



Telecom Decision CRTC 2015-496

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CISC Canadian Steering Committee on Numbering – Revised Canadian International Mobile Subscriber Identity Guideline

*The Commission **approves with changes** the revised Canadian International Mobile Subscriber Identity Guideline submitted by the CISC Canadian Steering Committee on Numbering. Specifically, the Commission establishes a definition of “full MVNO” and revises the definition of “MVNO.” The Commission also establishes a process for the administration of a full MVNO registration list.*

Background

1. In *Regulatory framework for wholesale mobile wireless services*, Telecom Regulatory Policy CRTC 2015-177, 5 May 2015 (Telecom Regulatory Policy 2015-177), the Commission determined that it would be appropriate for full mobile virtual network operators (MVNOs) to be eligible to acquire mobile network codes (MNCs). The Commission directed the Canadian Steering Committee on Numbering (CSCN) of the CRTC Interconnection Steering Committee (CISC) to amend the Canadian International Mobile Subscriber Identity Guideline (the IMSI Guideline) to allow full MVNOs to acquire MNCs.
2. An MNC is a unique identification number that identifies a specific wireless service provider’s (WSP) network in a given country.¹ The MNC permits a WSP to establish direct roaming agreements with both domestic and international providers because its network can be uniquely identified. Currently, the IMSI Guideline specifies that MNCs can only be assigned to wireless carriers (i.e. carriers that hold a spectrum licence from Industry Canada).
3. MVNOs are mobile WSPs that rely on some or all components of a wireless carrier’s network, including the radio access network (RAN), to provide retail services. In Telecom Regulatory Policy 2015-177, a full MVNO was described as an MVNO that supplies most of the components of a network apart from the RAN, while branded resellers provide marketing services, distribution channels, and billing services but rely on wireless carriers for the rest of their business, including the operation of the network. While MVNO models vary, they all require access to the RAN of a wireless carrier.

¹ MNCs in Canada are assigned by the Canadian Numbering Administrator (CNA) pursuant to the IMSI Guideline.

4. On 6 July 2015, the CSCN submitted the following report for Commission approval:
 - *Revised Canadian IMSI Assignment Guideline to include Full MVNOs* (CNRE114B) [the Report]
5. There was consensus on all of the changes in the Report that would (i) allow full MVNOs to acquire MNCs, and (ii) require full MVNOs to register with the Commission. While there was agreement on the definition of an MVNO, the CSCN did not reach consensus on how a full MVNO should be defined. The CSCN stated that the definition provided in Telecom Regulatory Policy 2015-177 was not specific enough for the purposes of the IMSI Guideline, and that “full MVNO” is not a defined term in the wireless industry. As such, several non-consensus views were submitted.
6. The Report recommended that the Commission (i) decide on the definition of a full MVNO to be included in the IMSI Guideline, (ii) approve a revised IMSI Guideline with the final definition, and (iii) qualify all eligible registrants, and create and administer a registration list for full MVNOs.

Issues

7. The Commission has identified the following issues to be addressed in this decision:
 - Should the Commission approve the revised IMSI Guideline, including a definition of “full MVNO”?
 - Should the Commission establish and administer a registration list for full MVNOs?

Should the Commission approve the revised IMSI Guideline, including a definition of “full MVNO”?

8. The CSCN reached a consensus on all of the proposed revisions to the IMSI Guideline in order to allow full MVNOs to acquire MNCs, except the definition of a full MVNO. Bell Canada, Cogeco Cable Inc. (Cogeco), Rogers Communications Partnership (RCP), and Saskatchewan Telecommunications (SaskTel) each provided a proposed definition of “full MVNO.”
9. Cogeco submitted that it is the role of the Commission to determine the requirements that a WSP must meet to be considered a full MVNO, and that the registration requirement with the Commission should be the determining element to identify parties eligible to obtain an MNC. Accordingly, Cogeco supported the following definition: “An MVNO that is registered with the CRTC as a Full MVNO.”

10. Bell Canada and RCP proposed definitions that incorporate elements of the IMSI guideline used in the United States.² RCP proposed the following definition: “A Full MVNO is an MVNO that must: register with the CRTC and demonstrate that it has core network hardware platforms separate from all WSPs (e.g. switches, routers) and a service profile management system (e.g. Home Location Register [HLR], Home Authentication, Authorization, and Accounting [AAA], or Home Subscriber System [HSS]); own, operate or have access to transmission facilities to provide mobile wireless services to consumers; and handle its own network routing. All platforms are within Canada.”
11. Similarly, Bell Canada proposed that a full MVNO is an entity that meets the following criteria: it owns and operates core network hardware separate from all WSPs (e.g. switches, routers, etc.); it owns and operates a service profile management system (a Home Location Register [HLR], or a Home Authentication, Authorization, and Accounting [AAA], or a Home Subscriber System [HSS]); and it handles its own network routing.
12. SaskTel submitted that MNCs are to only be assigned to, and used by, public networks offering public telecommunications services, and that the specific network elements are less relevant because they change over time. SaskTel further submitted that it is important to have a requirement to use MVNO-owned network resources to deliver and manage MVNO services. The company therefore proposed the following definition: “A Full MVNO utilizes a Carrier Wireless Service Provider’s network through a negotiated arrangement to provide its own managed telecommunication services to the general public. It is differentiated from Resellers and Rebillers by its requirement to own certain network elements to manage the service received by its end customers.”

