demonstrates that Shaw and other licensees have been inserting amplifiers, taps, splitters, and other strand equipment into their cabling; this equipment is necessary to provision communications services over their networks. The record also demonstrates that licensees have not been submitting permit applications when adding, rearranging, transferring, replacing, or removing such strand equipment.

67. The ILECs were asked to identify their practices with respect to requiring applications for third-party attachments to their support structures, and in particular to strand. Not all the ILECs responded, and of those that did, some were not clear as to their actual practices. Based on the information received from Shaw, the Cable carriers, the CCSA, and some of the ILECs, the Commission finds that the historical practice of the ILECs has been not to require a permit application for strand equipment. Further, other than the notices of unauthorized attachment that TCC issued to Shaw with respect to the attachment of WiFi equipment, there is no indication that any of the ILECs have taken measures to require permit applications for operations involving strand equipment.

Management of support structures

a) Spare capacity

68. In the Commission's view, the record of this proceeding demonstrates that TCC has been able to manage capacity for the placement of both its and licensees' facilities on aerial support structures without requiring permit applications for strand equipment, which has been added, rearranged, transferred, replaced, and removed over a number of decades. Furthermore, the Commission considers that there is no evidence to support TCC's proposition that a licensee's failure to file applications for the addition, rearrangement, transfer, replacement, or removal of strand equipment has prevented TCC or other licensees from attaching their facilities.

b) Construction standards

69. The Commission notes that TCC's tariff regarding support structure service provides that TCC shall set out and enforce construction standards based on safety and technical requirements, and that a licensee's facilities must meet those standards. The Commission considers that this tariff provision enables TCC to establish parameters governing the weight, loading, and placement of licensees' strand equipment.

70. The Commission is not persuaded that permit applications for strand equipment are required to enable TCC to properly enforce compliance with its established construction standards. The Commission considers that Item 404 includes a comprehensive regime associated with the requirement to comply with appropriate construction standards.

71. First, pursuant to Item 404, licensees have an obligation to ensure that their facilities, including the installation thereof, comply with the appropriate construction standards. Second, Item 404 provides TCC with the ability to conduct ongoing inspections of its support structures to ensure compliance with its construction standards and, when non-compliance is found, to notify the licensee of its non-compliance and to charge the licensee for the costs associated with the inspection. Third, if non-compliance has not been rectified following notification, Item 404 enables TCC to correct the defect or remove the relevant facilities, and to charge the licensee based on costs incurred.

72. The Commission is not convinced that TCC has experienced significant difficulty in ensuring licensee compliance with its construction standards or that the existing regime is insufficient to deal with any instances of non-compliance that might arise.

c) Administrative process and competitive implications

73. The Commission considers that requiring a licensee to apply for and obtain a permit prior to every addition, rearrangement, transfer, replacement, or removal of strand equipment would represent a significant administrative burden for both TCC and the licensee.

74. The Commission further considers that the imposition of such a permit requirement would impose a significant financial burden on the licensee. In addition, the Commission notes that Item 404 provides that the licensee shall pay a search charge whether the application is accepted, withdrawn by the licensee, or rejected by TCC due to unavailability of spare capacity.

75. Finally, the Commission is concerned that requiring such permits would affect the ability of TCC's support structure users to provision, maintain, and upgrade their networks in a timely manner in order to deliver services to end-users.

d) RF emissions and interference

76. The Commission notes that safety standards associated with WiFi devices are established by the appropriate governmental bodies and that the manufacture of such devices must comply with all applicable standards. The Commission also notes that requirements associated with interference caused by RF-emitting devices are within the purview of Industry Canada, and the obligation for licensees to comply with various safety and technical standards is already included in TCC's construction standards. The Commission considers that it would be open to TCC to amend its construction standards to require compliance with any relevant standards.

77. Accordingly, the Commission does not consider that concerns related to RF safety and interference require that permits be obtained for the addition, rearrangement, transfer, replacement, or removal of WiFi strand equipment.

Commission's determination

78. In light of the analysis presented above, the Commission finds that there is no basis on which to require permits for strand equipment inserted into cabling attached to TCC strand.

