



## Telecom Decision CRTC 2017-119

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Ottawa, 28 April 2017

*File number: 8669-C12-01/01*

### **CISC Emergency Services Working Group – Consensus report regarding updates to the wireless 9-1-1 caller location accuracy thresholds**

#### **Background**

1. Effective and timely access to emergency services is critical to the health and safety of citizens, and is an important part of ensuring that Canadians have access to a world-class communication system. In Telecom Regulatory Policy 2014-342, the Commission set out its 9-1-1 action plan, which includes key initiatives aimed at enhancing Canadians' access to existing 9-1-1 services and facilitating the transition to next-generation 9-1-1 services. One of these initiatives is to improve the 9-1-1 caller location information provided by wireless carriers to public safety answering points (PSAPs). Such improvements are in the public interest to safeguard Canadians.
2. In Telecom Decision 2015-255, the Commission approved the wireless 9-1-1 location accuracy monitoring process. The objective of that process was to create a standard format and methodology for collecting and reporting the results of wireless service providers' (WSPs) performance regarding wireless 9-1-1 caller location accuracy.
3. In accordance with the monitoring process, WSPs have since filed two sets of location accuracy performance results with the Commission.<sup>1</sup> These results were compared to location accuracy thresholds that the Commission had previously approved,<sup>2</sup> and demonstrate that WSPs were generally exceeding the minimum location accuracy thresholds and attaining the target thresholds.
4. Additionally, as per the monitoring process, the CRTC Interconnection Steering Committee (CISC) Emergency Services Working Group (ESWG) reviewed the appropriateness of adjusting the location accuracy thresholds.

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<sup>1</sup> The Commission received Period 1 performance results on 31 August 2015 and Period 2 results on 29 February 2016. Period 1 covers 1 May 2015 to 31 July 2015, Period 2 covers 1 August 2015 to 31 January 2016, and Period 3 covers 1 January 2016 to 31 December 2016.

<sup>2</sup> See paragraph 9 of Telecom Decision 2014-415.

## **The ESWG report**

5. On 7 November 2016, the ESWG submitted the following consensus report (the Report) for Commission approval:
  - *Recommended Updates to the Wireless Location Accuracy Thresholds Approved in Telecom Decision 2014-415*, 21 September 2016 (ESRE0075)
6. The Report can be found under the “Reports” section of the ESWG page, which is available under the CISC section of the Commission’s website at [www.crtc.gc.ca](http://www.crtc.gc.ca).
7. In the Report, the ESWG recommended that the Commission (i) approve updated location accuracy thresholds (as shown in the Appendix to this decision) to be used for reporting Period 3, and (ii) reiterate the ESWG’s obligations to continue the annual process of assessing the WSPs’ location accuracy performance results and to recommend any future required adjustments to the thresholds.
8. The ESWG developed its proposed new minimum and target thresholds based on WSPs’ aggregated results for Periods 1 and 2, with the expectation that most WSPs should reasonably be able to meet these thresholds in future reporting periods. However, the ESWG stated that it expected that some WSPs will not meet the proposed minimum thresholds in certain locations for reasons such as the low penetration of Global Positioning System (GPS)-enabled devices, and the configuration of their cell tower locations at the borders of their serving areas where triangulation techniques are not as accurate.

## **Commission’s analysis and determinations**

9. The Commission is continuously looking for ways in which emergency telecommunications services can be improved. Enhancing WSPs’ location accuracy performance constitutes such an improvement.
10. The Commission has analyzed the ESWG’s proposed minimum and target thresholds compared to the WSPs’ location accuracy performance results for Periods 1 and 2, and finds that the thresholds are fair and reasonable. Additionally, the methodology used by the ESWG to determine the proposed thresholds is appropriate since it is (i) based on the approved monitoring process using standard mathematical concepts, (ii) repeatable, and (iii) auditable.
11. The Period 2 performance results indicate that the proposed thresholds are fair and reasonable, since
  - only a small number of WSPs would potentially not be able to meet the proposed minimum thresholds;
  - the WSPs that are not currently meeting the proposed target thresholds are distributed evenly across all provinces and categories, demonstrating that meeting these target thresholds would require efforts by WSPs; and

- the WSPs that participated in preparing the Report<sup>3</sup> have demonstrated that they wish to improve their performance results by agreeing to the proposed thresholds.
12. Accordingly, the Commission reiterates that WSPs that do not meet the minimum thresholds must provide explanations, and action plans to meet or exceed the minimum thresholds in the future.
  13. The location accuracy monitoring process is working well, as demonstrated by WSPs' actions to improve their performance results and the significant increases in the proposed thresholds.
  14. In light of the above, the Commission **approves** the recommendations set out in the Report, and
    - **directs** WSPs to use the new minimum and target thresholds (shown in the Appendix to this decision) as the basis for measuring their location accuracy performance for Period 3, and for subsequent reporting periods;
    - reiterates that the ESWG is to continue to (i) follow the approved annual monitoring process of receiving and assessing the WSPs' location accuracy performance results; and (ii) file future reports with recommended adjustments, as required; and
    - requests that the ESWG continue to monitor and report on technical and standards developments in the wireless industry that could lead to improved location accuracy results.

Secretary General

### Related documents

- *CISC Emergency Services Working Group – Consensus report on monitoring the wireless 9-1-1 caller location accuracy performance of wireless carriers*, Telecom Decision CRTC 2015-255, 15 June 2015
- *CISC Emergency Services Working Group – Consensus report regarding wireless enhanced 9-1-1 Phase II location accuracy requirements*, Telecom Decision CRTC 2014-415, 6 August 2014
- *9-1-1 action plan*, Telecom Regulatory Policy CRTC 2014-342, 25 June 2014; as amended by Telecom Regulatory Policy 2014-342-1, 30 January 2015

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<sup>3</sup> These WSPs are Bell Mobility Inc.; Bragg Communications Incorporated, operating as Eastlink; Freedom Mobile Inc.; MTS Inc.; Rogers Communications Canada Inc.; Saskatchewan Telecommunications; TBayTel; TELUS Communications Company; and Videotron G.P.

## Appendix to Telecom Decision CRTC 2017-119

### Recommended updates to the wireless 9-1-1 caller location accuracy thresholds approved in Telecom Decision 2014-415, as per Consensus Report ESRE0075

Uncertainty Threshold <sup>4</sup>	<150m for Rural / Small PSAPs		<150m for Large / Metro PSAPs		<1000m for Rural / Small PSAPs		<1000m for Large / Metro PSAPs	
	Periods 1 & 2	<b>Period 3</b>	Periods 1 & 2	<b>Period 3</b>	Periods 1 & 2	<b>Period 3</b>	Periods 1 & 2	<b>Period 3</b>
<b>Minimum threshold</b>	33%	<b>50%</b>	33%	<b>50%</b>	60%	<b>65%</b>	72%	<b>75%</b>
<b>Target threshold</b>	48%	<b>65%</b>	48%	<b>65%</b>	74%	<b>80%</b>	86%	<b>90%</b>

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<sup>4</sup> Uncertainty thresholds are measures, expressed in percentages, that represent the number of 9-1-1 calls delivered by WSPs to PSAPs within a defined radius at a given level of confidence.