Commission’s analysis and determinations

13. With regard to Cogeco’s and SaskTel’s proposals, these definitions are broad and do not include any technical requirements to identify full MVNOs. As such, the definitions would be unduly open to interpretation as to which entities would be eligible for an MNC.
14. While Bell Canada’s and RCP’s proposals are technical and incorporate some United States IMSI guideline requirements, they also include additional elements. Some of these elements would raise the technical and capital investment thresholds necessary to qualify as a full MVNO (and, hence, to obtain an MNC) beyond what the Commission contemplated in Telecom Regulatory Policy 2015-177. Further, such thresholds would likely result in few entities being eligible to qualify as full MVNOs, thereby undermining the development of a Canadian MVNO market.

² International Mobile Subscriber Identity (IMSI) Management and Assignment Guidelines, Version 15 (March 2014)

15. Accordingly, the Commission establishes the following definition of “full MVNO”:

A Full MVNO is an MVNO that is registered with the CRTC, owns and operates core network hardware separate from all WSPs (e.g. switches, routers) and has a service profile management system (e.g. Home Location Register [HLR], Home Authentication, Authorization, and Accounting [AAA], or Home Subscriber System [HSS]) for end-user devices that can access WSP networks in Canada.

16. The Commission notes that the core network hardware does not include transmission facilities connecting the full MVNO to the WSP’s RAN or other networks, including the public switched telephone network and the Internet.

17. In reviewing the revised IMSI Guideline, the Commission notes that the definition of “MVNO” in the Glossary states that an MVNO is a WSP, which, in turn, is defined as “a Canadian entity authorized by Industry Canada pursuant to the *Radiocommunication Act* to provide two-way common carrier wireless mobility communications service to the public.” By definition, an MVNO is not an entity that is authorized by Industry Canada pursuant to the *Radiocommunication Act* because it does not own spectrum. To address this definitional issue, the Commission considers that an MVNO should be referred to simply as a “service provider.” Accordingly, the revised definition of “MVNO” should read as follows:

An MVNO is a service provider who uses the spectrum and RAN of a wireless carrier and, in some cases, other facilities and/or services, to provide mobile wireless services to consumers.

18. Given that there was consensus on all other items in the Report, the Commission **approves with changes** the revised IMSI Guideline, including the definition of “full MVNO” and revised definition of “MVNO” as set out above.

Should the Commission establish and administer a registration list for full MVNOs?

19. There was consensus within the CSCN that the Commission should establish a registration list to permit eligible parties to register as full MVNOs, and that the Canadian Numbering Administrator (CNA) would use the list to assign MNCs appropriately.

20. Bell Canada supported a process by which the Commission would establish criteria and determine, based on confidential information, whether the entity in question meets the applicable criteria.

21. Cogeco submitted that since the Commission is relying mainly on market forces to foster the emergence of full MVNOs, the registration process should be as streamlined as possible. Cogeco proposed a two-step process. First, the entity would notify the Commission that it is negotiating a wholesale full MVNO access arrangement with a wireless carrier, after which it would be recognized and registered

as a proposed full MVNO. It could then submit an MNC application to be reviewed and processed by the CNA. Second, the proposed full MVNO would be registered as a full MVNO when it informs the Commission that it has concluded a wholesale full MVNO access agreement. Based on this registration, the CNA would assign the requested MNC to the full MVNO.

Commission's analysis and determinations

22. A Commission registration list for full MVNOs would establish a clear and transparent process for the acquisition of MNCs and ensure that the Commission validates all eligible entities. It would also allow the CNA to quickly identify whether a service provider is eligible for an MNC and to assign it in accordance with the IMSI Guideline. Further, the availability of a registration list that identifies potential full MVNOs could help them in their network development and negotiations with wireless carriers.
23. In light of the above, the Commission establishes the following process for the administration of a full MVNO registration list:
 - An entity must notify the Commission, in writing, that it intends to meet the eligibility requirements of a full MVNO within 12 months. Based on this notification, the entity will be registered as a proposed full MVNO by the Commission and will thus be allowed to submit an MNC application to the CNA. An MNC will not be assigned at this time.
 - Within 12 months of the date of registration as a proposed full MVNO, the proposed full MVNO must clearly demonstrate to the Commission that it meets the technical criteria of a full MVNO as described in the IMSI Guideline, and has concluded a wholesale full MVNO access agreement with a Canadian wireless carrier.³ The entity will then be registered as a full MVNO and, based on this registration, the CNA will assign the requested MNC to the full MVNO.
24. All MVNOs, including full MVNOs, that wish to provide telecommunications services in Canada must also continue to register on the appropriate Commission registration list(s). Entities may register on more than one list as long as they meet the obligations associated with each list.

Secretary General

³ The entity must submit a letter to the Commission that (i) provides the details on how the entity meets the full MVNO requirements, and (ii) identifies the wireless carrier with whom it has a wholesale full MVNO access agreement.