Policy Direction

79. Shaw noted that subparagraph 1(*a*)(ii) of the Policy Direction[22] provides that regulatory measures must be efficient and proportionate to their purpose, and must interfere minimally with market forces. Shaw also pointed to subparagraph 1(*b*)(iv) of the Policy Direction, which states that the Commission, when relying on regulation that relates to arrangements or regimes for access to networks, in-building wiring, or support structures, must ensure the technological and competitive neutrality of those arrangements or regimes, to the greatest extent possible, to enable competition from new technologies and not to artificially favour either Canadian carriers or resellers.

80. Shaw stated that the costs associated with a permit application start at $520 per permit and are likely to increase. Shaw submitted that the costs and time involved, and the resulting disruption to its service deployment plans, would outweigh any perceived benefit resulting from a permit regime, given the ILECs' historical practices and the absence of apparent negative consequences from a safety or technical perspective.

81. The Cable carriers submitted that the introduction of an unnecessary and inefficient regulatory measure would be contrary to the Policy Direction, would harm competition, and would have a negative impact on incentives for innovation and investment.

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[22] *Order Issuing a Direction to the CRTC on Implementing the Canadian Telecommunications Policy Objectives*, P.C. 2006-1534, 14 December 2006

82. The Commission considers that the determinations made in this decision are consistent with the Policy Direction for the reasons set out below.

83. The Policy Direction states that the Commission, in exercising its powers and performing its duties under the *Telecommunications Act* (the Act), shall implement the policy objectives set out in section 7 of the Act, in accordance with paragraphs 1(*a*), (*b*), and (*c*) of the Policy Direction. The Commission considers that its determinations in this decision engage the policy objectives set out in paragraphs 7(*a*), (*b*), (*c*), and (*f*) of the Act.[23]

84. Regarding subparagraph 1(*a*)(ii) of the Policy Direction,[24] the Commission considers that, for the reasons set out in this decision, requiring permits for the addition, rearrangement, transfer, replacement, or removal of strand equipment inserted into cabling for which a permit has already been obtained would not be efficient and proportionate to the purpose of ensuring that TCC is able to manage the capacity, and in particular the spare capacity, of the support structures it owns or for which it has a right to provide access.

85. With regard to the requirement set out in subparagraph 1(*b*)(iv) of the Policy Direction,[25] the Commission considers that requiring permits for the addition, rearrangement, transfer, replacement, or removal of WiFi equipment inserted into cabling for which a permit has already been obtained would, for the reasons set out in this decision, unduly impede the timely development of competition from new technologies.

Directives

86. The Commission directs TCC to file for approval, within **30 days** of the date of this decision, tariff revisions which state that communications-related equipment inserted into licensee cabling located on TCC strand (i.e. strand equipment) does not require a permit.

87. Given that the other ILECs have the same or similar wording in their tariffs regarding support structure services, and they were made parties to this proceeding,

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[23] The cited policy objectives of the Act are

7(*a*) to facilitate the orderly development throughout Canada of a telecommunications system that serves to safeguard, enrich and strengthen the social and economic fabric of Canada and its regions;
7(*b*) to render reliable and affordable telecommunications services of high quality accessible to Canadians in both urban and rural areas in all regions of Canada;
7(*c*) to enhance the efficiency and competitiveness, at the national and international levels, of Canadian telecommunications; and
7(*f*) to foster increased reliance on market forces for the provision of telecommunications services and to ensure that regulation, where required, is efficient and effective.

[24] According to subparagraph 1(*a*)(ii) of the Policy Direction, when relying on regulation, the Commission should use measures that are efficient and proportionate to their purpose and that interfere with the operation of competitive market forces to the minimum extent necessary to meet the policy objectives.

[25] Subparagraph 1(*b*)(iv) of the Policy Direction requires, among other things, that regulatory measures relating to support structures ensure the technological and competitive neutrality of the associated regime, to the greatest extent possible, to enable competition from new technologies.

the Commission directs the other ILECs that provide support structure services to show cause, within **30 days** of the date of this decision, why the Commission's determination set out in paragraph 78 above should not be reflected in their tariffs.

88. Finally, the Commission directs TCC to withdraw the notices of unauthorized attachment issued to Shaw for its WiFi equipment.

Secretary General

Related documents

- *Practices and procedures for staff-assisted mediation, final offer arbitration, and expedited hearings*, Broadcasting and Telecom Information Bulletin CRTC 2009-38, 29 January 2009, as amended by Broadcasting and Telecom Information Bulletin CRTC 2009-38-1, 26 April 2010

- *Revised regulatory framework for wholesale services and definition of essential service*, Telecom Decision CRTC 2008-17, 3 March 2008